ADDIS CHAMBER JOURNAL OF TRADE AND BUSINESS

Volume VI Number I September 2021

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ADDIS CHAMBER

Published by Addis Ababa Chamber of Commerce and Sectoral Associations

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ISSN 2410-7530

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Addis Chamber Journal of Trade and Business (ACJTB) is published annually by Addis Ababa Chamber of Commerce and Sectoral Associations (AACCSA), with the financial support from Confederation of Danish Industry (DI). The objectives of the journal are to help:

- Understand issues and problems of the private sector;
- Fill knowledge gaps and share information on trade and investment trends and state of affairs;
- Analyze and assess the business, investment, and macroeconomic environment of the country;
- Identify issues of competitiveness and investment opportunities as well as the comparative advantages and level of business competence of Ethiopian companies against other economies; and
- Analyze public policy and the regulatory environment to come up with concrete evidence and policy recommendations for the consumption of Public-Private Dialogue forum.

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SITUATION ANALYSIS OF TRADE LOGISTICS AND EXPORT COMPETITIVENESS*

ABSTRACT

This study aims to examine the situation of trade logistics for export competitiveness; to identify the most pressing and critical factors that account to low performance and inefficient trade logistics; and to recommend remedial measures to improve efficient trade logistics and thereby, to contribute to enhance export competitiveness. The study is carried out based on desk review of documents, collection, organizing and analysis of relevant primary and secondary data and information collected from key stakeholders, including business enterprises, freight forwarders and customs clearing agents.

Trade logistics is vital to Ethiopia's economic activity and financial stability. As Ethiopia is a landlocked country, the ability to transport freight goods quickly, economically and reliably is very important to its prosperity and competence in global market. In Ethiopia, trade logistics is a critical factor in facilitating international trade and increasing competitiveness in export, yet, the sector is a major bottleneck for efficient movement of import and export goods and export goods competitiveness at international market as well. The logistics services in the country is at lower stage of development compared to most African countries and including landlocked countries. The staggering high logistics cost, longer time and unreliable services characterize the sector. These deter trading with other countries and affect existing and new local and foreign investment activities.

The study revealed that the logistics system of the country is lagging behind the desired level. It is characterized by limited competition due to monopoly nature of shipping and logistics services; limited access to finance to private sector; lack of competent private logistics service providers in the logistics regime; inadequate logistic infrastructure and facilities; poor logistics management practice; inefficiency in transport service provision, management and coordination; high logistics cost; long transit time; absence of adequate skilled and qualified labor; limited coordination and integration among the industry actors; and bureaucratic hurdles and administrative and management bottlenecks.

To ensure efficient and reliable trade logistics for enhanced export competitiveness, the study recommends that, encourage competition and liberalize the logistics industry; alleviate bureaucratic bottlenecks; promote coordination and collaboration among different institutions in the logistics sector; promote multimodal transport system; ensure diversified trade corridors and outlets to seaport; improve efficiency of ports and corridors; upgrade infrastructure and facilities along Addis Ababa Djibouti trade corridor; avail adequate container with the required facilities and standards; support and encourage transport companies to build their capacity in different aspects; avail sufficient freight trucks and modernize export cargo trucks; establish cargo consolidation and deconsolidation facilities; promote single window service; enhance ICT intervention, automate the custom clearance system and expand those customs services not covered under e-single window system, and promote paperless services in the sector.

Key Words: Trade Logistics, Export Competitiveness & Logistics Industry

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I. INTRODUCTION

1.1 Background of the Study

Trading with other countries is crucial for economic and social development of Ethiopia. Through trade, the country imports goods that are not produced locally and export goods that the country has comparative advantage. Thus, trade facilitates exchanges of commodities and is source of revenue and employment. To leverage the benefits of trade and thereby achieve economic growth and development; barriers to trade must be eliminated. One of the barrier to trade facilitation in the country is inefficient and costly logistics industry.

A logistics framework which comprises hardware, which is the physical infrastructure needed to move goods effectively, and software, which is the associated services and processes needed to move and trade goods effectively. In other words, it comprises the flow of goods, information and fund from its process point of view. It is becoming a critical element of competitiveness and economic performance both in itself and within the context of an intensified globalization. In Ethiopia, trade logistics is vital to the country's economic activity and financial stability.

The logistics services in the country is at lower stage of development compared to most African countries and landlocked countries. World Bank's Logistics Performance Index (LPI) reported that, Ethiopia's rank dropped from 104 out of 160 economies in 2014 with an LPI score of 2.59 to 126 out of 160 in 2016 with LPI score of 2.38. Moreover, tracking and tracing, logistics quality and competence, and timelines show deterioration compared to previous LPI reports. This indicate the alarming situation of the logistics industry with higher logistics cost, longer transit time and low service reliability.

Compared to Sub-Saharan Africa (SSA) and Latin America countries, Ethiopia's customs delays are among the longest in the world. Transportation delays along Ethiopia-Djibouti transport corridor occurred frequently. Numerous stages in the process of clearing and transporting commercial goods in transit from the port of Djibouti to Addis Ababa could take more than 20 days. This calls to examine cross borders trade logistics inefficiency that led to lower export competitiveness.

It is against this backdrop that AACCSA has assessed the status, issues, and hurdles of trade logistics vis-à-vis export competitiveness. The study aims to examine the situation of trade logistics for export competitiveness, to identify the most pressing and critical factors that account for low performance and inefficient trade logistics, and to recommend remedial measures to ensure efficient trade logistics system and thereby, enhance export competitiveness of the country.

1.2 Objectives of the Study

The main objective of this study is to examine the situation of trade logistics for export competitiveness, to identify its bottlenecks and recommend remedial measures. Further, the study aims to assess trade logistics performance and salient features of the sector; to identify legal, institutional, administrative, and infrastructure bottlenecks of the sector; and to suggest recommendations to ensure effective and efficient logistics services.

1.3 Scope of the Study

The study tasks involved undertaking desk review; collecting and organizing data and information from pre-identified key stakeholders, including business enterprises, freight forwarders and customs clearing agents, and logistics operators; analysis and discussion of findings; and suggesting recommendations. The scope of study specifically covered the following:

1. Thorough review of theories and available researches and studies made earlier, including empirical studies on current status, performance and salient features of trade logistics and its effect on export trade performance of Ethiopia;
2. Review of government and key stakeholders' policies, plans and strategic documents on trade logistics and export competitiveness;
3. Analysis of the essential characteristics of the trade logistics system along major trade corridor;
4. Assessment of customs laws and performance, border institutions, transport and logistics services and overall trade facilitation for export sector;
5. Identify legal, institutional, administrative, and infrastructure constraints that impede export sector in connection with trade logistics;
6. Benchmarking analysis on best practices and lessons from other countries, including land-locked countries for efficient trade logistics and thereby export competiveness; and
7. Suggest recommendations to ensure efficient and reliable trade logistics regime for enhanced export competitiveness.

1.4 Method & Approach of the Study

To meet the purpose of the study, this study was carried out based on robust and proven research method in consideration of highest compliance to research ethics. A participatory approach was employed to involve key stakeholders, business enterprises and other actors. The research method comprised of both quantitative and qualitative approaches, mainly relied on the latter through data and information generated through key informant interview (KII) and focus group discussion (FGD). Detail qualitative information gathered from business enterprises, freight forwarders, customs clearing agents and logistics operators, government and non-government organizations through in-depth interview. Quantitative data and qualitative information gathered from secondary data sources - various published reports.

1.4.1 Data Sources and Collection Instruments

In this study, a mix of both primary and secondary sources of data were used to collect relevant data and information. The primary sources of data and information were key stakeholders of the sector and selected AACCSA business members. Secondary information was gathered from published and unpublished documents and reports. The study employed desk/literature review, key informant interview and focus group discussion to collect data and information.

1.4.2 Data Analysis

Relevant data and feedbacks, which were collected from export-oriented manufacturing firms, business actors in the industry, government and non-government institutions, and think-tanks are carefully organized, transcribed, processed, analyzed and interpreted to reach on the true picture of the study. In this study, data were analyzed in two ways: by applying quantitative and qualitative analysis.

II. ETHIOPIA'S INTERNATIONAL TRADE AND TRADE LOGISTICS

2.1. An Overview on Ethiopia's State of Economy, International Trade, and Trade Competitiveness

2.1.1 A Glimpse of Ethiopia's Economy

Ethiopia's economy experienced strong, broad-based growth averaging 9.4% a year from 2010/11 to 2019/20. It is the fourth largest economy in Sub-Sahara Africa (SSA) in terms of Gross Domestic Product (GDP) of USD 107 billion in 2019/20 at current market price. The growing GDP per capita income reached USD 1,000 in 2019/20. Nonetheless, real GDP growth slowed in 2017/18, due to civil unrest, political uncertainty, and policy adjustments that involved fiscal consolidation to stabilize the public debt. In 2019/20, partly due to COVID-19 (coronavirus pandemic), the growth slowed down to 6.1%. IMF has predicted the Ethiopia's economy will grow between 8-9% in between 2022-2024.

Industry, mainly construction, and services sectors accounted for most of the growth. Private consumption and public investment explain demand-side growth, the latter assuming an increasingly important role. On the supply side, GDP growth was driven by services with an average growth rate of 8.8% and industry with an average growth rate of 12.2%, facilitated by the development of energy, industrial parks, and transport infrastructure. On the demand side, private consumption and investment continued to drive growth, along with the government's stable spending on public infrastructure and strong foreign direct investment inflows (African Economic Outlook, 2019).

Despite reducing the extreme poverty rate from about 46% in 1995 to 24% in 2020, Ethiopia still has more than 25 million poor people. Demographic dynamics and a low initial level of development make poverty reduction challenging.

Ethiopia's exports of goods and services as percent of GDP have dwindled over the past years, from 12.5% in 2013 to a mere 7.9% in 2019. While, the county rising incomes, population of 110 million, emerging consumer goods market, and increasing urbanization provide economic opportunities. Its export-led industrialization strategy includes developing industrial zones across the country and business enablers' undertakings on energy, transport, and trade logistics. Investments in renewable energy will generate up to $1 billion in exports in the coming years. Abundant low-cost and trainable labor presents a comparative advantage in export-oriented light manufacturing, notably in leather, textiles, and agro-processing. The country's strategic location eases access to lucrative markets in the Middle East and Europe. Political reforms and normalized relations with neighboring Eritrea is expected to boost prosperity of the country and stabilize the region.

2.1.2 Performance of Ethiopia's International Trade

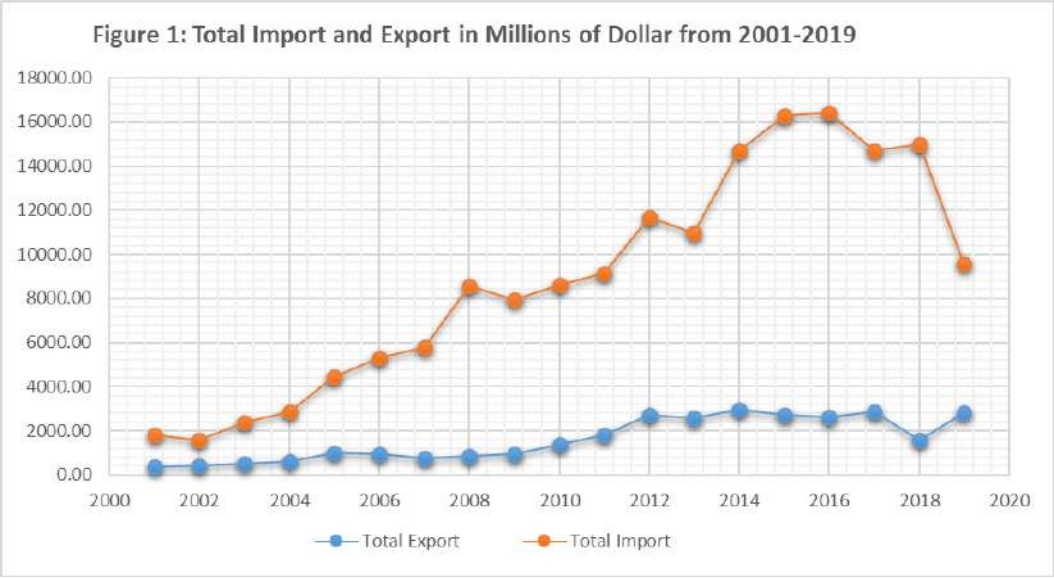
Ethiopia imports around 5,000 types of import goods and exports around 200 types of export goods. The volume and value of import by far exceeds from export. In 2020/21, the country imported $15.6 billion from abroad and exported $3.6 billion worth of goods to international market.

Few export items accounted a larger share of the total revenue generated from export. Statistically, top ten major export items accounted a minimum of 78.7% in 2018 and a maximum of 92.9% in 2015 of the total export earnings. For the last five years, the contribution of other export items is not more than 15% of the total revenue generated from export. On average, export revenue from coffee export is about 1/3 of the total export earnings. China is the leading market destination for Ethiopia's export products based on analyzing aggregate export data for the period from 2015 to 2019. The country generated $1.5 billion from China market for the period 2015 to 2019 from the total $12.7 billion export revenue generated in that period.

Most of import items of the country are machineries including computers, vehicles, electrical machinery and equipment, mineral fuels including oil and iron and steels. From 2015 to 2019, machineries import accounted on average 16.3% of the total import value, followed by import of electronics and mineral fuels with an average share of 10.99% and 8.21% respectively. The share of top ten imported products was nearly 2/3 of the total imported items in value. China is the leading exporter to Ethiopia and statistically, the country accounted 1/3 of the value of the total imported items of Ethiopia for the last five years. From the total $77.1 billion worth of import items, the share of China export to Ethiopia accounted $25.3 billion for the period 2015 to 2019. United States of America (USA), India and Kuwait ranked second, third and fourth with export goods value of $5.888 billion, $5.886 billion and $3.879 in that period respectively.

The balance of trade of the country, the difference between the value of exports and the value of imports is negative. The general trade balance and trade balance of the specific sector showed that, the gap between exports and imports is expanding and the country is net export deficit. For most period of years, import and export value and volume are increasing overtime, although, growth of export exceed that of import and this could be due to the effectiveness of export promotion and/or import substitution strategies of the country. Yet again, decline in import for past recent few years were due to economic slowdown and shortage of foreign currency. This evidenced by the fluctuation in current account during period of chronic forex shortage. For instance, during the period 2013 to 2019, the annual growth rate of export was about -0.7% while the growth rate of import was about 3.74%.

Figure-1: Total Import and Export from 2001 to 2019 (in million USD)



Source: Ethiopian Customs Commission, 2020

2.1.3 Ethiopia's International Trade Corridors

According to UNCTAD's Review (2015), around 80% of global trade by volume and about 90% of developing countries' volume of international trade is seaborne and over 70% of global trade by value are carried by sea and are handled by ports worldwide. Likewise, sea transport is important for Ethiopia's cargo movement in international trade.

However, since the independence of Eritrea in 1993, Ethiopia has been a land-locked country and this became a key factor shaping the external environment in which Ethiopia trades with the rest of the world. The Addis Ababa-Djibouti trade corridor linking Ethiopia to the Port of Djibouti is now the dominant gateway for the country with over 95% of Ethiopia's imports and exports using this route. Currently, very small volumes of Ethiopian traffic are using other ports in the region, mainly Port Sudan and Berbera. The country can use trade corridors along Djibouti, Port Sudan, Mombasa, and Barbara ports as alternative corridors for international trade. Although, customs clearing activities in many countries are conducted at port site, only facilitation is conducted at Djibouti corridor. Furthermore, Ethiopia's importers are using Free on Board (FOB), obliged to transport commodities up to the port of Djibouti through B/L of Ethiopian Shipping & Logistics Services Enterprise. Yet, Djibouti has its own protocols of port operations that creates delay in goods movement.

As a landlocked country, maintaining high performing trade corridors is critical to Ethiopia's trade competitiveness. Recent road and rail development projects along Addis Ababa Djibouti trade corridor envisaged to reduce transport costs and time. Development and upgrade in infrastructure is a key factor to attract investors and to build export capabilities in manufacturing sub-sector.

According to interviewed stakeholders of the sector, the major issues and bottlenecks for efficient movement of goods along trade corridors and export competitiveness are time consuming, costly, low and sub-standard service quality, bureaucratic burdensome and unreliable logistics service provision. Accordingly, they indicated that, as the country is a landlocked, the logistics sector, including port service need to be efficient. The following are the major challenges of the Addis Ababa-Djibouti corridor based on reports of stakeholders

- Lack of integrated logistics management and inefficient logistics system leads to higher price of export and imports items.
- Monopolization of shipping and logistics services and limited competition in the logistics industry.
- Lack of adequate inland transport facilities, inadequate and inconvenient road infrastructure, inefficiency in transport service and frequent traffic stops. In addition, shortage of truck vehicles and being too old and high price of transport or truck service are challenges of the corridor. Arrival of trucks at Djibouti port before the completion of export preparations (document submission) also observed.
- Inconvenient checking points or border posts and bureaucratic burdensome in customs compliance.
- Limited coordination among the industry actors.
- Limited and unreliable ICT services provision.
- Lack of well-equipped personnel and efficient information exchange. Occurrence of delay due to information exchange asymmetry between the exporter and receiver, even before unloading of cargo.
- Hurdles in containerization, in relation to quality, waiting time and efficiency of containers. Although, some export items need a special and dedicated container, containers are being used for multi-purpose, which compromise the quality of the item.
- Political instability and inadequate corridor security.
- Most Ethiopia's export commodities are agricultural items and these vulnerable to failure in logistics and transport system.
- Lack capacity to establish brand and competent logistic company.
- Unnecessary intermediation and middlemen intervention.
- Foreign currency shortage.

Specifically, actors in the logistics sector were asked to describe the characteristics trade logistics regime along Addis Ababa Djibouti trade corridor. Accordingly, they indicated that, there are improvements and commitment to develop the corridor, the case in point, improvement of Galafi route and opening of Tajura port in Djibouti. As the country is still depending on Addis Ababa-

Djibouti trade corridor, this by itself exposed the country to high risk of logistics failure, costly/high price, crowdedness, vulnerable to security issues and frequent changes in Djibouti port laws, illegal trade, delay, and mal-practices and corruption at the checkpoint. Expressway of the corridors need to be further expanded and waiting period of commodities at port site shall be reduced. The country shall use Berbera port as well, as it is less costly.

There are challenges in this corridor in relation to efficiency, infrastructure, service reliability and price. Exporters and importers reported that, there is bureaucratic burden in customs clearance and process redundancy and unmanageable timeframe in place by customs authority. Shortage of trucks and soaring prices of spare parts and limited vehicles maintenance services along the corridor are other challenges. Mismatch in demand and supply of containers, monopoly of inland terminals, and additional cost for cold warehouse for any failure in shipment of export cargo are hurdles of trade.

According to Ethiopian Freight Forwarders and Shipping Agents Association (EFFSAA), one of the major logistics challenge in Addis Ababa Djibouti trade corridor is the alteration of working hours of logistics companies on both sides. The Ethiopia and Djibouti logistics systems are not yet compatible and this creates time lapse and higher cost due to higher demurrage payment in hard currency. This require a joint action for the common good of both countries. A technical committee is established to resolve the long-standing challenges and working on establishing common working hour's system on both sides of logistics communities. A case in point, Ethiopian customs is open only 43 hours a week, while Djibouti side for 58 hours. Therefore, such kind of discrepancies should be realigned to coordinate the activities of the logistics actors on both sides.

2.1.4 Trade Competitiveness

Openness is an indispensable enabler of growth, job creation and development. However, openness alone does not lead to success. The competitiveness of economies in an integrated world determines how well they convert the potential created by access to global markets into opportunities for their firms, farms and people.

Primarily are policies and regulations that affect the business climate. Stable macroeconomic conditions are critical, as are well-functioning markets for the key inputs in any economy – land, capital and labour. The level of competition in the domestic economy is an important determinant of how well its firms will compete with the rest of the world. Innovation capacities can give a competitive edge to firms; as can the capacity to bring small and medium sized enterprises (SMEs) from their formative stages to businesses with the ability to compete in a global market.

Institutions are as important as policies. These include efficient public administration, timely decision-making and the rule of law – all aspects of good governance. Also important is hard infrastructure – transport (airports, ports, roads and railways), communications, energy and logistics, along with soft infrastructure, including education and skills. Finally, an understanding of how policies and institutions interact to affect competitiveness, both at the level of the economy overall and at the level of particular industries, is important (WEF, 2015).

Competitiveness is often used to describe economic strength of an entity against its competitors in global market economy in which goods, services, people, skills, and ideas move freely across

geographical borders (Momaya and Ambastha, 2005). The macro dimension of competitiveness more or less dwells on institutions, policies, and factors that determine the level of productivity and long-term prosperity of a nation (World Economic Forum, 2017). On the other hand, the micro perspective lodges from the firm perspective. Balkyte and Tvaronaviciene (2010) defined competitiveness as the ability of firms to produce and sell goods and services of the right quality at the right price and time, which is dictated not only by productive and efficiency but also performance in terms of quality, innovation, marketing and cost.

The government of Ethiopia has been designing development programs and policies that could foster the country's competitiveness through productivity improvement. Albeit all those efforts, however, the country's global competitiveness did not exhibit significant improvement in the last ten years. For instance, for the year 2015/16 alone, it ranked 109th out of 144 countries and its scores were below the African average on export diversification, productivity and technological upgrading (WEF, 2016).

2.2. International Trade Competitiveness vis-à-vis Logistics Sector

2.2.1. Definition of Logistics and Measuring Logistics Performance

The original term logistics dates back more than two centuries, originating from the military, where it means the supply of fighting troops with all necessary material (fuel, ammunition, foodstuff, etc.) and with lodging. It is defined by Council of Logistics Management as the process of planning, implementing and controlling the efficient, effective flow and storage of goods, services and related information from point of origin to point of consumption for the purpose of conforming to customer requirements. The integration of two or more logistics with in a network to create value, enhance efficiency and satisfy customers is called supply chain management.

Logistics is a network of services that support the physical movement of goods, trade across borders, and commerce within borders. Logistics encompasses an array of activities beyond transportation, including warehousing, brokerage, express delivery, and critical infrastructure services such as terminals. The mission of logistics is to get the right goods or services to the right place, at the right time, and in the desired condition and quantity in relation to customers' order.

The role of logistics in the global economy is better recognized today than it was 10 years ago. Good logistics services reduce the cost of trade. Logistics performance is about how efficiently supply chains connect firms to domestic and international opportunities. The Logistics Performance Index (LPI) tries to capture how logistically accessible, or how well connected to the physical internet of global logistics, a country is.

The performance of logistics service is normally measured on the basis of cost, time and service reliability (Warren H. Hausman, 2012). The performance of logistics in an economy depends on the public sector's interventions and policies. Public features include regulation, transportation infrastructure, the implementation of controls, especially for international goods (as in trade facilitation) and the quality of public–private partnership and dialogue.

The World Bank's LPI analyzes countries through six indicators:

i. The efficiency of customs and border management clearance.

ii. The quality of trade- and transport-related infrastructure.

iii. The ease of arranging competitively priced international shipments.

iv. The competence and quality of logistics services.

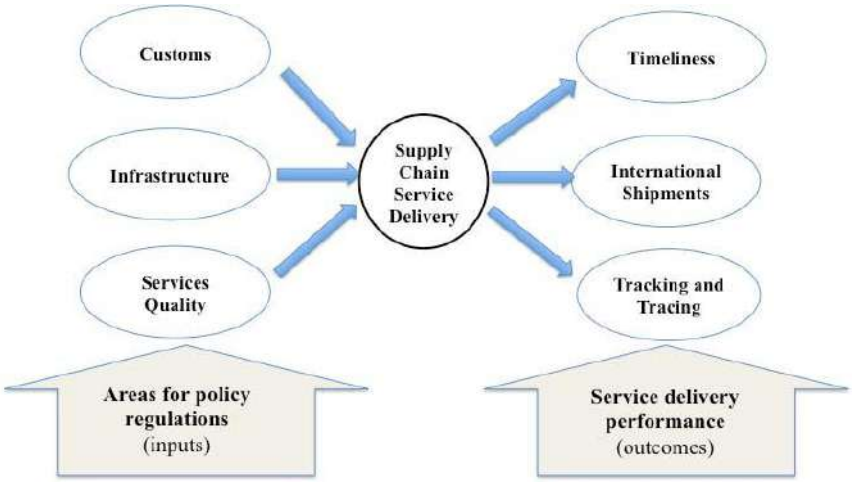
v. The ability to track and trace consignments.

vi. The frequency with which shipments reach consignees within the scheduled or expected delivery time.

The World Bank chosen the above components based on theoretical and empirical research and on the practical experience of logistics professionals involved in international freight forwarding. The figure-2 below maps the six LPI indicators onto two main categories:

- Areas for policy regulation, indicating main inputs to the supply chain (customs, infrastructure, and services).
- Supply chain performance outcomes (corresponding to LPI indicators of time, cost, and reliability—timeliness, international shipments, and tracking and tracing).

Figure-2: Input & Outcome of LPI Indicator



Probably the most comprehensive study that objectively considered most of the important factors in the assessment is that made by Bookbinder and Tan (2003) where the authors proposed attributes of a world class logistics system, applied cluster analysis to data from secondary sources to classify European and Asian countries into three levels (tiers) of logistics excellence.

2.2.2. The Role of Logistics for Trade Competitiveness

According to Porter (1990), national prosperity is created, not inherited. It does not grow out of a country's natural endowments, it labors pool, its interest rates, or its currency's value, as classical economics insists. A nation's competitiveness depends on the capacity of its industry to innovate and upgrade. Companies gain advantage against the world's best competitors because of pressure and challenge. They benefit from having strong domestic rivals, aggressive home-based suppliers and demanding local customers.

He pointed out that the competitive advantage of countries can be further analyzed by assessing the resources and conditions in the national industrial environment. Porter further pointed out the diamond model in which the factor endowment, market demand, relevant industry, and firm strategy and rivalry are important resources that support the national competitiveness in different industries. In addition, the government policy and market opportunity are also important conditions that effect on national competitive advantage.

Logistics services which include activities required for the transportation, storage and handling of production inputs and finished products from producer to consumer (or intermediary producer), play a critical role in international trade. Consumers of logistics services are typically suppliers of products themselves. Consequently, the efficient supply of logistics services helps to facilitate international trade in a whole range of other products. The timelier, reliable and efficient the logistics supply chain, the more efficiently and reliably goods can be delivered from the point of production to the point of consumption. In particular, increased international trade in unfinished products, i.e. the movement of intermediate goods within production processes, requires logistics services of ever-higher quality with regard to the reliability, safety, security and frequency of deliveries.

Competing international networks of increasingly multiservice logistics providers offer ever more diversified solutions for trade, commerce, and manufacturing. Indeed, the annual turnover generated by these global networks exceeds US$4.3 trillion (WB, 2018).

Statistically, total logistics costs (packaging, storage, transport, inventories, administration and management) are estimated on average at 20% of total production costs in Organization for Economic Co-operation and Development (OECD) countries. Transport usually accounts for a quarter of total logistics costs, storage for a fifth and inventories for a sixth.

If logistics services are inefficient, firms are likely to maintain higher inventories at each stage of the production chain, requiring additional working capital (bigger warehouses to store larger inventories). Gaush and Kogan (2001) estimated that developing countries could reduce the unit cost of production by as much as 20% by reducing inventory holdings by half.

While, Ethiopia’s scores under the World Economic Forum’s Global Competitiveness Index (GCI) have improved over the period 2012/13 to 2016/17 (from 3.6 to 3.8), several factors undermine the competitiveness of Ethiopian products in international market. These are inefficient trade logistics system, high cost of transportation; low productivity; products quality below sanitary and phyto-sanitary standards; poor coordination among various stakeholders; limited access to forex and finance; lack of experience and knowledge about international trade; marginalization of the country

for not participating actively in the regional and multilateral trading systems; limited access and expensive working premises and industrial land; and limited availability of inputs at reasonable price and quality.

Interviewed export-oriented manufacturing firms, business actors in the industry, business associations, government and non-government institutions, and think-tanks believed that, trade logistics is a critical factor in facilitating international trade and increase competitiveness in export for the reasons that the country's economic development and export oriented agro-industry products and services require efficient logistics system. Its economic strategy is focused on export sector and this sector requires effective trade facilitation and efficient logistics system. The timeliness, cost, price, and quality of export and import commodities is highly dependent on the logistics system.

Stakeholders of the logistics sector suggested that, for enhanced contribution of the logistics to the economy and trade; active participation of the private sector in trade corridor and logistical service facilities provision is vital. Moreover, the country need to use alternative seaports, these are Berbera, Port Sudan, and Assab port so that Djibouti port would be more competitive and responsive. Developing and using logistics hub and encouraging multi-modal system are also vital.

III. STATUS, PERFORMANCE, & MAIN FEATURES OF TRADE LOGISTICS

The efficiency and effectiveness of goods and services movements depends on the logistics performance of a country. The ability to transport goods quickly, safely, economically and reliably is vital to success of businesses, and to a nation's prosperity and capacity to compete in globalized economy. Logistics also serve as a major enabler of growth of trade and commerce in an economy and thus affect the economic growth of a country through influencing the macroeconomic variables such as the rate of inflation, productivity, and other aspects of the economy.

Peter Drucker stated that, logistics is one of the last frontiers of opportunity for organizations wishing to improve their corporate efficiency. Logistics costs represent a significant proportion of total costs that it is possible to make major cost reductions through fundamentally re-engineering logistics processes, in order to achieve sustainable competitive advantage.

Logistics play a key role in any economic competitiveness specifically for developing countries like Ethiopia, where the achievement of the national development goals depends on the sustainability of an economy growth for a reasonably long period. This in turn depends on the efficiency and effectiveness of the logistics industry of a country in terms of facilitating international trade to increase the competiveness of the export sector. As Ethiopia is a landlocked country, the ability to transport freight goods quickly, economically and reliably is very important to a nation's prosperity and competence in global market.

Currently, the logistics system of Ethiopia is characterized by poor logistics management system and poor transportation infrastructures. In addition to that, the country is mainly dependent on only Djibouti port for international trade. Its inland transportation is also underdeveloped as only road transportation is used for main share of freight transport. Detail discussion on the status of the available modes of transportation and logistics infrastructures of the country is provided in the section that follows below.

3.1 Status of Transportation

Transportation is one of the basic and important elements of operational activities in international logistics operation and it plays a significant role in the successful completion of the logistical chain process. Products produced at different places need transportation services to deliver them to the market place. Besides the transportation services, ICT has a paramount importance in the contemporary business world, since it is seriously assisting transportation operations and the whole supply chain process at large. The recent advancement seen in technologies greatly supported the development of transportation and communication system by improving the efficiency and effectiveness of the supply chain process. Today, it is common to book or track any shipment using products of information communication technologies very easily.

3.1.1 Road Transport Infrastructure and Service

The Government of Ethiopia (GOE) has steadily expanded its road network in recent years. In the past fifteen years, the GOE has been vigorously engaged in new road construction as well as upgrading of the existing road network through Ethiopia's Road Sector Development Programs (RSDP). As of the end of Fiscal Year (FY) 2018/19, Ethiopia had 138,127 kilometers of all-weather roads – about 39% of the required road network in the country. In FY 2018/19, the GOE invested 37.3 billion Birr ($1.13 billion) in road construction. The Ethiopian Roads Authority plans to build an additional 10,000 kilometers of road at a cost of 41 billion Birr ($1.24 Billion) in 2019/20. In the ten years' development of the of transport sector (2021-2030), to expand road transport infrastructure, it has set to build 102,000 kilometers new roads, thereby raising the overall national road network from 144,000 kilometers to 246,000 kilometers.

Road transport service covers 95% of the general cargo transportation. The number of cargo trucks with load capacity of less than one metric ton increased from 30,827 in 2016 to 55,797 in 2021 with an average growth rate of 16% annually. The number of cargo tracks with load capacity of more than one metric ton reached 146,263 in 2021 with an average growth rate of 10.5% annually. The total number of liquid cargo vehicles that are providing liquid transport service are 3,107.

As a landlocked country, Ethiopia primarily uses the port of Djibouti as a gateway for the vast majority of its internationally traded goods (through which 95% to 98% of its trade flows), with most of the goods essentially transported to and from the port by trucks. This situation has made Ethiopia's trade logistics very expensive and uncompetitive. Ethiopia's reopening of diplomatic relations with Eritrea has created the expectation of expanded logistics operations via the Eritrean ports of Assab and Massawa.

The new Addis Ababa-Adama toll road, the new Awash River crossing bridge and the under construction outer ring road of Lebu-Akaki-Goro are expected to improve the flow of traffic in the route in saving a travel time and lowering the vehicle operating cost. For instance, the heavy vehicles are only paying for 38% of the benefit they have gained on the new toll road.

3.1.2 Railways

Ethiopia is aggressively working to develop an extensive rail network. Ethiopian Railways Corporation (ERC) completed a 656 kilometer railway network construction project that links the

capital city Addis Ababa to the port of Djibouti. The new rail system began commercial operations in 2018.

The Addis Ababa-Djibouti rail project will significantly improve Ethiopia's international trade by reducing traders' logistical costs and time of delivery. The new electric railway reduces transport time from Djibouti to Modjo (a dry port city 70 kilometers from Addis Ababa) from the current 84 hours to just 10 hours. Cargo capacity on the rail network is 3,500 to 4,000 tons of freight per train, with ERC anticipating 6 to 7 million tons of cargo per year in its first few years of operation. Cargo volume will increase to 10 million tons in the mid-term.

In the ten years' development of the of transport sector (2021-2030), to expand rail transport infrastructure, it has set to increase the length of railway from 902 kilometers to 4,199 kilometers. The government is currently implementing a $2 billion National Logistics Development (NLD) strategy, which was incorporated into GTP II to alleviate trade logistic hurdles. Under this strategy, the GOE aspires to expand its rail network, targeting enhancement of the country's export competitiveness by significantly reducing trade logistic costs. As a part of the NLD plan, the GOE will further expand its railway network linking all the seven major dry ports and towns of the country.

3.1.3 Air Cargo

Aviation in Ethiopia is a high-growth sector with increasing demand for air transportation, both passenger and cargo, with the sector expanding at an average 20% growth rate. Ethiopian aviation sector set to grow 226% by 2037 according to the International Air Transport Association's (IATA). Air transport and foreign tourists arriving by air currently support 5.7 percent of the nation's GDP valued at $4.2 billion and about 1.1 million jobs. In the ten years' development of the of transport sector (2021-2030), to expand the aviation infrastructure, it has set to build 6 airports, 6 passenger terminals, and 10 cleared earth runways.

Ethiopian Airlines is the fastest growing airline in Africa. In its seven decades of operations, Ethiopian has become one of the continent's leading carriers, unrivalled in efficiency and operational success. Ethiopian commands the lion's share of the pan-African passenger and cargo network; operating the youngest and most modern fleet to 92 international destinations across five continents. Ethiopian fleet includes ultra-modern and environmentally friendly aircraft such as the Boeing 787, Boeing 777-300ER, Boeing 777-200LR, Boeing 777-200 Freighter, Bombardier Q-400 double cabin with an average fleet age of five years. In fact, Ethiopian is the first airline in Africa to own and operate these aircraft. Ethiopian Airlines also has plans to build a major airport outside of Addis Ababa with a capacity of 80 million passengers per year at a cost of $4 billion.

Air cargo is preferred mode of transportation for high value and perishable products. Ethiopian air cargo is transporting flowers and horticulture destined to export market and the logistic facility in COVID-19 era has greatly supported. Ethiopian has built cold store in Addis Ababa, Bahir-Dar and Mekele airports, a logistics infrastructure that is needed to store perishable export products, such as fruits, vegetables, meat and flower.

3.2 Logistics Service Provision

3.2.1 The State of Logistics Services Provision

The existing logistics service providers are engaged either in both freight forwarding and shipping agency business fields or separately in one of the two business fields. The freight forwarders are entitled to undertake a customs clearing business. In September 2018, Ethiopia's Investment Board has passed a decision that foreign investors are allowed to participate in logistics sector (freight forwarding & shipping agent services) through joint venture arrangement with domestic investors, where the foreign national holding a significant but minority stake of 49% or less. Three state owned enterprises namely Ethiopian Shipping Lines, Dry port Service Enterprise & Maritime & Transit Service, that were engaged in the logistics industry are amalgamated and formed Ethiopian Shipping & Logistics Service Enterprise (ESLSE). This state-owned enterprise provides freight forwarding, shipping, trucking and stevedoring services. ESLSE provides multi-modal and uni-modal transport operations. About 8% of these services are provided by the private sector. Forwarding service providers represent 17% of the service providers and the majority lacks strong financial bases and faces some problems in management and organization. Customs clearing agents consists of informal operators and represent about 75% of the services providers and focus on individual consignments in which they provide cheaper services based on personal contacts. The majority lacks strong financial capacity, management and organization.

3.2.2 Multimodal and Unimodal

The Ethiopian Shipping and Logistics Services Enterprise is currently known as a sole multimodal transport operator by providing a multimodal transport service to customers who are engaged in foreign trade activities and others. The multimodal transport service is currently being provided consolidating the sea transport, inland transport and other support activities under a single multimodal transport contract. Currently, 48% of the general cargo handled through multimodal system.

Given the lack of a cargo assignment system, most trucking companies prefer to wait in Djibouti for cargo. This prevents the possibility of contracting round trips which would eliminate some of the empty back-haul trips. The transport rates are fixed and based only on the distance traveled without regard to topography, road condition or the possibility of finding return cargo which affect the costs and profit of the associated trip for the trucking companies. There is no system designed to rationalize the handling of the empty containers at the dry ports, making it difficult for exporters to find an empty container from their shipping line and therefore returning all the containers empty at a higher cost.

In the unimodal system, Ethiopian documentation is completed and duties collected while the goods are at the port. The goods travel in transit to the destination for final clearance and final release. The unimodal system generally handles bulk, palletized cargo in boxes, breakbulk, project cargo, and containers. Some shippers use the unimodal system because it delivers directly to the destination. The ESLSE unimodal system also handles exportable items like coffee, sesame, pulses, textiles, spices, and processed foods.

Unlike the uni-modal transport system, shipments will not be allowed to stay longer days at the port of discharge (Djibouti port). As per the multimodal transport agreement made between Ethiopia and Djibouti, multimodal shipments are allowed to enter to Ethiopian dry ports prior to starting local customs clearance process by customers which was taking longer time in uni-modal transport system.

The freight transport and logistics is still characterized having long time custom processing even if it is much better with respect to previous times and also 57% of the customers chose uni-modal transport over multimodal transport. The new imported trucks by ESLSE may improve and increase the capacity of the freight vehicle carrying capacity to 57 ton/vehicle and also if the axle load limit is increased with 2 ton/axle limit, there is going to be an improvement on the vehicle operating cost.

In this study, interviewed enterprises stated that, ESLSE is providing shipping service in response to increasing import and export. To support the competitiveness of the export products, the enterprise is providing containers free of charge. This is in addition to the support that are provided to state supervised strategic commodities of the country.

3.2.3 Dry Ports Operation

The containers with imported goods to Addis Ababa are inspected by customs and other agencies at Modjo Dry port if they are carried through under multimodal regime (72% of total multimodal imports) and at Kality Dry port if they are carried through unimodal regime (70% of total unimodal imports). 75% of import goods handled at Modjo dry port. To shift Modjo dry port as a colorful logistics hub of the country, a new project worth of USD 150 million was launched for the expansion the dry port. The project is a transformative initiative which comprises comprehensive infrastructure enhancement of the port and associated facilities that are currently not available such as export consolidation, dry port storage and multi-model transfer platform to make import-export activities more seamless. In the ten years' development of the of transport sector (2021-2030), to expand the logistics infrastructure, it has set to increase the number of dry ports from eight to eleven.

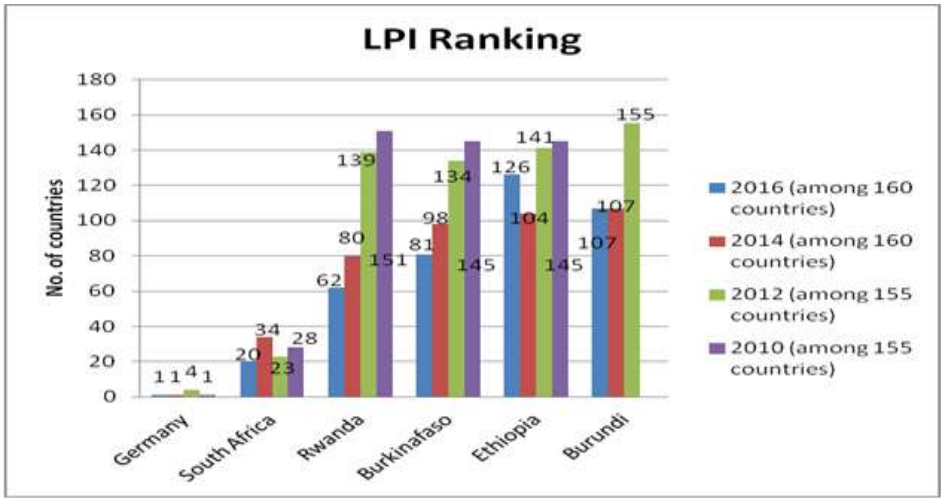
ESLSE has already tackled some of the bottlenecks at Mojo dry port, including delays in imports of containerized cargo. The major cause of delays is the presence of two types of users at the Dry Port. Those whose interest is in having their cargo released as soon as possible and those (traders) who want to store their cargo cheaply at the dry port while they search for customers. The average dwell time of 44 days marks the fact that some are cleared in 3 to 5 days, while others are held for over 140 days (and perhaps should be considered abandoned at that time). These long held containers take up space at the container yard, increase the number of containers per stack, and increase the number of moves to get to a container.

Interviewed stakeholders said that, government monopolizes all dry ports, this creates uncompetitive service provision and thus, private sector involvement in the logistics services provision should be promoted and supported to introduce competition.

3.3 Status, Performance, and Characteristics of Ethiopia's Trade Logistics

The status and performance of Ethiopia's logistics sector varies over the years. Regarding the facilitation of trade across borders (trade logistics), Ethiopia ranks 161st out of 185 economies under the World Bank's Ease of Doing Business Report. In World Bank LPI report, Ethiopia ranked 126th out of 160 countries in logistics performance and LPI score was 2.38 in 2016. This logistics performance is alarming as its relative ranking in the World Bank LPI dropped from 104 in 2014 to 126 in 2016 (World Bank LPI report, 2016). World top performers are Germany, Luxembourg, Sweden, Netherland and Singapore with rank 1-5 and logistics performance score 4.23, 4.22, 4.20, 4.19 and 4.14 respectively.

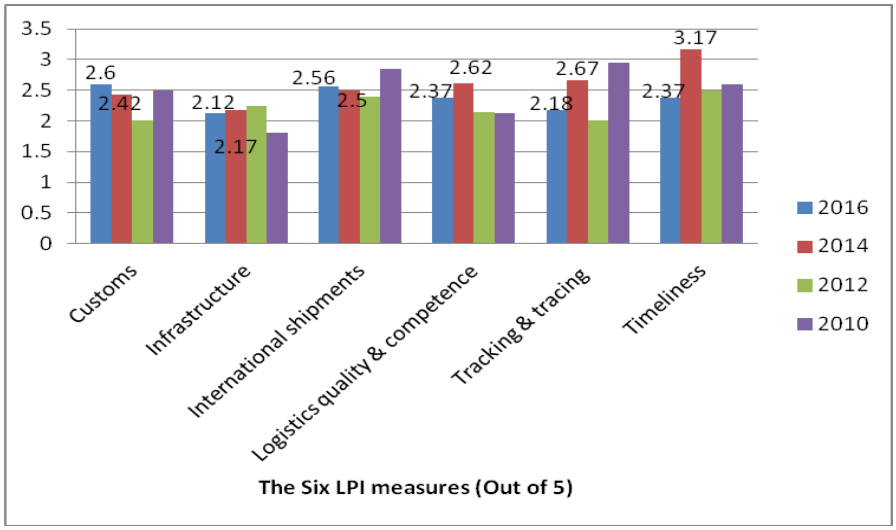
Figure-3: Ethiopia's LPI ranking (WB LPI Report 2010, 2012, 2014, 2016)



Source: World Bank LPI Report

As indicated in figure-3, Ethiopia ranked 126th in 2016 (LPI score is 2.38) among 160 countries on overall performance with fluctuation from 2010-2016. Besides, Ethiopia's LPI score on the six measures summarized in figure-4 below shows that the country is lagging behind the average low income countries. Specific indicators for customs and international shipments have shown slightly improvement in 2016. Tracking and tracing, logistics quality and competence, timelines show deterioration compared to previous LPI reports. These indicate higher logistics cost, longer transit time and poor service reliability.

Figure-4: Ethiopia's LPI score on the six measures (WB LPI Report 2010, 2012, 2014, 2016)



Source: World Bank LPI Reports

According to Ministry of Transport, Ethiopia logistics performance is found to be weak albeit the importance of the corridor for country's foreign trading. The inefficiency on the part of logistics as whole, make it difficult to attract foreign investment.

The low performance of the Ethiopia's logistics performance is attributed to issues related to trade finance and trade system, inadequate logistics services capability and poor co-ordination, inadequate infrastructure and poor facilities management.

Interviewed stakeholders, companies, and actors in the sector stated that, although there was improvements in logistics sector, the timeliness, reliability and cost of the overall logistics system is behind the average performance of peer and most developing countries. Specifically, Ethiopia's logistics sector appears to be considerably behind those of competitor countries in Asia as well as certain other land-locked countries in Africa, such as Uganda. With regard to actual costs, it has been calculated that for a 20-foot container of garment export to Germany, Ethiopia's logistics costs are 247% higher than that of Vietnam and 72% higher than that of Bangladesh. In terms of time the sea transport will take a voyage time of 40 days and 37 days (including vessel voyage time and time in ports) from Tianjin and Shanghai ports to Djibouti port, respectively. For inland road transportation from Djibouti to Modjo dry port, it takes 2-10 days on performance basis under normal circumstances. In the future, there might be a cheaper alternative of oil pipeline and railway in the Djibouti-Addis Ababa route, which are considered to be the more efficient and least cost modes of transport.

The substantial delays in shipping containers is one of many indicators of inefficient trade logistics in the country. Compared to selected European, Asian and African countries, the day required at border for customs clearance in Ethiopia is the highest. Clearance time varies from station to station and for import and export. More delay is observed while importing goods.

In Tanzania, in 2013, importing a single 20-foot container costs just 1,090 dollars, and exports in neighboring Kenya only require 2,000 dollars. While in Ethiopia, importing a container takes 41 days and exports 40 days, in Kenya exports only take 21 days.

There are several causes for the logistics sector lagging behind peer countries. Interviewed stakeholder said that, "one of the root cause is orientation in export competitiveness. For example, the industry zones shouldn't be concentrated in few areas only, rather they should be located in areas where resources are available. In China, Zuanzou, huge manufacturing zone is placed where resource can be easily mobilized. Hence, industry zones need to be closer to ports which reflects competitive price of logistics and commodity as well".

Stakeholder argued that, factors such as limited diversified export commodities, few trade destination countries, and non-membership to WTO, which has tariff related issues have implication on the sector performance.

At this time, the electronic single window service provision improved problems related with timeliness, reliability and price of the sector.

3.4 Ethiopia's Status in Trading across Border

This study reviewed World Bank's Doing Business report, as the report covered the time and cost associated with the logistical process of exporting and importing goods. Doing Business measures, the time and cost (excluding tariffs) associated with three sets of procedures—documentary compliance, border compliance and domestic transport—within the overall process of exporting or importing shipments.

According to the World Bank Doing Business Report of 2020, Ethiopia's ranked 156th in trading across borders among 190 economies, while, comparable economies, like Rwanda and Kenya ranked 88 and 117 respectively. Table-1 below further breakdown the indicator in three measurements and it showed that, the country is lagging behind Sub-Saharan Africa (SSA), in documentary compliance in terms of time to export and documentary compliance time to import and associated cost.

Table-1: Trading across Borders

Indicator	Ethiopia	Sub-Saharan Africa	OECD
Time to export: Border compliance (hours)	51	97.1	12.7
Cost to export: Border compliance (USD)	172	603.1	136.8
Time to export: Documentary compliance (hours)	76	71.9	2.3
Cost to export: Documentary compliance (USD)	175	172.5	33.4
Time to import: Border compliance (hours)	72	126.2	8.5
Cost to import: Border compliance (USD)	120	690.6	98.1
Time to import: Documentary compliance (hours)	194	96.1	3.4
Cost to import: Documentary compliance (USD)	750	287.2	23.5

Source: World Bank Doing Business Report, 2020

Below table-2 illustrates Ethiopia's import and export travel time and cost for a given items.

Table-2: Details – Trading across Borders in Ethiopia

Characteristics	Import	Export
Product	HS 09 : Coffee, tea, matï and spices	HS 8708: Parts and accessories of motor vehicles
Trade partner	Germany	Japan
Border	Galafi-Awash border crossing	Galafi-Awash border crossing
Distance (km)	698	698
Domestic transport time (hrs.)	48	48
Domestic transport cost (USD)	550	529

Source: World Bank Doing Business Report, 2020

Customs Status

Table-3: Details-Trading across Borders in Ethiopia- Components of Border Compliance

	Time to Complete (hours)	Associated Costs (USD)
Export: Clearance and inspections required by customs authorities	12.0	65.0
Export: Clearance and inspections required by agencies other than customs	35.5	106.5
Export: Port or border handling	3.4	0.0
Import: Clearance and inspections required by customs authorities	72.0	120.0
Import: Clearance and inspections required by agencies other than customs	0.0	0.0
Import: Port or border handling	3.2	0.0

Source: World Bank Doing Business Report, 2020

IV. POLICIES, PLANS, & STRATEGIES OF LOGISTICS SECTOR AND BEST EXPERIENCES OF OTHER COUNTRIES

4.1 Policies, Plans, and Strategies of the Logistics Sector

If Ethiopia continues its notable growth performance, it would potentially reach middle-income status by 2025. This entails a logistics system that comes up with the current and future development requirements. In line with this, many opportunities are also identified which Ethiopia can tap for future growth which could help transform the logistics industry to a more efficient, effective, sustainable and competitive service delivery.

Trade logistics service is highly associated with a county's security status and policies. It is also important to ensure polices and laws are coordinated to achieve efficiency in the logistics

sector. Ethiopia's logistics sector challenges emanate from both policies or regulations and their implementation. It shall look into a new horizon to establish modern and efficient logistics system. In this regard, partnership between public and private sector and active involvement of the private sector is required. Recently, the government is towards involving the private sector, such as the ratification of the multi-modal directive. It should be noted that, the logistics infrastructure plays a key role to transform the sector.

4.1.1 Transportation and Transportation Logistics Policy

The Ministry of Transport has prepared transportation policy. The policy proposes to consolidate transport institutions and four existing and proposed regulatory agencies but there is no specific rail regulator, and one is needed. Yet, there is no stated transportation logistics policy document as such, either for the sector as a whole or for the individual sectors. However, there are written indications of policy with regard to these topics and to each mode of transport. These are found in the various proclamations relating to the different modes of transportation and the regulatory authorities mandated with their oversight. Each such proclamation contains a preamble, which generally sets out the reasons for its enactment and a provision setting out the stated objectives of the legislation. The preamble and stated objectives are, at the least, indications of the government policies leading to the enactment of these pieces of legislation and will be discussed below as part of the discussion on applicable law and policy relating to the applicable institutions and modes of transport.

4.1.2 Regulatory Frameworks and Enforcement

The Ethiopian Customs Commission (ECC) is implementing a variety of tools recommended by the World Customs Organization (WCO) for efficient regulatory framework. These include risk management, an Authorized Economic Operator (AEO) program, a new valuation system, electronic seals and tracking devices, scanners and so forth. It is critical that they are instituted well and that unnecessary redundancy of controls is eliminated. For example, ECC is developing a risk management program that seeks to do risk profiles based not only on customs experience with the company, but drawn on experiences throughout Ministry of Revenue, which is a very positive step. Nevertheless, at this point, while elaborate monitoring systems are being constructed, most cargo is still going through physical examination. While customs is starting an AEO program, identified AEO companies are still queuing with other trucks, rather than being fast tracked through a lane bypassing the inspection area. The AEO right to use a secure transit lane and minimal inspections is controlled by periodic verifications and submission to a post-clearance audit. Good practice in customs agencies is establishing compliance programs in which compliant companies are given certain benefits for their compliance and the customs agency is able to focus on those companies that have a record of non-compliance.

The need for more reliable connectivity is clearly demonstrated in customs. There is an agreement between Ethiopian and Djiboutian customs for a special regime that will facilitate the movement of cargo at the Port, in transit on the Ethio-Djibouti Corridor and at the border posts. Yet, much of it is not being implemented because the connectivity necessary for implementation is not in place.

In addition to the improvements being sought in customs, it is essential that all border control agencies improve their clearances. It will not help for customs to improve its time, if agriculture or veterinary services delay cargo. Addressing the inefficiency in coordination among agencies, is called Cooperative Border Management (CBM) or IBM. It will be a critical component of future improvements.

Interviewed stakeholders were asked to point out the greatest legal, institutional, administrative, and infrastructure constraints that impede export sector in connection with trade logistics and for logistics sector actors as well. Accordingly, they indicated that, institutional arrangement of the logistics system is far behind the required. The institutions have no adequate capacity to lead and manage the sector. Appropriate interventions needed to develop the capacity of private sector (companies) in addition to customs and transporters.

In the interview of this study, stakeholders specifically asked to provide their feedback and comments on customs laws and procedures and their overall valuation of the performance of customs and border institutions. Accordingly, regarding customs, several bottlenecks are resolved with the new introduced integrated service provision, a single window procedure that is believed to reduce documentation redundancy and procedural complications. However, still the system requires further simplicity. System interruption, unavailability of internet and size of attachment, and service hours for those who export at night (like meat, flower) are the new emerged challenges in associated with the system. The one window service need to introduce for export trade as well.

Sometimes customs laws create complexity. Policies making should be based on rigorous studies to ensure service reliability and simplicity. Before the enforcement of new customs procedures, the exporters and transistors should be involved and be aware of the changes. Custom laws need to be compatible with the international standards and laws must be proactively reviewed and revised timely.

There is limited human capacity development; this is exemplifying by custom officers who do not have adequate knowledge of the system. There is lack of balance between trade facilitation and contraband control. The authority's orientation is more of revenue generation than trade facilitation. There is lack of collaborative relationship between traders and customs authority, partly due to traders' attitude, as they tend to escape customs procedure and while the authority has controlling behavior.

Too many checkpoints and frequent complete checking is used instead of sample checking based on risk assessment. At Djibouti site, checking is conducted not based on protocol. Sometimes, when checking conducted on commodity, it creates additional delay and ships might leave without cargo.

The law in Ethiopia shall as well serve with that of in Djibouti. For instance, Djibouti has mandate on container that are not allowed. There are also non-value adding document requests, last minutes additional request that causes further delay, network congestion and intermittent service availability causes repeated entry of data, customs offices are not working in weekends whereas the grace period counts also on weekends, new directives and circulars are posted on notice boards that are inaccessible to all customers on time, internal communication within departments and branches is not yet integrated and still involve customers to exchange information and documents, and unnecessary repetition in organization of data and information.

As there are no transit offices at dry ports, it is not possible to follow up clearance. Commodities have to be moved out within 15 days as per procedure, but due to bureaucracy whenever customers are forced majeure the authority doesn't take into account the bureaucratic burden, rather they just collect the penalties. The other challenge is the administration of dry ports where commodities are obliged to exit the port within 15 days otherwise will be confiscated by the authority. However, the authority is not prepared well to implement and this forced the enterprise to pay for container for extended period of time. There is also shortage of cargo cranes at dry port.

Poor road infrastructure particularly in Djibouti. The train infrastructure that is extended to the actual port site is in short of 1.5 Kilometer (due to disagreement with Djibouti) where Djibouti transporters are involved as business opportunity. This must be resolved. On the other hand, train is scheduled for Tuesday and Friday but not operating accordingly and this causes exporters to miss shipment. Briefly, since most of the country's export items are agricultural and are subject to quality control, all aspects of the logistics need to respond well in terms of time, cost and service reliability.

4.2 Major undergoing Initiatives on Logistics

4.2.1 National Logistics Strategy

Reports published by international organizations, such as the World Bank, indicate that poor logistics is severely hampering trade and foreign direct investment. This is forcing the Ethiopian government to develop a more in-depth detailed strategy for the logistics sector. The government, through the Ethiopian Maritime Affairs Authority (EMAA), has prepared a National Logistics Strategy (NFLS) that provides an assessment of Ethiopia's logistics sector, identifies the main logistics impediments, and provides key recommendations to transform the sector. The strategy has 6 goals and 98 intervention areas. The NFLS has outlined key strategies along with corresponding interventions for implementation in five areas: improving logistics service offerings; improving trade finance, production and the distribution network; improving and developing trade logistics facilities and infrastructure; implementing an efficient transit and trade facilitation; and setting up effective logistics governance. National Logistics Strategy document has set targets reducing from port to inland destination from 46 to 7 days.

The $2 billion National Logistics Development strategy is currently under implementation, which was incorporated into GTP-II to alleviate trade logistic hurdles. Under this strategy, the GOE aspires to expand its rail network, targeting enhancement of the country's export competitiveness by significantly reducing trade logistic costs. As a part of the NLD plan, the GOE will further expand its railway network to roughly 1,545 km (960 miles) linking all the seven major dry ports and towns of the country.

4.2.2 Plans and Projects

The ten years' development plan (2021-2030) of the country has set principal objectives of trade development plan. These are to establish a modern, equitable and competitive domestic marketing system; to increase the variety, quantity, and quality of export products mainly by focusing on value addition; to expand trade destinations by strengthening regional and international trade relations; and to increase the amount of forex earing. Furthermore, the plan has set targets to achieve the

aforementioned trade development objectives, among other to put Ethiopia among 50 countries that have removed trade barriers, thereby raising the ease of doing business score from 48 to 80. The stated trade objectives and targets requires reliable, efficient, and affordable trade logistics system.

The government has a long-term commitment to expand and modernize the logistics sector. In 10-year perspective development plan of the transport sector, Ministry of Transport has planned to construct road and rail projects to modernize the logistics sector. Furthermore, the Ministry has given priorities to achieve efficiency in the logistics service. Accordingly, the Ministry is working to bring down cargo demerge from 40 to 3 days. As part of the effort, the Ministry has established the Ethio-Djibouti Corridor Technical Committee charged with coordinating logistics activities with Djibouti partners. That includes harmonizing working hours of the logistics services between the two sides.

The Ethiopian Trade Facilitation Project is a continuation of the first phase, Project by International Finance Corporation (IFC). Ethiopia Trade Facilitation Project under Component 1- supports Ethiopian Customs Commission and other stakeholders, such as Ministry of Trade and Industry, Ethiopian Food and Drugs Administration, and Ministry of Agriculture. Whereas, Component 2 of the project–supports the Ethiopian Maritime Affairs Authority (EMAA) in realizing relevant parts of National Logistics Strategy and Ethiopian Revenue and Customs Authority in facilitating trade environment.

In line with the goal of increasing the capacity of leading and managing a better trade- logistics, the World Bank Group works with developing country policymakers and private sector leaders funding different projects for successful change in the sector. Hence, the project "Ethiopian Trade Logistics Baselines Collection" and implemented by Frontieri will be of support for the necessity to draw data that can serve as a baseline measure, and enable collection of the much needed baseline information from the target groups; logistics operators, customs brokers, exporters, importers and various decisive agencies in Ethiopia.

✓ Modjo Logistics Hub & other projects

The government introduce a multimodal system to ease the movement of goods and avoid the confiscation of goods at the Port of Djibouti. The table below illustrates local containerization at Modjo and Endode.

Table-4: Local Containerization: Modjo and Endode

Key Performance Indicator	January 2018	August 2019
Containerized cargo quantity	33%	42%
Logistics cost (Twenty-Foot Equivalent Unit - TEU)	$1,309	$950
Logistics Time – T & R	6 days	4 days

Major initiatives are under way to improve trade logistics, including new high-speed rail and multi-lane highway connections to Djibouti's main port and improved border connections to neighboring countries; and the establishment of new export-oriented industrial parks in which all firms benefit from the Authorized Economic Operator procedures for imports and exports.

✓ Deregulation

Ethiopia has also made significant reforms to its logistics industry with the consolidation of Ethiopian Shipping Lines management, domestic logistics operators, and interior dry ports into ESLSE. The effect of this move, as well as of Ethiopian Airlines' ongoing monopoly position in air transport, on Ethiopia's evaluated ranking on ease of trading across borders remains to be seen.

Interviewed respondents were asked to evaluate the role and the performance of private operators in the logistics sector, including freight forwarders and customs clearing agents, transporters, private operator in dry and airports. Accordingly, they revealed that, the involvement of the private sector is mandatory. However, suitable legal support and facilitation is required to harness private sector participation. In this regard, there are challenges to aware the authority on the legal procedures to be implemented. The government is shall manage the seasonal fluctuation of transport services by involving the private sector. There are opportunities to improve trade logistics sector and to enhance the role of private sector in the sector as well. These are technology and ICT based administration of the logistics system.

4.3 Experiences of Best Performing Countries and Status in Trade Logistics

The logistics gap between high- and low income countries remains wide. The countries with the worst performance in 2012 were least developed countries that were also landlocked countries, small-island states, or post conflict countries. Making up three-fourths of the bottom LPI quintile, these countries typically have small trade volumes, are far from trade hubs, and are hampered by severe capacity constraints. Adding to their difficulties on top of their reform challenges and their lack of scale economies for infrastructure and services is their dependence on the logistics of similarly constrained neighboring countries.

The Ethiopia-Djibouti corridor linking Ethiopia to the Port of Djibouti is now the dominant gateway for the country with over 95% of Ethiopia's imports and exports using this route. The port of Djibouti port charges for 20 feet and 40 feet containers and average seaport dwelling time were analyzed. A representative comparison has been made on port charges and inland transport for import cargo with regional and African countries as shown in the following tables.

Table-5: Port charge comparison with regional ports

Cargo	Port charges (USD) full container								
	Aden	Hodeida	Port Sudan	Berbera	Mombasa	Avg.	Min	Max	Djibouti
20'	228	235	127	200	157	189	127	228	455
40'	301	159	172	300	195	225	159	301	810

Dwell Time

Figure-5: Comparison of average sea port dwelling time (Days) from East African Ports

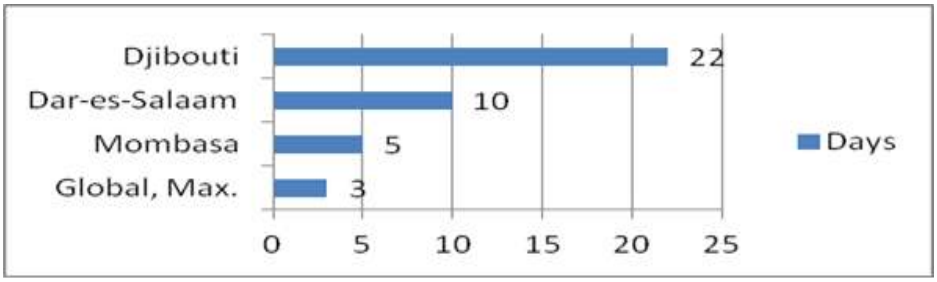


Table-6: Inland transport comparison with East African ports

Origin	Destination	Distance, KMs	Rate/TEU	USD/KM	USD / Ton	USD/Ton KM
Mombasa	Nairobi	483	1045	2.16	34.83	0.072
	Kampala	1137	3700	3.25	123.33	0.108
	Kigali	1439	4800	3.34	160	0.111
Dar-es-Salaam	Kampala	1571	4600	2.93	153.33	0.098
	Kigali	1475	4300	2.92	143.33	0.097
Djibouti	Addis Ababa	925	2050	2.22	68.33	0.074

The import cost is higher compared with regional and African counties. Briefly, while, there are improvements in trade facilitation and logistics sector, such as Ethiopia has achieved 2.9 out of 5 in customs logistics but the country is lagging behind peer countries.

- Countries experience indicated that, shipping and logistics service in most developing and land-locked countries is not monopolized. The involvement of the private players in the sector created fierce competition and thereby enhance service quality. Thus, based on other countries experience multi-modal system should be promoted well. Further, countries have sector specific banking, such as construction, agriculture, industry, export, and the like.

- **Kenya:** in Kenya, 70 - 80% of money transaction is based on mobile banking and thus, the financial transaction in Ethiopia need to be technology based and efficient. Although, Ethiopia attracts more FDI in the east Africa, Kenyan economy is performing well. In Kenya, there is no asset tax on trucks rather they pay for insurance.

- **Rwanda:** Djibouti has double tax (>30%) higher than that of Rwanda.

- **China:** Among the root causes for flimsy logistics system in the country is orientation of the export competitiveness. For example, the industry zones shouldn't be concentrated in few areas only, rather they should be located where resources are available. In China, Zuanzou, huge manufacturing zone is placed in where resource can be easily mobilized. Hence, it is beneficial to establish industry zones in areas closer to ports that reflects competitive price of logistics and commodity as well.

- **Vietnam:** most of Vietnamese commodities are exported through China, which has the most efficient logistics system.

V. ANALYSIS AND DISCUSSION

5.1 Challenges of Trade Logistics for Export Competitiveness

In order to realize the objectives and ensure that the country's vision and dream come true, a coordinated and concerted effort on innovative freight transport and logistics system at national level is critical. Although, country level self-assessment on logistics and customs revealed improvements, in this new era of economic development, both soft and hardware of logistics infrastructure are lacking in Ethiopia.

This study revealed that the logistics system of the country is characterized by poor logistics management system; institutions that are doing business as usual, controlling attitude rather facilitating and limited integration among themselves; inadequate logistics infrastructure; inadequate fleets of freight vehicles in number and age; and damage and quality deterioration of goods while handling, transporting and in storage. These coupled with lack of seaport resulted in poor linkage of producers (farmers) to the consumers (market) and non-competitiveness of Ethiopian goods on global market, which compromised livelihood of the people and economy of the country. There is very high rate of traffic accident (first in the world) and congestion in cities and at city inlets/outlets to which freight vehicles contribute significantly. Efficient and effective logistics system needs to be put in place to solve these socio-economic problems.

Several bottlenecks affect the effectiveness and efficiency of logistics sector in the country. The table below provides the major issues and constraints of the sector

Thematic Area	Specific Hurdles and Constraints
Policy, Legal, Regulatory and Procedure	o More efficient transport and logistics sector can be realized through private sector participation. Yet, the private sector participation in the logistics sector is highly constrained. While, government owned ESLSE and endowment companies have easier access to finance, private operators are constrained by access to finance. o Limited competition in the logistics industry due to monopolization of shipping and logistics services. The government monopoly position is more dominant in import goods. o Limited awareness in regulatory procedures.
Institutions and Human Resource	o Absence of adequate skilled and qualified labor in logistic operation and in emerging economic and supply chain management system in governmental and private organizations. o Lack of organization and management tools that are required to promote intermodal system. o Lack of competent actors in the logistics system and lack of capacity to establish brand and competent logistic company. o Limited coordination and integration among the industry actors. o The customs officers do not have adequate knowledge about customs procedures. Officer fear auditors and they are more bureaucratic as a result. Complaint review requires 15 days a minimum, which automatically increase the unintended cost.
Administrative and Management	o Too many checkpoints. Inconvenient checking points or border posts and bureaucratic burdensome in customs compliance. o Political instability and inadequate trade corridor security and prevalence of road accident along the trade corridor. o High congestion of freight trucks in the border partly clearance problem and importers also tend to keep their containers there until they find a buyer. o The sector challenge also emanates from leadership. The export support committee should be re-established with members from Ethiopian Customs Commission, various trade bureaus, Ministry of Finance, Ethiopian Shipping and Logistics Services Enterprise, National Bank of Ethiopia, and the private sector.
Infrastructure, Facilities and Equipment	o Inadequate and inconvenient road infrastructure. Lack of adequate logistic infrastructure and facilities. These are inland transport facilities; facilities for export consolidation/stuffing/ packing, bagging and discharging services for bulk shipment; limited number, capacity and well-equipped dry ports and Container Freight Station (CFS), bonded warehouse facility and cargo handling equipment. o Hurdles in containerization of export items. Shortage of containers and longer waiting time to get container, and difficult to get quality and efficient container. Although, some export items need a special and dedicated container, containers are being used for multi-purpose, which compromise the quality of the item.

Thematic Area	Specific Hurdles and Constraints
Transport Service	o For inland cargo transport service, there are government owned transport companies, transport associations, and endowments. The structure of transport companies created complication and as a result, freight transport system in the country is complex. Track operation is costly. There is lack of business concept in transport system. Lack of sufficient specialized cargo tracks for special and dangerous products and limited organized information and data on cargo and cargo tracks are hurdles of the cargo transport service. o Transport cost is expensive, among the reasons is load factor, which is 60-65% and round trip is covered by import goods. Likewise, inland transport cost to transport export products from resource areas is expensive. o Damage of goods and quality deterioration while in storage, packaging transporting, and post-harvest loss in food items. o Inefficiency in transport service provision, management and coordination. For example, freight transporter said that, the government abruptly instruct transport companies to provide compulsory transport service during the time when tracks are engaged in other duties. Freight trucks are too old and in shortage. Price of transport or truck service is high. The price of transportation increases when bulk imports are needed (for agricultural inputs and products) and this require better transport management. Arrival of trucks at Djibouti port before the completion of export preparations (document submission) is a challenge. o Lack of coordination of goods transport (which resulted in low load rate). o Poor traffic flow patterns, congestion in cities and at inlets/outlets, and lack of adequate and convenient parking spaces for trucks.
System	o Inefficient logistics system and lack of integrated logistics management that increased the price of export and imports items. o Long port dwelling time and lack of proper systems for the management of port facility that causes delayance in locating containers. Port dwelling time of cargo is more than ten-fold longer than the international standard, which is on average of three days. o Limited and unreliable Information Communication Technology (ICT) services. o Inefficient information exchange. Occurrence of delay due to information exchange asymmetry between the exporter and receiver, even before unloading of cargo.

In a nutshell, as a result of aforementioned hurdles of trade logistics, the sector is characterized by high logistics cost, longer transit time, and unreliable and low quality services provision.

5.1.1 High Logistics Cost

Ethiopia, one of the 16 landlocked countries in Africa, has two major dry ports and heavily relies on ports from its neighbor Djibouti. According to Ministry Finance, high cost of charges, reduced free time for imported cargo, the untimely availability of empty containers of export cargos and inadequacy of facilities remain the major challenges that escalated Ethiopia's total logistic cost for its import and export trade, which affected the country's competitiveness in the international market.

Logistics cost account 20 to 25% of the GDP for Ethiopia while it is below 10% for developed countries. According to Ministry of Finance, Ethiopia consumes 16% of its foreign trade value, which is about two million USD per day for transit costs. Poor trade logistics adds about 10% to companies' production cost.

Trade competitiveness is influenced by many issues including transit time, logistics cost, port lifting capacity, port dwell time and service delivery among others. Here the logistics cost will be analyzed. The logistics cost components considered in the analysis include transactions, transport, storage and port handling and other costs.

Table-7: Logistics Cost Performance

Cost List	**Unimodal**		**Multimodal**	
	Cost (USD)	%	Cost (USD	%
Shipping at Sea	725	28	725	30
Port Service at Djibouti	650	25	600	25
Land transportation to Ethiopia	1127	43	1000	41
Inland dry port service	100	4	113	4
Total	2,602	100	2,438	100

Source: Maritime Affairs Authority, Internal Diagnosis Report, 2018

i. Calculating Import Costs

The cost to import or move 20feet equivalent container, which is non-hazardous cargo from Shanghai (China) has been considered using the proposed Ethiopian logistics cost model and secondary data available from various sources taking average cost both under uni-modal and multimodal to Djibouti and Modjo/Addis Ababa are summarized in table-8 based on the underlying assumption listed below.

Table-8: Average Import Logistics Cost, USD (20' Containerized cargo)

Cost component	**Uni-modal**		**Multi-modal**	
	Cost	**%**	**Cost**	**%**
Transaction L/C value	1404	27	1404	27
Sea freight	1055	20	1055	20
Port handling & Storage	954	18	600	12
Djibouti to Djibouti	700		600	
Storage	254		-	
Inland Transport from Djibouti to Addis Ababa/Modjo	1400	26	1237	24
Insurance	200	4	200	4
Scanning	42	1	42	1
Commission and other expenses	60	1	100	2
Dry port handling	-		113	2
Container demurrage	150	3	200	3
Dry port storage	-		257	5
Total	5,265	100	5,208	100

Assumptions:

- Value of cargo USD 40,000
- Non IMDG cargo
- In 1x20'container
- Loaded from Shanghai China
- Container demurrage 30 days for uni-modal & 40 days for multimodal
- Demurrage free time is 30 days for uni-modal at Djibouti & 20 days for multimodal at dry ports
- Dwelling time 40 days at Djibouti for uni-modal & 60 days at dry ports for multimodal
- Industry average is taken for port expenses

The facts in Table-8 show that for import logistics, the transaction cost (L/C value) and the inland transport cost being almost equal constituting the highest share of the total logistics cost followed by sea freight cost. In general, the total logistics cost (TLC) for import is in the high side in all its components.

Transport Cost

The highest transport costs are found in African and central Asian land locked developing countries. This high costs continue to be greatest impediment to the countries' trade competitiveness, equitable access, and global markets. Likewise, transport cost in Ethiopia is high and the country need to address infrastructure gaps in order to address high transit transport costs and improve trade competitiveness.

The table-10 below illustrates the cost associated with inland freight transport both by uni-modal and multi-modal transport. The import freight inland transit cost for transporting by trucks is the expense involved in moving cargo to inland dry ports and at destination/consignee premises. The inland transport cost from Djibouti to Addis Ababa/Modjo accounted the highest share of average import cargo transport costs in unimodal and multi-modal.

Table-9: Average Import Cargo Transport Cost (USD)

Cost component	**Uni-modal**		**Multi-modal**	
	Cost	%	Cost	%
Sea Freight to Djibouti	1055	34	1055	35
Djibouti port Handling	700	22	600	20
Inland Transport from Djibouti to Addis Ababa/Modjo	1400	44	1237	41
Dry port handling	-		113	4
Total	3,155	100	3,005	100

Sea Freight Cost

The sea freight transport cost is the amount paid for the process of transporting cargo by ship from port of origin to port of destination in this case Djibouti port. Ethiopia's sea freight rate is expensive compared to other selected countries with same port of origin. Summary of freight rate from different shanghai port to various ports is tabulated in table-10.

Table-10: Freight rate (USD/TEU) from Shanghai to various ports

Port of origin	Port of destination	Freight rate /TEU
Shanghai	USA west coast	2,033
	USA east coast	3,290
	North Europe	1,084
	Mediterranean	1,151
	South America Santos	1,380
	Australia Melbourne	818
	West Africa (Lagos)	1,927
	South Africa (Durban)	805
	Singapore	231
	Japan	346
	Korea	197
	Hong Kong	85
	Dubai	771
	Djibouti	1,055

Source: UNCTAD, 2014

South African ports (Durban) enjoy cheaper freight level due to their high trade volume movement and high concentration of liner shipping connectivity as they are hubs served direct without transshipment. Areas where the global carriers operate are characterized by having many and large number of specialized vessels and global network. As a result, they enjoy high frequency, low transit time, low freight rate, strong marketing strategy, modern communication and fast documentation. Despite the favorable connectivity in shipping, the Ethiopian freight rate is not justifiable. The freight rate is influenced by working along the route on frequent (weekly) services, economies of scale and export import balance.

ii. Calculating Export Costs

According to world Bank's doing business 2013 report, the average costs of exporting a container for landlocked developing countries increased from 2,220 USD in 2006 to 3,000 USD in 2013, while transit developing countries are only paying 50% of this cost.

Total Logistics Cost

Similar analysis has been performed for export logistics considering major export commodities, Coffee and Textile to Hamburg and Istanbul, respectively. The cost matrix is provided in table-11 below.

Table-11: Export logistics cost (USD) for sample commodity - Uni-modal

Cost component	20' cost	%	40' cost	%
Transaction L/C value	0	0	0	0
Transport	1,700	77.27	2,900	78%
Inland transport to Djibouti	600	(27.27%)	1,200	32%
Sea freight	1,100	(50%)	1,700	46%
Port handling & Storage	460	20.91	751	20%
Port operation handling (Djibouti)	460	(20.91%)	751	20%
Storage	0	0	0	0
Other costs	40	1.82	80	2%
TLC (USD)	**2,200**	**100**	**3,731**	**100%**

From the above table-11, it can be inferred that the major cost for these particular export commodities accounts for transport (77% and 78%) and port handling accounts about 20.9%. This implies that the export logistics cost is higher yet free from transaction fee at local banks. The port handling cost can be minimized by stuffing in Ethiopia.

5.1.2 Longer Transit Time

Customs procedures, documentary requirements, inspections as well as general security issues can all severely hamper the timely movement of goods across borders which leads to substantial administrative and financial burdens and there by entail substantial economic and social costs to the national economy. There is delay in communication between customs commission's frontier and destination customs clearing stations.

Table-12: Transit Times Performance

Activities	Transit Time (Days)				
	Unimodal			Multimodal	
	Bulk	Cont.	RoRo	Cont.	RoRo
Get transit permit from customs in Ethiopia	2	2	2	---	---
Customs clearance at Djibouti	2	2	2	1	1
Get delivery order from ship agent at Djibouti	1	1	3	1	3
Receiving goods at port	1	1	1	1	1
Carrier assignment and getting port gate pass	2	1	1	1	1
Loading and documentation for land transport	1	1	3	1	2
Inland transport	3	3	3	3	3
Customs clearance at the destination and shipment delivery	2	1	2	4	4
Total	**14**	**12**	**17**	**12**	**15**

Source: Maritime Affairs Authority, Internal Diagnosis Report, 2018

Table-13: Logistics Time for Import Cargo under unimodal and multimodal

Activities	Unimodal		Multimodal	
	Time (days)	%	Time (days)	%
Submit forex permit and LC opening	45	37	45	40
Waiting time for ship at the port of loading	10	8	10	9
Shipping at sea	25	20	25	23
Waiting time for ship at the port of discharge	37	30	6	5
In-land transport	3	2	3	2
Dwell time at dry port	-	-	19	17
Customs clearing and shipment delivery	3	3	4	4
Total	123	100	112	100

Source: Maritime Affairs Authority Internal Diagnosis Report, 2018

Specific Challenges in Export Trade Logistics

The challenges related to export logistics performance include among others

- The performances of the banking services required for export trade takes longer time.
- Few financial instruments are available to assist exporters in managing their cash flow from the time an order is received until the time payment is received.
- Getting export permit (customs) is time taking.
- Inspection by relevant public regulatory authorities is done in different locations.
- It is time consuming to fulfill the required number of documents.
- Cumbersome process and procedures for clearance of imported inputs to be used in preparation of exports.
- Higher processing time and transportation cost of export products. Difficulties in terms of organization of the export cargo operations at Djibouti including empty availing, stuffing and also costs.
- Port facility limitation in Djibouti to handle some type export cargoes and does not go with and fulfil Ethiopia's development.
- Lack of integrated ICT system applications to organize, plan and timely arrange export shipments is lacking and excessive manual documentations are in use.
- Port transit expenses (port operation) such as stuffing and handling charges in Djibouti are on the high side compared to neighboring ports.
- Longer transit time (delay) for the export.
- ESLSE inability to participate in the carriage of export cargo.

5.2 Assessment of Logistics Practices based on Specific Attributes

Table-14: Overall assessment of logistics practice in Ethiopia

General Attributes	Specific Attributes	Description
I. Infrastructure	1. Distribution infrastructure 2. Infrastructure maintenance and development 3. Water transportation 4. Air cargo	1. The distribution/collection of goods is generally inefficient due to poor road infrastructure 2. Infrastructure maintenance and development is/is not adequately planned and financed due to limited resources 3. Landlocked, no international waterways. Rivers with rapids and falls, non-navigable except Baro 4. Cargo handling throughput is good
II. Performance	5. Customs administration 6. Process management 7. Customer orientation	5. Hinders the efficient transit of goods, there is much delay caused by customs 6. Process management (quality, time to market, etc is not emphasized in Ethiopia) 7. Does not emphasize customer satisfaction adequately
III. Information System	8. New information technology 9. Electronic commerce	8. Implementation does not meet business requirements, use at rudimentary level 9. Is not developed at all for business opportunities
IV. Human resources	10. Labor regulations 11. Immigration laws 12. Skilled labor 13. Industrial disputes 14. Industrial relations 15. Employee training 16. Worker motivation	10. Regulations (hiring and firing practices, minimum wages, etc) are flexible enough 11. Do not prevent from hiring foreign labor 12. Is available with searching country's labor market 13. Are very low 14. Labor relations are generally productive 15. Is not high priority in companies 16. Does not identify with company objectives due to very low wage rate
V. Business environment	17. Export credits and insurance 18. Exchange rate Policy 19. Cost of capital	17. Are not available at reasonable prices for companies interested in exporting 18. Hinders the competitiveness of enterprises 19. Hinders competitive business environment
VI. Political environment	20. Political stability	20. There is risk of political instability but heavily controlled by police

VI. CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

Logistics services which include activities required for the transportation, storage and handling of production inputs and finished products from producer to consumer (or intermediary producer), is a lifeblood of the country's economic activity and financial stability and export competitiveness as well. Consumers of logistics services are typically suppliers of products themselves. Consequently, the efficient supply of logistics services helps to facilitate international trade in a whole range of other products. The timelier, reliable and efficient the logistics supply chain, the more efficiently and reliably goods can be delivered from the point of production to the point of consumption. In particular, increased international trade in unfinished products, i.e. the movement of intermediate goods within production processes, requires logistics services of ever-higher quality with regard to the reliability, safety, security and frequency of deliveries.

Well-functioning domestic and international logistics is a precondition of national competitiveness. Logistics is becoming a critical element of competitiveness and economic performance both in itself and within the context of increasing globalization. A logistics framework which comprises hardware, which is the physical infrastructure needed to move goods effectively, and software, which is the associated services and processes needed to move and trade goods effectively.

The following conclusions are drawn based on review of documents and analysis of the data and information obtained from the business community and other stakeholders of the sector about the situation of trade logistics for trade competitiveness in Ethiopia

- While, there are improvements in trade facilitation and logistics sector, such as Ethiopia has achieved 2.9 out of 5 in customs logistics but the country is lagging behind peer countries.
- The logistics system of the country is characterized by poor logistics management system; institutions are doing business as usual, controlling attitude rather facilitating and limited integration among themselves; inadequate logistics infrastructure; and damage and quality deterioration of goods while handling, transporting and in storage.
- Intermodal transport provided by ESLSE for import goods from foreign suppliers through the port of Djibouti up to dry ports through one bill of lading is running successfully. This has reduced the cost of delays, saved transport and warehouse charges and is able to provide prompt delivery of containerized goods. This service is expected to increase in the coming years.
- The density and quality of transport infrastructure is very low. 70% of rural population is not connected to all weather road, which hampers marketing of agricultural products. Due to poor handling and transportation, agricultural products are inferior in quality both in local and especially in international market. There is lack of infrastructure and integrated transport services to link producers (farmers) to consumers (market).
- Absence of adequate skilled labor in logistic operation and in emerging economic and supply chain management system in governmental and private organizations.
- Lack of integrated logistics management and inefficient logistics system leads to higher price of export and imports items.

- Long dwell time at port and lack of proper systems for the management of port facility, leading to delays in locating containers.
- Hurdles in containerization, with related to shortage, quality, waiting and efficiency of containers. Although, some export items need a special and dedicated container, containers are being used for multi-purpose, which compromise the quality of the item.
- Monopolization of shipping and logistics services and limited competition in the logistics industry.
- Lack of competent actors in the logistics system and lack of capacity to establish brand and competent logistics company.
- Too many checkpoints. Inconvenient checking points or border posts and bureaucratic burdensome in customs compliance. Limited awareness in regulatory procedures.
- Political instability and inadequate trade corridor security and prevalence of road accident.
- Lack of adequate inland transport facilities, inadequate and inconvenient road infrastructure, and inefficient in transport service. In addition, to old and shortage of truck vehicles, the price of transport or trucking service is high. Arrival of trucks at Djibouti port before the completion of export preparations (document submission). The price for transportation increases when bulk imports are needed (for agricultural inputs and products) and this require better transport management. Furthermore, major freight transport companies lack capacity in terms of skilled human resource, management skills and number of fleets of vehicles.
- Lack of coordination of goods transport (which resulted in low load rate).
- Limited coordination among the industry actors.
- Limited and unreliable ICT services provision.

6.2 Recommendations

If Ethiopia can continue its notable growth performance, it could potentially reach middle-income status by 2025. This entails a logistics system that comes up with the current and future development requirements. In line with this, many opportunities are also identified which Ethiopia can tap for future growth which could help transform the logistics industry to a more efficient, effective, sustainable and competitive service delivery.

There are basic requirements to transform Ethiopia's logistics to reality, among other things that include availing sufficient facilities, infrastructure and other resources.

Trade logistics system in Ethiopia can improve considerably so that Ethiopia can reap the benefits of cheap and timely shipment of goods traded across borders. The study proposed the following recommendations to resolve the low performing trade logistics sector and ensure efficient and reliable trade logistics for enhanced export competitiveness.

Intervention Area	Specific Recommendations
Policy, Legal, Regulatory & Procedure	- Promote multimodal transport system and encourage competition. Avoid the monopoly power of ESLSE, This results, among other things, overstock of containers at dry port due to lack of expertise and capacity on the part of ESLSE be alleviated. Ahead of liberalization of the sector, build the capacity of the private sector in all spheres. On the other hand, the state owned ESLSE being the only Multimodal Transport Operator (MTO) should work together with different private stakeholders in addressing the issues of customer's complaint. - Promote private sector to actively involve in the logistics system development, such as cold storage facility, transport system, port development and operation; ensure access to credit, and facilitate incentives to business companies in the sector. Support the private sector actors in the industry to establish strong organizations with the right capacity, vision and strategy. To encourage competition in the logistics sector, not only large operators, but also new entrants should be supported. - Promote proactive Public-Private Dialogue (PPD) forum. Involve stakeholders in policy and regulation making process. Ensure coordination at policy level. Promote a functional stakeholder partnership. - Develop a trade policy that takes into account its impact on trade competitiveness. - Effectively implement the national trade logistics strategy. The implementation of the strategy shall be overseen centrally by higher level leadership/highest authority of the government in charge of providing strategic leadership. - Alleviate bureaucratic challenges. Reduce bureaucratic procedures at dry ports. Enhance customs regulatory and enforcement system. - Enhance awareness of the private sector regarding custom procedures. - Integrate the location of the dry port with that of resource availability. - Change single height container freight train wagons to double stack container wagons to reduce cost and enhance competitiveness goods on the global market. - Promote bilateral agreements that enhance cross-country coordination. Regional network: cost reduction through use of regional network to develop infrastructure.

Intervention Area	Specific Recommendations
Institutions & Human	- Ensure consistence in service provision. Service provision standards should be well communicated to customers and their implementation should be ensured. - Complaint and appeal submission and resolution facilities should be in place and operational. - Promote coordination and collaboration by different institutions in the logistics sector. - Increase the knowledge base and skill in the sector. Increase labor productivity consistently and benchmarking future skill needs, improve work culture and wage rate. - Improve managerial decision-making, labor productivity and optimum use of equipment and infrastructure. - Enhance the technical skills of labors and finance capacity of the logistics service providers, customs clearing agents, shipping agents and brokers need to bring in efficiency in goods flow and lower costs. - Support and encourage transport companies to build their capacity in different aspects. - Strengthen post-clearance audit practice.
Administrative, Management & Service	- Avail adequate container with the required facilities and standards. - Avail sufficient trucks. Modernize trucks to be used for export cargo. Facilitate the loan provision service. Provide loan facility for cargo truck procurement. - Provide grace period and tax relief for exporting companies based on performance. - Ensure adequate forex provision. - Increase the number of clearance custom stations through decentralizing import/ export cargo clearance stations.
Infrastructure, Facilities & Equipment	- enhance bargaining power, lower trade logistics costs and provide better services, ensure diversified trade corridors and outlets to seaport to expand alterative trade corridors and sea ports. Improve efficiency of ports and corridors. Upgrading infrastructure and service facilities along Addis Ababa Djibouti trade corridor. - , Upgrade and develop road, rail, airfreight infrastructure, dry ports and terminal infrastructures in line with intermodal transport requirements to enhance Ethiopia's export goods competitiveness in regional and global market. Broaden inland logistics infrastructure for staffing and un-staffing.

Intervention Area	Specific Recommendations
System	- Promote single window service. Improve the efficiency of electronic single window by centralizing approval procedure. - Enhance ICT intervention, automate the custom clearance system, and promote paperless services in the sector. Promote electronic processing of transactions and payments through digitalization and capacity building. - Implement Electronic Cargo Tracking System (ECTS) to reduce contraband, delay, inefficiency and price surge in logistics. - Raise awareness of the community about trade corridor living along trade corridor. - Align working times of logistics service providers located within Ethiopia & Djibouti. Working hours should be 24/7. - Integrate transport and logistic services to ensure coordinated and improved system.
Specific Actions & and Corresponding Interventions for enhanced export logistics	1) Develop and strengthen export incentive schemes for export-oriented industries. - Provide regulations to export processing free zones and consolidation centers where goods imported as inputs for export products can be brought in and processed and re-exported without barriers. - Strengthen sea freight discount to breakeven level for raw material import, relaxed container free time, delivery at warehouse, provide credit scheme. - Promote voucher usage for customs duty payment, bonded warehouse permit and consideration as AEO. 2) Establish cargo consolidation and deconsolidation facilities. - Introduce a world class strategically placed well-equipped container freight stations. - Adopt measures for the designation of inland export cargo shipment consolidation and processing centers. 3) Establish a system to stuff all containerizable export cargo locally - Provide regulation to simplified transfer of empty containers on inland movement for export use. - Establish a hub for handling different export cargo such as horticulture, beef, fruit and vegetable. - Establish a system to stuff exports locally at container freight stations (CFSs). - Strengthen/promote local containerization of exports. - Establish a dedicated unit for export operation responsible for the end-to-end activities of the export (market search through production, transportation and delivery).
Addis Ababa Chamber of Commerce & Sectoral Association (AACCSA)	- Proactively involve in policymaking process in as far as trade logistics is concerned and institutionalize and work on complaint handling and advocacy; - Undertake awareness creation on issues, policies and regulations and other several aspects of trade logistics to the business community; - Jointly undertake studies with research centers, think-tanks and academia such as Department of Logistics and Supply Chain Management of College of Commerce of Addis Ababa University - Provide trainings in different areas of trade logistics.

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ASSESSMENT ON POTENTIAL AFRICAN MARKETS PERTAINING TO AfCFTA*

ABSTRACT

This study aims to identify potential market opportunities for Ethiopian business companies in trading with existing and potential trade partners in African Continental Free Trade Area (AfCFTA) and to assess the constraints and recommend solutions. The study used both primary and secondary data. Key informant interviews and a review of documents were undertaken to collect data and information. Quantitative and qualitative data analysis techniques were employed. Accordingly, interviewed experts believe that, AfCFTA is an inclusive and win-win arrangement for all its members. If member countries diversify their export products, they will benefit from this trading arrangement. On the other hand, in the analyzed period of Ethiopia's top export items Revealed Comparative Advantage (RCA) and Revealed Symmetric Comparative Advantage (RSCA) index indicated that, there is a continuous comparative advantage except for natural pearls and precious stones and metals and stones in 2018 and articles of apparel and clothing in 2016.

While, there are numerous trading opportunities in Ethiopia, there are challenges ranging from policy to infrastructure gaps. The major challenges and constraints in connection with international trade include weak institutional capacity, frequent power outages and interruption, limited access to finance, shortage of foreign exchange, bureaucratic burden and corruption, and limited coordination among government institutions.

The study recommendations includes, improving the business environment and promoting Foreign Direct Investment (FDI), promoting joint ventures between the local small and medium enterprises with that of foreign companies; diversifing Ethiopia's export products; promoting university-industry linkages; creating and strengthening forward and backward linkages between producers and processors; establish a desk to provide information and advises about AfCFTA market; formulate export strategy to harness AfCFTA market; and establish a responsible organ that coordinate actors in trade sector and utilize the opportunity created by AfCFTA.

Key Words: AfCFTA, Competitiveness, Market Opportunity, International Trade

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I. INTRODUCTION

1.1 Background

As part of Addis Ababa Chamber of Commerce and Sectoral Associations effort in substantiating its advocacy activities with evidence-based arguments and to provide timely and relevant business development services, it has been undertaking studies on topical private sector issues, opportunities and challenges. Among these are issues in relation to regional economic integration and free trade agreements, such as, African Continental Free Trade Area (AfCFTA).

The AfCFTA will bring together all 55 member states of the African Union covering a market of more than 1.2 billion people, including a growing middle class, and a combined Gross Domestic Product (GDP) of more than US$3.4 trillion. In terms of the numbers of participating countries, the AfCFTA will be the world's largest free trade area since the formation of the World Trade Organization (WTO). According to Economic Commission for Africa estimates, AfCFTA has the potential both to enhance intra-African trade by 52.3 % by eliminating import duties, and to double this trade if non-tariff barriers are also reduced.

Small and Medium Enterprises (SMEs) are key to economic growth in Ethiopia. These business enterprises are usually struggling to penetrate more advanced overseas markets, but are well-positioned to tap into regional export destinations and can harness regional markets as stepping stones for expanding into overseas markets as the next stage. Free trade agreement, such as, AfCFTA benefts SMEs as it provides the opportunity to supply inputs to larger companies in the region.

Taking into account the above and other many envisaged benefits companies in Ethiopia could harness from AfCFTA, AACCSA with financial support from Initiative Africa has undertake a study entitled "Assessment on potential African Markets Pertaining to AfCFTA". Accordingly, this study was undertaken to explore the opportunities in Africa markets for Ethiopian companies and identify constraints therein. This report assessed and identified market opportunities for Ethiopia's products in AfCFTA and investigated legal, institutional, and infrastructure hurdles and forwarded recommendations to tackle the challenges.

1.2 Purpose of the Study

The main purpose of this study is to identify potential market opportunities for Ethiopian business companies in trading with existing and potential trade partners in AfCFTA and to assess the constraints and recommend solutions.

1.3 Scope of the Assignment

The scope of the assignment specifically covered the following:

- Undertake comparative analysis of Ethiopian export performance in Africa vis-à-vis other traditional trading partners;
- Identify and document opportunities brought by AfCFTA agreement;

- Undertake theoretical and empirical literature on business and economic impacts of regional free trade areas on a nation, specifically the potential pros and cons of participating in AfCFTA on Ethiopia's industrialists and overall business environment;
- Examine and reflect on readiness to join AfCFTA by reviewing the efficiency of existing trade facilitation service within various Ministry offices and agencies and identify gaps to improve the trading regime;
- Review Ethiopia's business competitiveness in participating in AfCFTA and identify legal, regulatory and institutional constraints;
- Identify the existing opportunities, obstacles, and challenges of Ethiopian industries as far as AfCFTA is concerned and prioritize them as agenda for appropriate interventions,
- Forward recommendations to exploit the market opportunities brought by AfCFTA.

1.4 Technical Approach and Methodology

The study adopted a participatory approach and dealt with wider issues of trade policy, regional integration, including AfCFTA, trade facilitation and regulatory issues, these are (i) government policies (domestic and foreign trade policy); (ii) legislative and regulatory frameworks, i.e. provisions directed to the business environment in general and the industrial sector in particular; and (iii) legislative and regulatory framework prevailing in regional integration, particularly Ethiopia's participation in AfCFTA.

1.4.1 Data Sources

To meet the objectives of the study, both primary and secondary data were used. These include the following:

- Desk work to analyze merchandise trade flows between Ethiopia and traditional trading partners;
- Literature review on theoretical and empirical issues of AfCFTA and its implication on Ethiopia trading regime and traders;
- Review of government policies, regulations and plans and reports that are available in Ministry of Revenue, Ministry of Trade and Industry, Ministry of Finance and UN COMTRADE, WITC, WTO, and ITC among others;
- Interview with selected exporting companies that are engaged in agriculture and manufacturing sector; and
- Key informant interview of experts in Ministries and trade associations.

1.4.2 Data Collection Tools

Appropriate data collection instruments were employed to collect data and information. These are semi-structured interview guide and checklist. Data collection instruments were further used to triangulate the results of each tool and the reliability of the information collected from the target population.

1.4.3 Analytical framework

The study analytical framework is based (i) a review of national trade policies, strategies, plans and institutional arrangements; (ii) analysis of regional trade policies, strategies and plans related to AfCFTA; (iii) scanning of business environment hurdles and opportunities related to regional trade integration.

From operational point of view, the study is supported by a two-pronged approaches for data generation and analysis including (i) desk work, aimed at reviewing relevant literature and consolidating the information available in secondary sources, and (ii) stakeholders consultations, which is key informant interviews to collect data on potential African markets pertaining to AfCFTA. A template was designed to collect relevant data from various stakeholders at different levels.

1.4.4 Data Analysis

Data and information gathered from different sources were analyzed by employing quantitative and qualitative data analysis techniques. Interpretive and clustering analysis techniques were used to analyze qualitative data. On the other hand, quantitative data were analyzed using appropriate statistical software and presented in tabular, charts and tables.

II. ASSESSMENT OF ETHIOPIA'S BUSINESS COMPETITIVENESS IN JOINING AfCFTA

Competitiveness is the ability of firms to produce and sell goods and services of the right quality at the right price and time, which is dictated not only by productive efficiency but also performance in terms of quality, innovation, marketing, and cost. The Global Economic Forum explained competitiveness as the set of institutions, policies, and factors that determine the level of productivity of a country. The level of productivity, in turn, sets the level of prosperity that can be reached by an economy. The Forum argued that the productivity level also determines the rates of return obtained by investments in an economy, which in turn are the fundamental drivers of its growth rates. In other words, a more competitive economy is likely to grow faster over time.

The Ethiopian government has been engaged in designing development programs and implementing policies and strategies that could foster the country's competitiveness through productivity improvement. These strategies include developing adequate infrastructure, supplying a skilled workforce, creating a decent business environment, setting up support industries, and attracting foreign direct investment (through Industrial Parks (IPs) and Special Economic Zones (SEZs).

Recently, Ethiopia has joined the largest continental free trade market, AfCFTA. Joining this free trade area requires the country to enhance the competitiveness of its firms, which can withstand stiff competition coming from competing countries in Africa. Furthermore, companies should develop a capacity to tap opportunities associated with access to this market. To identify the right intervention assessing different dimensions of competitiveness of Ethiopia is essential and subsequently, this study assessed the competitiveness of Ethiopia's firms based on the Global Economic forum twelve

pillars of competitiveness which the Forum used to construct competitiveness index for countries.

Based on tweleve pillars of competitiveness, vis-a-vis individual countries' competitiveness, competiveness index and associated global and within selected AfCFTA countries is presented in a table below.

Table-1: The competiveness index and associated global and within selected AfCFTA countries

Name of the Countries	Score out of 7	World Rank	Rank with the African Countries
Mauritius	4.52	45	1
Rwanda	4.35	58	2
South Africa	4.32	61	3
Botswana	4.3	63	4
Morocco	4.24	71	5
Algeria	4.07	86	6
Namibia	3.99	90	7
Kenya	3.98	91	8
Tunisia	3.93	95	9
Egypt	3.9	100	10
Senegal	3.81	106	11
Seychelles	3.8	107	12
Ethiopia	3.78	108	13
Ghana	3.72	111	14
Tanzania	3.71	113	15
Uganda	3.7	114	16
Cameroon	3.65	116	17
Gambia	3.61	117	18
Zambia	3.52	118	19
Benin	3.47	120	20
Guinea	3.47	119	21
Madagascar	3.4	121	22
Swaziland	3.35	122	23
Mali	3.33	123	24
Zimbabwe	3.32	126	25
Nigeria	3.3	125	26
DRC	3.27	126	27
Burundi	3.21	129	28
Lesotho	3.2	131	29
Malawi	3.11	132	30
Mauritania	3.09	137	31
Liberia	3.08	134	32
Chad	2.99	135	33
Mozambique	2.89	136	34

Source: Authors' compilation based on the Global Competitiveness Report 2017/18

In comparison with more than half of the countries in AfCFTA market, Ethiopia has better competitiveness in macroeconomic environment and institution under the basic requirements for competitiveness and market size and labor market efficiency under efficiency enhancer.

According to the World Economic Forum Global Competitiveness Index, which covers 137 economies, national competitiveness is defined as the set of institutions, policies, and factors that determine the level of productivity. Ethiopia stands 108th out of 137 economies. Burundi with a global competitiveness index of 3.21, was ranked 129th out of 137 economies. The economy of Mauritius is the most competitive in AfCFTA and globally. It stands first in AfCFTA, with competitiveness index of 4.52, and ranked 45th out of 137 economies. Rwanda, South Africa, Botswana, Morocco, and Algeria follows Mauritius in the ranking. Based competitiveness index, business people make decision. However, competitiveness indicators are aggregate figures and in short of detail analysis.

Although, all pillars of competitiveness matter to an economy, the effect in different economies varies. In line with well-known economic theory of stages of development, the GCI assumes that, in the first stage, the economy is factor-driven and countries compete based on their factor endowments primarily un-skilled labor and natural resources. Maintaining competitiveness at this stage of development hinges primarily on well-functioning public and private institutions, a well-developed infrastructure, a stable macroeconomic environment, and a healthy workforce that has received at least a basic education.

As a country becomes more competitive, productivity will increase and wages will rise with advancing development. Countries will then move into the efficiency-driven stage of development when they must begin to develop more-efficient production processes and increase product quality because wages have risen and they cannot increase prices. At this point, competitiveness is increasingly driven by higher education and training (5th pillar), efficient goods markets (6th pillar), well-functioning labor markets (7th pillar), developed financial markets (8th pillar), the ability to harness the benefits of existing technologies (9th pillar), and a large domestic or foreign market (10th pillar). Finally, as countries move into the innovation-driven stage, wages will have risen by so much that they are able to sustain those higher wages and the associated standard of living only if their businesses are able to compete using the most sophisticated production processes (11th pillar) and by innovating new ones (12th pillar).

Table-2: Location and Classification of Selected Countries by each stage of development

Stage of Development				
Stage 1: Factor driven	**Transition from Stage 1 to Stage 2**	**Stage 2: Efficiency Driven**	**Transition from Stage 2 to Stage 3**	**Stage 3: Innovation driven Economy**
Burundi		Egypt	Mauritius	
Ethiopia		Swaziland	Seychelles	
Kenya				
Madagascar				
Tanzania				
Uganda				
Zambia				
Zimbabwe				

Source: World Economic Forum (2017)

The above table depicts that, Burundi, Ethiopia, Kenya, Madagascar, Tanzania, Uganda, Zambia and Zimbabwe are among selected AfCFTA countries in Stage 1, factor driven. Egypt and Swaziland are in Stage 3, efficiency driven economies. Only Mauritius and Seychellesare in the process of transition from Stage 2 to Stage 3. The report revealed that, none of the AfCFTA countries have reached Stage 3: which is classified as innovation driven. In fact, none of the African countries have reached innovation driven economies. The implication of the forgoing analysis is that, for Ethiopia, which is in the middle of the competitiveness rank, it would be unlikely to reap full benefit of the trading as is usually presented on textbooks characterization of joining regional trading blocs such as the AfCFTA before its economy has potentially moved away from factor driven and transited to efficiency driven or even a higher level as Egypt and Swaziland or even Mauritius and Seychelles.

III. MARKET OPPORTUNITIES AND BENEFITS CREATED IN AfCFTA

Africa is a highly dynamic market. The population of Africa is projected to reach 2.5 billion by 2050, at which point it will comprise 26% of what is projected to be the world's working age population, with an economy that is estimated to grow twice as rapidly as that of the developed world.

With average tariffs of 6.1%, businesses currently face higher tariffs when they export within Africa than when they export outside it. AfCFTA will progressively eliminate tariffs on intra-African trade, making it easier for African businesses to trade within the continent and benefit from the growing African market.

Continental Free Trade Area has an effect on businesses, in terms of market opportunity, competitiveness, cost of production, access to expertise and technology, economies of scale etc. Yet, some of Ethiopia's manufacturing firms are uncompetitive in the international market by price and quality of products. Ethiopia's firms will face stiff competition from abroad when the door is opened for more trading activities in a free trade agreement. Thus, to stay in the market, firms will be forced to increase their competitiveness, cut costs, and increase efficiency. Nonetheless, free trade prevents domestic monopolies from charging too high prices.

In the free trade area, small and medium-sized firms in Ethiopia possibly will expand their business and they will be able to import raw materials from other countries and to have assembly or other production work done internationally. Thus, companies can take advantage of lower costs of production or enhanced technologies that may not have been available to them in a closed market.

The World Investment Report has put Ethiopia as one of the top-performing African countries in foreign direct investment flow. The expanded market due to the free trade agreement would attract more foreign investors to invest in Ethiopia aiming to sell products to other markets.

3.1 AfCFTA Benefits to Ethiopia's SMEs and Private Sector

In a market-oriented economy, the private sector plays a vital role in poverty reduction through various channels. It can reduce income poverty by enhancing productivity, reducing unemployment, and creating competition among workers so which drives up wages. Private enterprises can also help to keep prices of essential goods and services down and increase the real effective incomes of poor people by producing essential goods and services in large-scale production. On top of

this, private sector growth can provide a government a large source of tax revenues, which in turn supports increased public investment.

Small and medium-sized enterprises (SMEs) are key to growth in Ethiopia. These businesses usually struggle to penetrate more advanced overseas markets, but are well-positioned to tap into regional export destinations and can use regional markets as stepping stones for expanding into overseas markets at a later point.

Regardless of the benefits of joining international organizations including AfCFTA and WTO, the private sectors in Ethiopia are worried about the superficial threats and pressures they will experience coming from the rest of the world, especially the developed economies. The fact that the private sector in general are at their earliest stage of growth, they prefer to be protected by the government. The government of Ethiopia has many packages that support the SMEs however, most of those SMEs prefer to be protected and stay SME to get the privileges from the government. If they grow to middle and large industries, they will not be eligible to receive those packages and as a result, they do not want to grow into middle and large companies, they do not want to face any international pressure that comes from competition. For those and related reasons, they oppose membership.

In contrast to this, there are also visionary SMEs who wanted to grow as fast as they can by exploiting all the possible benefits now and after the membership. They are aware that those international memberships are governed by their corresponding rules and laws and every member will be treated equally before the law, they have also their dispute settlement mechanisms. Hence, according to them, AfCFTA and/or WTO will bring an opportunity for their company as well as the country in general.

3.2 Ethiopia's Readiness in Joining AfCFTA

Ethiopia has comparative advantages in its major export items compared to other countries in Africa, such as, coffee, oilseeds and sesame, chat, fruits and vegetables, leather and leather products, textiles and garments, and manufacturing products, like electronics. The availability of fertile arable land, abundant water, low labor wage and labour efficiency in the manufacturing of leather and leather products and garments in well-managed firms, affordable access to raw materials, and generous government incentives and improving supports make much more easier to do business.

Although, there are opportunities to do business and export to the vast AfCFTA market, manufacturers face various hurdles. These are limited access to finance and forex, limited access to skilled and qualified labour, limited innovation and technology, inadequate supply of inputs and raw materials, low productivity (lack of scale and task specialization), production of very low-quality products and limited backward and forward linkages within value chains. In comparison with more than half of countries in AfCFTA market, Ethiopia has better competitiveness in macroeconomic environment and institution under basic requirements for competitiveness and market size and labor market efficiency under efficiency enhancer.

3.3. Discussion of Findings from Stakeholders Perspectives

First and foremost, it is important to understand the level of respondents' perceptions on about AfCFTA. Some respondents have a clear understanding about AfCFTA, while other lack detail knowledge but have the basic knowhow. In a nutshell, most of FGD participants said that, AfCFTA is similar to the global trading system, also known as World Trade Organization, although there are differences. In most products, there will be no tariffs on trade between African countries.

Respondents have explained that AfCFTA is inclusive and is a win-win platform for all its members. It is quite known that African countries have a diversity of economic configurations and will be affected in different ways by AfCFTA. Nevertheless, the benefits from AfCFTA are widespread and will compensate for the potential effects. While African countries that are relatively more industrialized are well placed to take advantage of the opportunities for manufactured goods, less-industrialized countries can benefit from linking into regional value chains. Regional value chains involve larger industries sourcing their supplies from smaller industries across borders. AfCFTA makes the formation of regional value chains easier by reducing trade costs and facilitating investment. A complement to the above point, agricultural countries can gain from satisfying Africa's growing food security requirements. The perishable nature of many agricultural food products means that they are particularly responsive to improvements in customs clearance times and logistics that are expected of AfCFTA. Provided that customs clearance and logistics-related delays are minimized, then those countries can gain what is available in the corridor of the AfCFTA. Therefore regardless of the level of benefits, countries will gain from the AfCFTA and it is simply a platform that secures a win-win stage for all members.

The majority of African countries are classified as resource-rich. Tariffs on raw materials are already low and thus, AfCFTA will provide little to further promote these exports. However, by lowering intra-African tariffs on intermediates and final goods, AfCFTA will create additional opportunities for value addition in natural resources and business diversification. The cost of being landlocked includes higher costs of freight and unpredictable transit times. AfCFTA provides particular benefits to these countries: in addition to reducing tariffs, the AfCFTA is set to include provisions on trade facilitation, transit and customs cooperation.

More specifically, according to interviewed Ministry of Trade and Industry officials, the Ministry has become the implementing organ of AfCFTA by the parliament and National Steering Committee for Trade Relation and Negotiation. Moreover, the Ministry is working on the establishment of subcommittees on standard, trade facilitation and custom issues, rule of origin as well trade in goods and services. In addition, the Ministry is undertaking an AfCFTA response strategy with the help of development partners. On the other hand, the government also works on the preparation of goods and service schedules.

Under this, Custom Commission were interviewed and they replied that, the commission engaged in the activities to strengthen the Rules of Origin Team and was involved in the preparation of goods offer. Both institutions mentioned that, shortage of skilled work force in the area, lack of experience in FTA at regional level, and limited institutional technical capacity and infrastructure facilities are the key challenges in the implementation of the AfCFTA agreement.

IV. LEGAL, REGULATORY AND INSTITUTIONAL CONSTRAINTS IN JOINING AFCFTA

Entering AfCFTA requires as a precondition of easing restrictions on capital flows across the country's borders. Economists argue that, liberalization and free flow of goods and services across countries over time will bring economic growth and improve welfare of the trading parties. In Ethiopia, the financial sector in the general and current account in particular is not liberalized yet, and there is a strict capital control. Under these conditions, internationalization of production and distribution will be challenging. Such a challenge will be huge hindrance to harness the benefits of AfCFTA.

However, there is an urgent call from the business community to the Ethiopian government to reform the trade facilitation including credit system, utility provision and power outage, which is currently costing the private manufacturers 35,000 to 40,000 for one minute of electric power interruption and subsequently hampering productivity, reducing output and affecting the competitiveness of the export sector. There are also challenges about digitalization and business sophistication.

According to the Ministry of Trade and Industry, Ethiopia has no domestic and international trade policies and the sector is governed by the strategy set in the second growth and transformation plan and homegrown economic reform. The Ministry informed that, it is in the process of developing domestic and international trade policy but not yet finalized. On the other hand, the Ministry reported that, there are no considerable institutional and legal constraints that could impend the country's accession to AfCFTA.

V. ETHIOPIAN TRADE PERFORMANCE

There are numerous options available these days, and the global market has become increasingly accessible to developing countries such as Ethiopia. Initiatives like AGOA, EBA, COMESA, and the numerous bilateral trade agreements signed with Western countries have provided new export potential. The recently initiated AfCFTA is also a huge opportunity for Africans by Africans with precious prospects by creating a liberalized market for goods and services through successive rounds of negotiations as well as contributing to the movement of capital and natural persons and facilitating investments by building on the initiatives and developments in the State Parties and the Regional Economic Communities. Ethiopia is also part of the "Everything But Arms" program that has been set up to provide access to the EU market for Least Developed Beneficiary Countries, free of duty and without quota restrictions, for all export products except arms.

The degree of openness to international trade shows how much ones' economy is exposed to international relationships or the degree of integration with the external market. Developing countries exports primary products (agricultural products) for cheap international prices and imports in turn capital goods including machinery, chemicals, automobiles and etc. at higher prices which results in a deficit in their trade balance. The case for Ethiopia is not different from those circumstances where the trade balance of the country is being in deficit for many years consistently. The following table summarizes the trend as well as the performance of export and import using data extracted from the ITC database.

Table-3: Trend and performance of Ethiopia compared to the world from 2013-2019 (billions of dollars)

	2013	2014	2015	2016	2017	2018	2019	Average
World Import	18876.62	18895.6	16560.19	16069.18	17786.92	19680.32	19084.94	21158.96
Growth rate	-	0.101	-12.36	-2.965	10.69	10.645	-3.025	0.51
World Export	18874.89	18846.76	16411.29	15924.79	17559.62	19308.75	18708.56	20939.11
Growth rate	-	-0.149	-12.922	-2.964	10.266	9.961	-3.108	0.18
Ethiopia Export	2.973	3.275	2.914	2.789	3.022	2.704	2.788	2.924
Growth rate	-	10.16	-11.02	-4.29	8.35	-10.52	3.11	-0.70
Ethiopia Import	12.072	15.357	16.702	16.429	15.761	15.305	14.554	15.169
Growth rate	-	27.21	8.76	-1.63	-4.07	-2.89	-4.91	3.74
Ethiopia BoT	-9.099	-12.082	-13.788	-13.640	-12.739	-12.601	-11.766	-12.245

Source: Authors' estimation using data from WTO and ITC Database

The country's overall trade balance and the trade balance of a single industry revealed that the difference between exports and imports is widening, and the country's net export is negative. Both the country's import and export volumes are increasing, albeit, the rate of increase in export is quicker than the rate of increase in import. This can be considered as an indication of improving export promotion strategies or the country is registering a positive sign to substitute imported items by domestic production. On the other hand, we can also mention many other reasons that may have a potential effect on the decline in the import level including shortage of foreign currency and unstable economic situation in the country. In line with this, the current account is experiencing a more fluctuating trend with time where there are both improvements and deteriorations. For instance, based on the data for the years 2013-2019, the growth rate of export is about -0.7 percent while the growth rate of import is about 3.74 percent annually.

a. Ethiopia Top Exported and Imported Products [2015-2019]

It is undeniable that exports played a major role in Ethiopia and developing a larger export base in a market-based system provides a unique opportunity for Ethiopia. However, the country's exports measured in percent of GDP falls short of reaching the heights seen in Korea, China, or Vietnam during their development periods (World Bank 2012). It remains unclear whether current export levels in Ethiopia are sufficient to support the course of large-scale productivity increases and structural change. As a result, this unclear or sort of lack of evidence calls for further investigation.

Expansion of exports is often behind positive signs of progress in economic growth. A thriving export sector helps align the domestic economic incentive structure with areas in which a country has a comparative advantage. This is desirable from the perspective of resource allocation. Furthermore, successful exports create dynamic efficiency gains by exploiting economies of scale, adopting best practice foreign technologies and business processes, and being subject to higher international competition. Export sectors are also associated with productivity gains leading to wage premiums and job creation. In addition to those discussed benefits born from an expansion of the export sector, the issue of foreign currency must be mentionable in the sense that exports help finance imports, especially capital goods, and enable countries to maintain a more favorable balance of payment situation. Eventually, this means that countries are in a better position to repay their external loans. Better availability of foreign exchange in an economy will also ease the overall financing burden for companies to trade.

Table-4: Exported Values of top Exported items by Ethiopia from 2015-2019 (million USD)

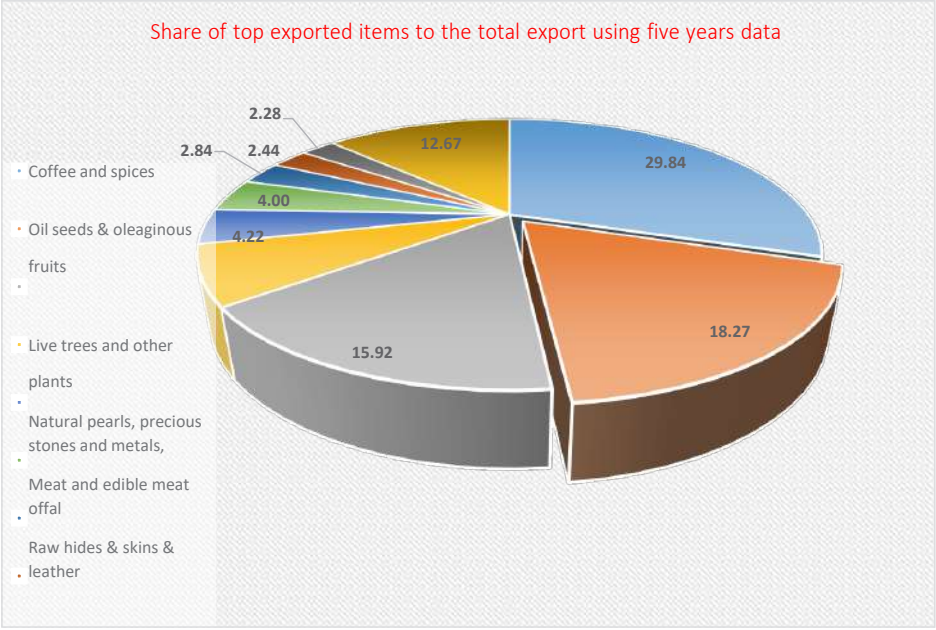
Product label	Value in 2015	Value in 2016	Value in 2017	Value in 2018	Value in 2019	Total	Share
All products	2697.08	2615.93	2862.59	2704	2821.53	13701.13	100
Coffee and spices	802.043	757.31	963.03	683.12	882.77	4088.28	29.84
Oil seeds & oleaginous fruits	451.354	516.85	446.27	572.68	515.86	2503.01	18.27
Edible vegetables	496.282	526.95	538.37	493.69	126.57	2181.86	15.92
Live trees and other plants	217.502	216.16	221.93	17.71	273.84	947.14	6.91
Natural pearls, precious stones & metals,	156.055	117.58	125.69	82.02	97.17	578.51	4.22
Meat and edible meat offal	95.238	93.65	97.09	177.70	84.52	548.20	4.00
Raw hides & skins & leather	87.36	67.61	74.766	88.06	71.09	388.88	2.84
Live animals	160.45	90.74	61.92	21.16	0.49	334.76	2.44
Articles of apparel and clothing accessories, knitted	39.16	32.02	40.94	34.12	166.73	312.97	2.28
Total	2505.43	2418.87	2569.99	2170.26	2219.04	11883.59	86.73
Share of the top products exported to the total export	92.89	92.47	89.78	80.26	78.65	86.73	

Source: Own computation based on 2-digit HS Code data extracted from UNCTAD-ITC Database

In today's globalized world, export performance is extremely important. In the age of cross-border trade, an industry must strive to thrive in the global market in order to develop financially. Export performance is used to assess the industry's survival restrictions. Ethiopia's economic rise since 2004 has been aided by a number of factors, including high export growth. Although experimentally proving causation is challenging, it is worth noting that exports cause growth in Ethiopia.

The top ten export share of Ethiopia for the periods 2015-2019 is summarized in the table above manufacturing industry is explained in this section. Alternatively, it can be also referred to in the pie chart drawn below. In both cases, what the authors attempted to show is that the total export value of the country is highly dependent on a very few items, which those top items accounting from about 78.65 percent in 2018 to 92.89 percent in 2015 of the total export. All the remaining other products on average contributes not greater than 15 percent in the last five years. More specifically, coffee on average contributes near one-third of the total export by Ethiopia. The share of coffee would be much higher than this if we follow the trend of the top coffee producing countries where the majority of domestically produced amount is exported to the rest of the world while in Ethiopia it is equally shared between domestic consumption and export.

On the other hand, this calls for the introduction of a policy or strategy that encourages the production and export of other items. It might not be straightforward to conclude that the export promotion strategy is effective in a situation where very few items are dominating the export sector of the country. Therefore, higher effort should be exerted; higher attention should be drawn towards export diversification. The fact that the country highly depends on rainfall, the production and hence the export might not be as of those trends if the season doesn't deliver good rainy time.

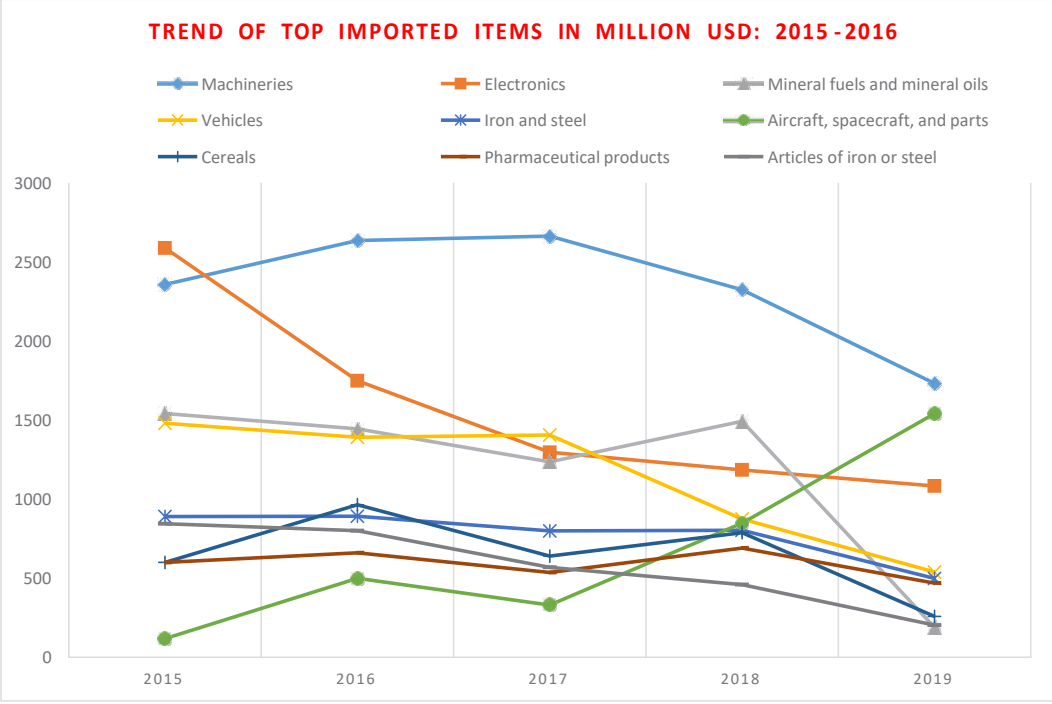


Ethiopia imports billions of dollars worth of commodities each year that might theoretically be produced locally. For businesses and investors, replacing these imported products with locally produced goods gives a big potential. Despite strong economic growth since 2003, salaries remain low, and a large portion of the population cannot buy high-end goods.One of the biggest challenges is a shortage of foreign currency; ironically, this is large because Ethiopia imports more than its exports. Many of the raw materials such as agricultural produce used by local manufacturers must be brought in from abroad. However, this is not possible if there isn't enough available international currency to pay the foreign supplier. The transport logistics of importing these raw materials is another obstacle for Ethiopian factories. The country is landlocked and depends on the port of Djibouti for much of its imports. However, the port is often congested, leading to delivery delays of vital factory inputs. To compensate for these delays, Ethiopian-based manufacturers need to import more raw materials than they require and this negatively impacts their cash flow. The following table presents the trend of top imported products in the last five years and their corresponding share to the total import made by the country. On average, the import of pieces of machinery accounts for about 16.41 percent of the total import made from 2015 to 2019, followed by the import of electronics and mineral fuels with a share of 10.99 percent and 7.83 percent respectively. The share of those top imported products to the total amount of import by the country is roughly two-third of the country.

Table 5: Imported Values of top imported items by Ethiopia from 2015-2019 (Billion USD)

Top Imported items	Value in 2015	Value in 2016	Value in 2017	Value in 2018	Value in 2019	Total	Share
All products total	16.70	16.43	15.76	15.31	14.55	78.75	100.00
Machineries	2.42	2.64	2.86	2.37	2.63	12.92	16.41
Electronics	2.66	1.75	1.39	1.21	1.64	8.65	10.99
Mineral fuels, mineral oils	1.58	1.45	1.33	1.53	0.29	6.17	7.83
Vehicles	1.52	1.39	1.51	0.89	0.82	6.13	7.79
Iron and steel	0.91	0.89	0.86	0.82	0.76	4.24	5.38
Aircraft, spacecraft	0.12	0.50	0.35	0.87	2.34	4.18	5.31
Cereals	0.62	0.97	0.69	0.80	0.39	3.46	4.40
Pharmaceutical products	0.62	0.66	0.58	0.71	0.71	3.27	4.15
Articles of iron/steel	0.87	0.80	0.61	0.47	0.31	3.06	3.88
Total (million USD)	11.31	11.05	10.17	9.67	9.88	52.09	66.14
Share of top imported items to total M	67.71	67.29	64.52	63.18	67.92	66.14	

Source: Own computation based on 2-digit HS Code data extracted from UNCTAD-ITC Database



The trend of the top imported products in the last five years, from 2015 to 2019, may be seen in the graph above. While most of the top imported products have had a more gradual drop in their respective trends, airplane and spacecraft imports have surged dramatically, particularly from 2017 to 2019. The trend in mineral fuel and mineral oil is similar to that of other industries. It was relatively stable from 2015 to 2018, but then fell precipitously the next year.Finally, we have tried to emphasize on the list of top imported and exported items yearly however, what we found is that it is concentrated among those used lists in the analysis part. Of course, there were little shifts in the rank of products but the list still remains almost the same across the years in consideration. As a response to this, we used the rank based on the total imported and exported amount in the last five years.

b. Ethiopia's export destinations and Top Suppliers

Generally speaking, Asia, Europe, the Middle East, Africa, and North America are among the top destinations of items exported from Ethiopia. Using the five-year aggregate exported data, China takes the lion' share of being a market destination for products exported by Ethiopia. Ethiopia earned 1.5 billion USD only from china from 2015 to 2019 out of a total 12.7 billion USD earned by exporting to the rest of the world. In terms of overall ranking, Somalia, Saudi Arabia, and the USA are ranked second to fourth following China with a total of 1 Billion USD, 920 million USD, and 867 million USD respectively accounting for 9.55%, 7.24%, and 6.83% of the total five-year export.

Each of these top ten destinations for Ethiopia's exports takes up roughly 63.66 percent of the country's total exports in the last five years. A compliment to those facts, Somalia surprisingly ranked second and Djibouti ranks ninth with about 450 million USD being collected from the export to our most neighbor country.

The growing importance of regional trade may also be seen in the fact that Saudi Arabia and the United Arab Emirates are currently Ethiopia's fourth and eighth largest export markets, respectively. Indeed, we are surprised to learn that Somalia and Saudi Arabia are now separately larger export markets for Ethiopia than the United States and Germany together.

Table 6: Major trading partners of Ethiopia based on a 5-year trade data (in millions of USD).

Major Destination of the total exported items			Major Suppliers of all imported items		
	Value (in million USD)	Share		Value (in million USD)	Share
World	12702.075	100	World	77087.15	100.00
China	1543.151	12.15	China	25277.92	32.79
Somalia	1212.969	9.55	USA	5888.38	7.64
Saudi Arabia	920.237	7.24	India	5886.11	7.64
USA	867.765	6.83	Kuwait	3879.33	5.03
Germany	855.521	6.74	Japan	3106.27	4.03
Netherlands	750.423	5.91	Saudi Arabia	2770.95	3.59
Switzerland	551.019	4.34	Turkey	2727.14	3.54
UAE	502.419	3.96	Italy	2722.97	3.53
Djibouti	450.746	3.55	UAE	1814.89	2.35
Israel	431.382	3.40	Indonesia	1697.12	2.20
Total	8,085.632	63.66	Total	55,771.08	74.39

Source: Own computation based on 2-digit HS Code data extracted from UNCTAD-ITC Database

On the other hand, we have estimated the top suppliers of products imported by Ethiopia from the rest of the world using a five-year data from the ITC database. It is not a surprise that one-third of the total items imported by Ethiopia in the last five years came from China. More than 25.3 billion USD is paid to China out of a total of 77.1 billion total imports from 2015 to 2019. USA, India, and Kuwait ranked from second to fourth following China with a total of 5888.38 million, 5886.11 million, and 3879.33 million USD respectively. Similarly, those top ten suppliers' supplies about 74.4% of the total imported items in between the years mentioned above.

A more detailed table is presented below with the list of top suppliers for the top imported products by Ethiopia (which are electronics, machineries, minerals, vehicles, iron and steel, articles of iron and steel, pharmaceutical products, cereals and plastics and articles). As it is presented in the table below, China is the top supplier of electronics (65.6%), machineries (40.8%), iron and steel (33.3%), articles of iron and steel (70.7%), and plastics and articles (27.5%). With 26% and 23.4 percent of the market, India is also the largest provider of grains and pharmaceutical products. It is not surprising to see China being ranked top supplier for many top products imported by Ethiopia the fact that China is on the verge to dominate the world economy.

Ethiopia's import of minerals is mainly supplied and dominantly imported from the Middle East markets (Kuwait, Saudi Arabia, and Dubai) which account for about 78.31% of the total import values made in the last five years (2015-2019). The most important emphasis here in this analysis should be drawn to the share of those suppliers in the total import of the country. The greater the share is the narrower and lesser trading partners the countries have. Therefore, as far it is commendable in terms of cost minimization and its contribution in the economic diplomacy corridor, the country must widen the alliance with the rest of the world using trade. The fact that the country is in the accession process to join the world-leading trading system, there are principles to accept and it will be better for the country to increase the bilateral relations. The membership to WTO will ensure that Ethiopian products will have access to more than 90% of the world market through Most Favored Nations (MFN) Treatment. Similarly, AfCFTA, the world's largest FTA, with the goal of creating a single continental market followed by free movement and a single currency union. It has the potential to double intra-African trade by eliminating import duties and reducing non-tariff barriers.

Table 7: Top Suppliers for the top imported items by Ethiopia using data from 2015 to 2019

Electronics		Machineries		Minerals		Vehicles		Iron and steel		Articles of iron or steel		Pharmaceutical products		Cereals		Plastics and articles	
Importers	Share	Importers	Share	Importers	Share	Importers	Share	Importers	Share	Importers	Share	Importers	Share	Importers	Share	Importers	Share
China	65.62	China	40.84	Kuwait	47.08	Japan	38.63	China	33.27	China	70.66	India	23.42	India	26.01	China	27.52
Sweden	11.81	USA	15.48	Saudi Arabia	24.03	China	25.64	Turkey	22.23	Turkey	8.33	Netherlands	17.87	USA	22.32	Saudi Arabia	15.35
USA	3.55	Italy	5.67	UAE	7.20	India	7.25	India	19.94	India	4.21	Belgium	13.65	Romania	14.55	UAE	9.45
Italy	2.80	Germany	4.89	Bahrain	6.58	Italy	6.83	Ukraine	11.80	Italy	3.34	Italy	10.79	Ukraine	9.76	Thailand	7.01
India	2.56	UK	4.37	South Africa	5.19	Spain	4.97	Taipei, Chinese	2.29	Austria	1.69	USA	10.20	Russian Federation	6.48	Korea	6.91
Turkey	1.53	India	3.91	Sudan	3.86	South Africa	2.77	Russian	1.73	Germany	1.62	China	5.55	Italy	5.69	Turkey	6.46
Germany	1.42	Belgium	2.83	Egypt	1.28	Germany	2.62	Japan	1.64	Poland	1.36	Switzerland	3.25	Bulgaria	4.03	India	6.35
UK	1.40	Japan	2.73	India	1.01	Thailand	2.48	Italy	1.35	USA	1.10	Korea	1.80	Germany	2.21	Egypt	2.48
Korea	1.30	Turkey	2.59	Total	96.23	Korea	1.61	Viet Nam	1.30	Total	92.31	Germany	1.68	Pakistan	1.52	Netherlands	2.36
France	1.03	Korea	1.99			USA	1.20	Total	95.55			Denmark	1.46	Serbia	1.30	Taipei, Chin	2.01
Total	93.02	Total	85.3			Total	94					Total	89.67	Total	93.87	Total	85.9

Source: Authors' Computation using data from ITC

Table 8: Top Destinations for the top exported items by Ethiopia using data from 2015 to 2019

Coffee		Edible vegetable		Live Animals		Articles of apparel and clothing accessories		Live trees and other plants		Raw hides and skins and leather		Oil seeds and oleaginous fruits		Meat and edible meat o		Natural or cultured pearls, precious or semi-precious stones, precious metals	
Importers	Share	Importers	Share	Importers	Share	Importers	Share	Importers	Share	Importers	Share	Importers	Share	Importers	Share	Importers	Share
Germany	17.08	Somalia	40.66	Somalia	39.58	Germany	51.89	Netherlands	78.70	China	46.01	China	50.92	UAE	60.03	Switzerland	89.48
Saudi Arabia	16.10	Djibouti	11.47	Egypt	16.24	USA	26.00	Saudi Arabia	4.15	Hong Kong	15.32	Israel	15.81	Saudi Arabia	34.89	India	6.13
USA	12.81	Pakistan	6.87	Djibouti	13.20	Italy	5.89	Germany	2.55	Italy	11.49	Turkey	4.45	Bahrain	2.21	USA	1.30
Japan	8.98	India	5.59	Saudi Arabia	11.13	Sudan	4.92	USA	2.33	Thailand	6.27	USA	3.83	Viet Nam	1.52	Hong Kong	0.99
Belgium	7.54	Indonesia	5.05	Yemen	9.89	UK	3.73	Norway	2.25	India	5.32	Viet Nam	3.50	Hong Kong	0.37	UAE	0.81
Korea	4.65	Viet Nam	3.65	UAE	3.71	France	2.60	UK	2.12	UK	4.71	India	2.78	Total	99.02	Total	98.71
Italy	4.54	Sudan	3.62	Libya	1.62	Total	95.03	UAE	1.54	Viet Nam	3.13	UAE	2.31				
Sudan	4.22	Kenya	2.72	Oman	1.40			Belgium	1.42	Indonesia	2.19	Jordan	2.18				
France	3.95	UAE	2.64	Sudan	1.01			Japan	1.33	Philippines	0.70	Saudi Arabia	1.93				
UK	3.15	Yemen	1.94	Bahrain	0.90			Total	96.39	Total	95.14	Total	87.71				
Total	83.02	Total	84.21	Total	98.68												

Source: Authors' Computation using data from ITC

To summarize the concerns concerning Ethiopia's top trading partners, the main surprise is the important significance that South-South trade links can play for Ethiopia's export potential in terms of exports by country of destination. As we tried to highlight in the figures above, very few of Ethiopia's top 10 trading partners (both destinations for our exports and suppliers of our imports) were from the developed or western world. It's also notable that countries with extremely low per capita incomes (Djibouti, Sudan, and Somalia) are now bigger customers for Ethiopian exports than some of the world's wealthiest and most stable nations. Thus, without neglecting long-standing historical trade links, Ethiopia's exporters would be well-served by paying equal attention to increasingly important neighboring and regional markets in the developing world.

6.3 Measuring Export Competitiveness/Performance

There are so many measurement indices developed to measure competitiveness and/or performance; especially export competitiveness/performance, since 1965. Revealed Comparative Advantage (RCA), Export Competitiveness (XC), Reveal Symmetric Comparative Advantage (RSCA), Net-Export RCA, Modified RCA, Real effective exchange rate (REER), Global Competitiveness Index (GCI), Baltic States Export Competitiveness Index, Michaely Index, Contribution to Trade Balance (CTB), Business Competitiveness Index (BCI), Manufacturing Export Competitiveness Index (MECI), and so on are exists.

The notion of revealed comparative advantage (RCA) is based on Ricardian trade theory, which states that trade patterns are determined by relative productivity differences between countries. Although such disparities in productivity are difficult to see, an RCA metric may be easily derived using trade data to "expose" them. While the statistic can be used to get a rough idea of a country's competitive export strengths, it should be used with caution. It should be noted that applied national measures which affect competitiveness such as tariffs, non-tariff measures, subsidies, and others are not taken into account in the RCA metric.

RCA indices evaluate export performance as the total exports of a specific product, divided by the total exports of that country compared to the world exports of the product, divided by total world exports. The factors that contribute to movements in RCA are economic: structural change, improved world demand, and trade specialization. The RCA index is defined as the ratio of two shares. The numerator is the share of the country's total export quantity of the commodity of interest in the volume of its total exports. The denominator is share of world exports quantity of the same commodity in total world exports volume. RCA[1] is defined as follows:

[1] Analoguest the RCA, The Revealed Symmetric Comparative Advantage (RSCA) measure which reflects the RCA in its symmetric form as an index of competitiveness.

$$RSCA = \frac{RCA - 1}{RCA + 1}$$

Where the RSCA ranges from [-1 to +1]. The closer the value is to +1, the higher the competitiveness of a country in the commodity of interest.

$$RCA_{i,j} = \frac{\frac{X_{ij}}{X_{it}}}{\frac{X_{wj}}{X_{wt}}}$$

Where, $\boldsymbol{RCA_{ij}}$ represents the RCA of a given country i for a product j, $\boldsymbol{X_{ij}}$ represents the export volume of product j in country i, $\boldsymbol{X_{i}}$t represents the total export volume of country i, $\boldsymbol{X_{wj}}$ represents the export volume of product j of the world and $\boldsymbol{X_{wt}}$ represents the total export volume of the world.

RCA<1: the product has no capacity of competitiveness
1<RCA<2.5: the product has a low capacity of competitiveness
RCA>2.5: the product has a high capacity of competitiveness

Generally speaking, a country is said to have a revealed comparative advantage in a given product i when its ratio of exports of product i to its total exports of all goods (products) exceeds the same ratio for the world as a whole. That is when the ratio is greater than one. When a country has a revealed comparative advantage for a given product (RCA >1), it is inferred to be a competitive producer and exporter of that product relative to a country producing and exporting that good at or below the world average. A country with a revealed comparative advantage in the product i is considered to have an export-strength in that product. The higher the value of a country's RCA for product i, the higher its export strength in the product i.

Although this index is quite often used for calculating comparative advantages, it is still related to a range of technical inconsistencies and problems, especially when comparing the received values (Yeats 1985). For this reason, numerous attempts have been made to adjust and transform this index, and suggestions have been given for alternative indices of measuring the comparative advantage. Following that criticism the revealed symmetric comparative advantage (RSCA) index is introduced to alleviate the symmetry problem.

This table shows a comparison of the revealed comparative advantage indexes top exported products of Ethiopia for the period of 2015 to 2019 based on the data extracted from the UNCTAD-ITC database. Generally, the RCA indices of Ethiopia indicate that the RCA index for all the top exported items is greater than 1 which indicates that the country has a comparative advantage from the export of the products.

The calculated index of revealed comparative advantage of Ethiopia export in relation to rest of the world is presented in the following two tables (including the RSCA). The index of revealed comparative advantage of Ethiopia export of the top items in relation to the world shows a continuous comparative advantage in the analyzed period except for Natural pearls and precious stones and metals and stone in 2018 and articles of apparel and clothing in 2016. As we have discussed in the previous section RCA index which is greater than one explains the comparative advantage of the country against the world and hence is roughly competitive in the international market.

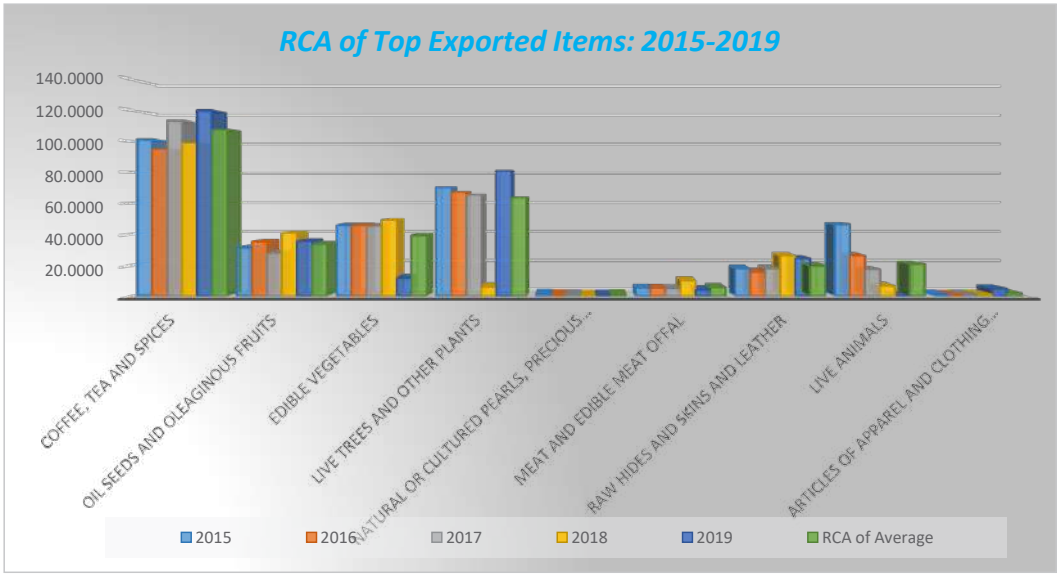
It is not surprising to see the index of RCA for coffee is comparably higher than the other items. This is also in support of the finding we have discussed in the previous sections on the share of top exported items to the total export made by the country from 2015 to 2019. The average of RCA index for coffee is 107.78, followed by the RCA of live trees and other plants and Edible vegetables with 63.5 and 39.15 respectively. However, the country must design an export promotion that lets a bundle of products to play in the export value. As far as the export is concentrated around a few products, the RCA index might be exaggerated for those top exported products. The more the export is diversified the lesser the RCA index will be.

Table-9: Calculated RCA Index of top exported items from 2015-2019

List of top exported products	RCA-Index					
	2015	2016	2017	2018	2019	Average
Coffee, and spices	101.24	95.11	113.40	98.88	120.14	107.78
Oil seeds and oleaginous fruits	31.30	35.07	27.89	40.75	35.43	33.49
Edible vegetables	45.70	45.69	45.39	49.15	11.65	39.15
Live trees and other plants	70.18	67.12	65.62	5.71	81.13	63.48
Natural pearls, precious stones and metals	1.49	1.09	1.17	0.90	0.99	1.17
Meat and edible meat offal	5.09	5.04	4.81	9.89	4.14	5.39
Raw hides and skins and leather	17.68	15.67	17.61	26.13	24.13	19.54
Live animals	46.26	26.11	17.17	6.50	0.14	20.58
Articles of apparel and clothing accessories, knitted or crocheted	1.09	0.90	1.12	1.02	4.65	1.84

Authors' Computation using data from ITC

As noted earlier, Ethiopia enjoys a significant revealed comparative advantage in the export of the above-listed top exported products. Ethiopia's coffee, live trees, and other plants, edible vegetables, oil seeds, live animals, raw hides and leather, and other items exhibited a strong export performance during the past decade as evidenced by the RCA index.



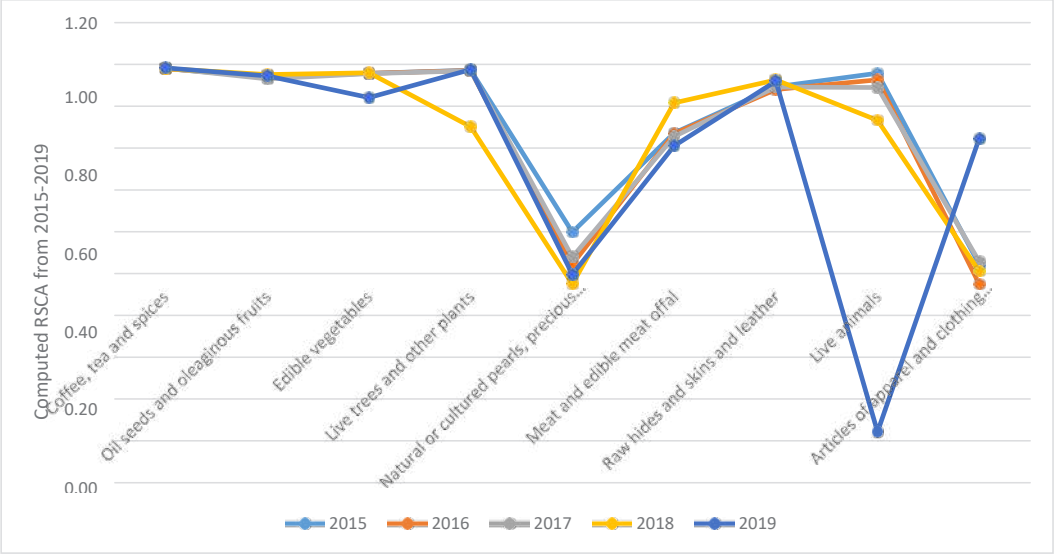
The export index of revealed symmetric comparative advantage was calculated in order to overcome the problems with symmetry. The results from the calculation are shown in the proceeding table. The results of the RSCA index vary between the limits of -1 and +1. The calculated results confirm the already established state of the Export comparative advantage in relation to the RoW by using the RCA index.

Table-10. Calculated RSCA Index of top exported items from 2015-2019

List of top exported items from 2015-2019	RSCA					
	2015	2016	2017	2018	2019	5 Years Average
Coffee and spices	0.980	0.979	0.983	0.980	0.984	0.982
Oil seeds and oleaginous fruits	0.938	0.945	0.931	0.952	0.945	0.942
Edible vegetables	0.957	0.957	0.957	0.960	0.842	0.950
Live trees and other plants	0.972	0.971	0.970	0.702	0.976	0.969
Natural or cultured pearls, precious	0.198	0.045	0.080	-0.050	-0.004	0.080
Meat and edible meat offal	0.672	0.669	0.656	0.816	0.611	0.687
Raw hides and skins and leather	0.893	0.880	0.893	0.926	0.920	0.903
Live animals	0.958	0.926	0.890	0.733	-0.756	0.907
Articles of apparel and clothing accessories, knitted or crocheted	0.043	-0.050	0.058	0.012	0.646	0.297

Source: own computation using the UNCTAD-ITC Database (at 2 digit HS-Code)

The RSCA index for Articles of apparel and clothing accessories, knitted or crocheted, as well as Natural or cultured pearls, precious, were consistently low throughout the periods even at the disaggregated level. Negative RSCA indicates comparative disadvantage and uncompetitive in the international market. Generally, the computed RSCA index for the top exported products by Ethiopia exhibited consistent advantage and competitive in relation to the rest of the world as the indices are much closer to +1.



VI. REGIONAL INTEGRATION EXPERIENCE IN AFRICA

According to the Abuja Treaty and the African Continental Free Trade Area (AfCFTA) accord, Regional Economic Communities (RECs) are a stepping stone toward the establishment of an African economic community in 2028.

Currently, there are eight regional integrations recognized by the African Union to boost intra African trade in the Continent. These are Intergovernmental Authority for Development (IGAD), Common Market for Eastern and Southern Africa (COMESA), East African Community (EAC), Community of Sahel-Saharan States (CENSAD), Economic Community of Central African States (ECCAS), Economic Community of West African States (ECOWAS), Southern African Development Community (SADC) and Arab Maghreb Union (UAM).

Summary of the potential export items within Africa

As most literature indicated, African countries' export is similar and primary products do not able to trade between themselves. On the other hand, there is also empirical evidence that shows, trade is happening between similar products. The summary table indicated below displays potential of Ethiopia within the COMESA region compared with other RECs.

S.N	COMESA	EAC	SACU	ECOWAS	ECCAS
1	Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral ...	Coffee, tea, maté and spices	Natural or cultured pearls, precious or semi-precious stones, precious metals, metals clad ...	Mineral fuels, mineral oils and Products of their distillation; bituminous substances; mineral ...	Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral ...
2	Copper and articles thereof	Natural or cultured pearls, precious or semi-precious stones, precious metals, metals clad ...	Vehicles other than railway or tramway rolling stock, and parts and accessories thereof	Natural or cultured pearls, precious or semi-precious stones, precious metals, metals clad ...	Ships, boats and floating structures
3	Natural or cultured pearls, precious or semi-precious stones, precious metals, metals clad ...	Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral ...	Ores, slag and ash	Cocoa and cocoa preparations	Copper and articles thereof
4	Coffee, tea, maté and spices	Live trees and other plants; bulbs, roots and the like; cut flowers and ornamental foliage	Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral ...	Edible fruit and nuts; peel of citrus fruit or melons	Inorganic chemicals; organic or inorganic compounds of precious metals, of rare-earth metals, ...
5	Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television ...	Edible vegetables and certain roots and tubers	Iron and steel	Cotton	Wood and articles of wood; wood charcoal
6	Inorganic chemicals; organic or inorganic compounds of precious metals, of rare-earth metals, ...	Tobacco and manufactured tobacco substitutes	Machinery, mechanical appliances, nuclear reactors, boilers; parts thereof	Ores, slag and ash	Ores, slag and ash
7	Tobacco and manufactured tobacco substitutes	Ores, slag and ash	Edible fruit and nuts; peel of citrus fruit or melons	Plastics and articles thereof	Cocoa and cocoa preparations
8	Edible vegetables and certain roots and tubers	Edible fruit and nuts; peel of citrus fruit or melons	Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television ...	Rubber and articles there of	Natural or cultured pearls, precious or semi-precious stones, precious metals, metals clad ...
9	Ores, slag and ash	Fish and crustaceans, molluscs and other aquatic invertebrates	Aluminum and articles thereof	Wood and articles of wood; wood charcoal	Organic chemicals
10	Articles of apparel and clothing accessories, not knitted or crocheted	Articles of apparel and clothing accessories, not knitted or crocheted	Beverages, spirits and vinegar	Fish and crustaceans, molluscs and other aquatic invertebrates	Machinery, mechanical appliances, nuclear reactors, boilers; parts thereof

VII. ETHIOPIAN INDUSTRIES: EXISTING OPPORTUNITIES, OBSTACLES AND CHALLENGES

7.1. What are the Existing Opportunities for Ethiopian Industries?

Over recent years, there has been an increased interest in Africa as a continent with immense resources and potentials. AGOA and EBA have been playing a major role in promoting Sub- Saharan Africa's integration into the multilateral trading system and empowering them to have more active roles in global trade negotiations. In addition to this, the creation of AfCFTA will be a solution for Africans and is expected to be the road towards the development of the continent.

After reviewing related published and unpublished works, government reports, and consulting private business actors, we come up with the following potential opportunities and challenges experienced by companies in the country. Some of the potential opportunities of the AfCFTA indicated as follows:

A. The government is engaged in a process of economic reform and liberalization, and the state will avoid being involved in most economic sectors. Even if the Government of Ethiopia (GOE) retains control over the utility sector, such as telecommunications, and prohibits foreign ownership of banking, insurance, and financial services, it is now heavily involved in transferring the ownership to private actors which will be an opportunity for the business.

B. Ethiopia's eligibility for duty-free market access (AGOA, EBA, etc.) plus other benefits available for low-income countries opportunities, but we don't know the date this country drops the unilateral GSP schemes. Therefore, the AfCFTA is a binding commitment, the countries do not able to stop the privilege of the FTA any time.

C. Ethiopia's relative proximity to large Asian and European markets. This may help the country to experience a shift to higher-value adding and technology-intensive production better than other countries in SSA;

D. Cheap and trainable labor makes it more feasible for the growth of the industries. Ethiopia, with a large potential workforce, cheap electricity and access to raw materials has the potential to be a strong candidate:

E. Huge investment in core infrastructures (energy, railway, airway, roads) to ease business activities and promote competitiveness;

F. Multiple manufacturing opportunities, a comfortable climate, and the strong desire and considerable commitment of the Ethiopian government to pull citizens out of poverty.

7.2. Existing Challenges of Industries in Ethiopia

While Ethiopia offers a number of opportunities as we have tried to discuss above, the market is also riddled with challenges. The following are, but are not limited to, among the challenges identified.

- Institutions are not effective and supportive enough to the level that industries are demanding from them.

- An ostensible challenge in the industrialization process is the seeming misallocation of human capital. Currently, with the booming of the construction sector, daily wage in the sector is by far greater than in the manufacturing as well as the service sector.
- Lack of a suitable workforce and high labor turnover is also a critical problem facing functional industries in Ethiopia today. What is worse is that employees are continually leaving to other nearby companies after cost-intensive training is being imparted. Whatever its causes, a high turnover rate can slow down trust between workers and managers and deter on-job training efficiency.
- Foreign exchange shortages, will continue to present difficulties for firms in Ethiopia. Businesses can usually expect delays in foreign exchange supply extending, and it is especially common to expect slow-downs and down-time in manufacturing.
- Electricity demand continues to outpace supply as new hydropower dams struggle to produce at full capacity. Power transmission lines and distribution facilities are inadequate to the demand.
- Government procedures and paperwork are usually bureaucratic and time-consuming, although some improvements have been made in recent years. While the customs clearance process is still very slow, the GOE is committed to improving its World Bank's Ease of Doing Business (EODB) ranking and is currently engaged in redrafting its Commercial Code, which has remained unchanged for the past fifty years.
- Weak linkages to the local economy. Companies in Ethiopia are expressing difficulties in identifying local raw material suppliers, and as a result, heavily rely on expensive imported inputs.
- Lack of coordination among service rendering government institutions. Coordination between important institutions like EIC, IPDC, MoTI, CBE, Customs and Revenue Authority, electric power and telecom agencies, etc. is very weak in facilitating the operation of companies, though these services are expected to be provided under one- window in the zones.

VIII. CONCLUSIONS AND RECOMMENDATIONS

Negotiations are the easy part, implementation is the real challenge: If the AfCFTA is to achieve its objectives of boosting intra-African trade and industrial competitiveness across the continent, African countries must not only conclude and ratify the AfCFTA Agreement, they must also implement it. That means translating the Agreement into national law and ensuring that all relevant government agencies are prepared for and able to apply the required changes and that they do so. These steps cannot be taken for granted. For one reason or another, many African countries have not properly implemented their regional trade agreements. As a result, intra-regional trade in Africa is still plagued by high tariffs, numerous non-tariff barriers, and other complications arising from the patchwork of partially implemented regional trade agreements with overlapping memberships.

The AfCFTA is meant to resolve the challenge of overlapping memberships. But instead of replacing existing regional trading agreements, it adds another (continent-wide) trade agreement to the mix.

So to achieve African economic integration, African states now have to implement the AfCFTA and step up implementation of their existing regional trade agreements.

Continental ambitions and domestic politics: Regional integration initiatives like the AfCFTA are more likely to be fully implemented by member states when they help further the interests of the ruling elites in those states. National political dynamics will therefore have an important bearing on the prospects for AfCFTA implementation. Ethiopia, for instance, has been reluctant to join any regional trade agreements in the past but is now taking steps towards ratifying the AfCFTA. This appears to be at least partly due to the reformist approach of the country's new leadership. For those supporting AfCFTA implementation, a close analysis of the political dynamics within African countries, and of the interests and motivations of their ruling elites, can provide a better understanding of whether rhetorical support for the AfCFTA is likely to be followed up by implementation, or if it is just signaling. Such analysis can also provide a clear picture of the room for maneuver in terms of strategies to promote AfCFTA implementation and overcome potential obstacles.

The fate of the AfCFTA depends on Africa's leaders: Politically-savvy support from development partners can help AfCFTA implementation, but the fate of the AfCFTA ultimately depends on African leaders following through on the high expectations they have set for the AfCFTA. They must show leadership and commitment to implementing the AfCFTA (and their other regional trade agreements), and not just under the bright lights of AU Summits. This also means engaging meaningfully with the private sector and African citizenry in which they are the ultimate intended beneficiaries of all this, after all. This will be crucial to ensure the AfCFTA avoids the implementation gap into which so many African agreements have fallen.

To sum up, to accelerate industrialization through exports, the government of Ethiopia has integrated the program with its national development strategies and plans and pushed forward the construction of zones in core areas to attract investment in priority industrial sectors. This being a good beginning, its prospect is more related to addressing the challenges and using the opportunities discussed above. The following recommendations could also reorient the concerned stakeholders to this end.

A. Economic Policy Perspectives

- The economy makes a transition from an agrarian-based economy to a modern economy, economic management tends to be sophisticated, requiring efficient institutions that are capable of handling the new realities. Institutions in the lines ranging from handling licensing to providing logistical support of export of manufacturing industries require an international standard of efficiency.

- Promoting regional economic integration to address the problem of the weak domestic market, and promote the competitiveness of the domestic economy through increased productivity.

- In addition to attracting large FDI, the government should also attract the larger local small and medium businesses, like through joint-investment with foreign companies, by introducing special policy instruments and incentive mechanisms which could also create a supply-demand value chain.

- According to the responses from the experts, the trade of the continent in general and Ethiopia in specific needs to be diversified and expand the items to be exported.
- In order to get the benefit from trade, Ethiopia must give special emphasis and put into reality the substitution of imported items and exported processed items instead of exporting raw materials.

B. Increasing Coordination among Public Sectors

- Strengthening coordination among responsible government institutions (IPDC, MoTI, EIC, customs office, etc.), clearly specifying their responsibilities, and utilizing strategic and phased approaches in the development of industries to ensure sustainable demand for it.
- Establishment of platform forum with the government authority (MoFA and MoTI) to promote the Ethiopia product in the African markets.
- At the national level, it is important to have institutions carry out implementation and fully utilize the opportunities of AfCFTA and there must be substantial coordination among those institutions who are responsible to undertake this specific activity.

C. Administration Effectiveness related

- The government is always expected to play through providing a pro-business environment for the private sector. This includes having sound macro-economic policies, good soft and hard infrastructure, and a developmental mindset. The Government has to exercise also greater flexibility in the administration of rules and regulations. It should facilitate conditions to do businesses, including foreign investors wishing to come to Ethiopia, through various promotional agencies. We need to have agencies entrusted with this responsibility in each important and strategic sector.
- Government must prioritize to create linkage between the industry and the farmer in the agro-processing sector
- To address high labor turnover, the government needs to improve labor law that could solve questions associated with salary and other benefits, strongly work on the workers' work discipline and attitude through training and discussion forums.
- Arranging discussion forums for all stakeholders (government, zone developers and managers, operating companies, employers, community representatives, research institutions and academia, etc.) to filter out problems and propose possible solutions.
- Businesses need to be fully made aware by the government of the potential of AfCFTA. It is only on this ground that they will have the benefits in the future and can then establish new trade linkages or push their governments to negotiate for these opportunities if they are not already covered by the negotiated substance of the agreement.

D. Emphasizing on R & D

- Strengthening industry-university linkages and involving the academia in strategic research, policymaking and advising, and other professional engagements.
- Creating linkage between resident companies and learning institutions like TVET to get the required workforce as well as to transfer skills. In addition, strengthening the capacity of research and development institutes is required to promote the implementation capacity of the government and the industrialists.

E. Increased Private Sector participation

- Increasing the knowledge of the private sector on the AfCFTA agreement should give more attention.
- The private sector support unit is important to provide information for the actors about access to the African markets.
- Regardless of their role, the private sector should be encouraged to participate in strategic planning and policy decisions affecting their functioning, which in turn requires the development of public-private coordinating institutions.
- Deep analysis in each sector about the utilization of the AfCFTA is essential.
- The chamber should design the strategy with the government officials to enhance the country's competitiveness in African and global markets.
- More active involvement of the private sector in terms of advocacy is required in order to ensure direct input into the AfCFTA negotiating institutions to ensure that AfCFTA is shaped to assist the business community to trade in Africa. AfCFTA is an opportunity for development in Africa. But it must be wielded by private enterprise. Through doing so, businesses can benefit from the great opportunities that the continent has to offer and contribute to its sustainable growth and development.

F. Benchmarking Others' Experiences: Learning from other well-performing countries like China and Mauritius on ways of handling logistic problems effectively, and alternatively sub-contracting the services to experienced organizations.

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REVIEW OF VALUE CHAINS ON SELECTED AGRICULTURAL PRODUCTS: THE CASES OF SPICES, SOYBEAN, AVOCADO AND HONEY

By Policy Research and Advocacy Department

I. INTRODUCTION

1.1 Background

Addis Ababa Chamber of Commerce and Sectoral Associations (AACCSA) is a voluntary business membership organization with a mission of promoting business and investment by providing demand driven services for its members and stakeholders, and advocating for favorable business environment towards fostering the development of a vibrant and dynamic private sector. In so doing, the chamber has been involved in various areas that are believed to create, nurture and sustain a pro-business environment conducive to businesses and contribute to sustained economic growth in the country. This review is the latest special engagement of the chamber in value chain and opportunity study of the agro-processing sub-sector.

In Ethiopia, agriculture makes a significant contribution to the economy, accounting for 43 percent of the GDP, 90 percent of export, and 85% of employment. Yet the sector has been exposed to a number of challenges. Among the challenges, the major ones are adverse climatic condition, lack of appropriate land use system, soil and environmental degradation, limited use of improved agricultural technologies, predominance of subsistence agriculture, lack and/or absence of business oriented agricultural production system, and limited or lack of access to market facilities. These factors have also contributed to the existing low participation of smallholder farmers in value chain and value addition of their products. The need for enhancing food security and the economy through improving agricultural value chains has therefore become critical.

In light of the above, AACCSA signed a grant agreement with GIZ (German Agency for International Cooperation) in the middle of December 2020 to implement the project "Cluster Support for Agriculture and Food Industries in Ethiopia". The project is intended to benefit agribusiness companies in Ethiopia. One of the activities in the project relates to conducting value chain and opportunity studies on selected high value agricultural products in fruits, cereals, plants and herbs, and spices with high potential for value addition and processing for various uses. Therefore, AACCSA commissioned consultants to conduct a total of thirteen13 studies, of which 7 are on opportunity and the remaining 6 value chain studies.

This review is a compendium of studies made on four products, namely spices, avocado, soybean, and honey from the studies produced by Kilimanjaro Trading and Consulting, Bamha Consulting Services, Getachew Consulting, and Excellency Consulting firms.

Major objectives of the studies are:

i. To create better understanding of the agriculture and food processing industry sub-sector,

ii. Provide inputs that enable investors to embark on investment, and

iii. Avail various forms of support for businesses thereby attracting investment, creating jobs and building public-private partnerships.

1.2 Methodology

Standard and scientific methods were employed for data gathering and analyses in the studies. The data collection for the analyses used primary and secondary sources. Under primary sources were included interviews, focus group discussions, key informant interviews and observations using structured questionnaire and checklists. The primary data were collected by using small sample size due to short study time and limited resources. Officials and experts from relevant government organizations, associations, and researchers who demonstrated interest in the sub-sector were also interviewed.

The secondary data were collected from various government sources, including Central Statistics Agency, Ministry of Agriculture, Ministry of Finance, and professional as well as research institutions. The bulk of the field work took place from March to May, 2021. Both the quantitative and qualitative data collected using primary and secondary sources were analysed and the results presented in descriptive and narrative format.

The assessment area included Addis Ababa city, Amhara, Oromia, Benishangul-Gumuz and SNNPR regions. Both the value chain analysis and opportunity studies focused on examining the current status of the products, including supply chain of the product, market potential, possibilities for collective marketing and chain efficiency, assessing and identifying key areas of opportunities, and recommending specific areas within the businesses having potential benefits for producers, processor and consumers.

Following the completion of the studies, the chamber organized validation workshops between August and October, 2021. The participants of the workshops discussed, commented upon, and validated the preliminary findings of the studies and suggested possible courses of actions.

This review paper is dedicated to providing a summary of the value chain analysis made on selected agricultural products - spices (ginger, pepper, and turmeric), avocado, soybean, and honey. AACCSA believes that the studies and the awareness creation efforts will fill the knowledge and policy gaps related to value chain, investment, and business uses of these high-value agricultural products.

II. REVIEW OF VALUE CHAINS AND MAJOR FINDINGS OF SELECTED AGRICULTURAL PRODUCTS

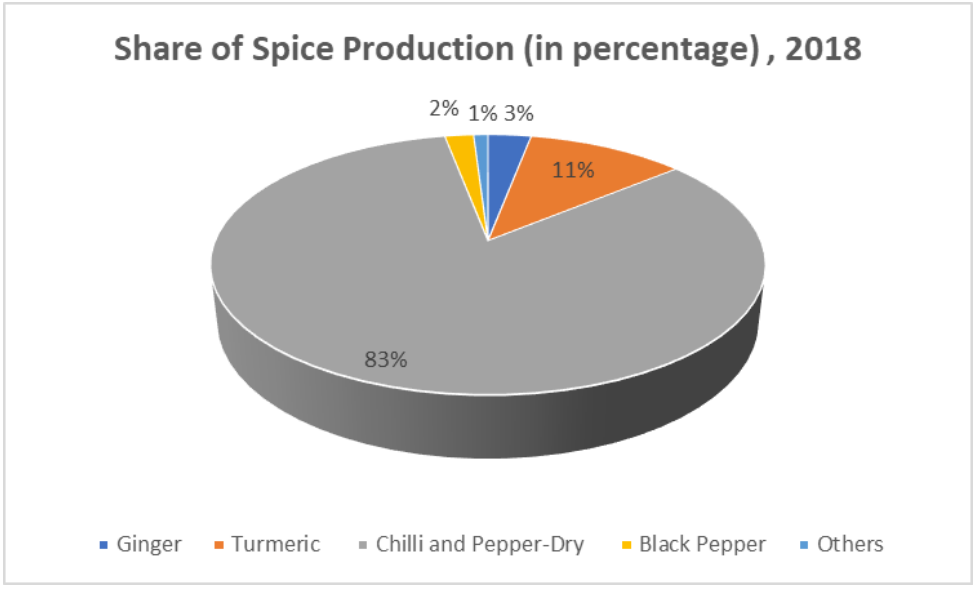
2.1 Spices

Ethiopia has immense comparative advantage in agricultural products, including spices, which emanates from its natural endowment. Over 50 spice crops are found in Ethiopia indicating a huge potential for investors. Not only this, the spices are unique in their organic content, rich in colour and flavour.

2.1.1 Production

The national production of pepper, turmeric and ginger in the years 2015/16 to 2020/21 was recorded as 262,790.826 - 295,980.508 tonnes, 16607.7 - 28856 tonnes, and 190.707 - 1349.366 tonnes, respectively. As shown in Figure 1, chilli and pepper (dry) (83%), followed by turmeric (11%) and ginger (3%) [FAOSTAT, 2018] contributed the lion's share to spice production.

Figure 1: Percentage Share of Ethiopia's Spice Production [FAO STAT (2018)]



The potential to increase spice production in Ethiopia is very high due to suitable climatic condition, ample cultivable land and cheap labor, proximity to potential export market and favorable policy environment. The spice production in Ethiopia is near organic standard. There is also huge room to support the production of ginger, turmeric and pepper with research as previous efforts are limited.

Pepper

The production of pepper has shown significant increase both in terms of the area harvested and productivity yield per hectare since 2007. In 2010, Ethiopia produced 265,276 metric tons of pepper that grew to 374,413 metric tons in 2019. Similarly the import of pepper increased to an average

quantity of 245 MT per annum from 2011 to 2019, representing an average value of 490,000 USD per annum. This demonstrates the existence of a big room for import substitution in the sub-sector. However, pepper is a very sensitive product which is highly affected by climatic and weather conditions. Farmers put water on dried pepper as they believe that water protects pepper from damage. Though moisture content is one of the parameters for pepper marketing and export, special attention is required to protect it from fungus that causes aflatoxin during storage.

Ginger

Between 2007 and 2019 the country imported an average of 156 MT of ginger per annum, representing an average value of 190,000 USD. From 1998 to 2013, ginger export amounted to an average of 6,360 MT per annum, representing an average value of 7,209,000 USD per annum. However, from 2014 onwards, there has been a sharp decline in the production and export of ginger in Ethiopia. For instance, in 2014 ginger export amounted to 2,900 MT, further declining to 6 MT between 2018 and 2019 with equivalent value of 7,000 USD per annum. This was basically due to Ginger Bacterial Wilt that caused significant loss in qualitative and quantitative rhizome yield in Ethiopia.

One of the approaches adopted to exploit the export potential of ginger is the use of irrigation based cultivation techniques that was tested and piloted by the agricultural research institutes, Areka, Jimma and Teppi-Mizan universities. The techniques identified by the institutes are expected to help control Ginger Bacterial Wilt.

Turmeric

The value of exported turmeric from 2012 to 2016 was 3,413 metric tons, with equivalent monetary value of 51,420 ETB per annum. From 2017 to 2020 export of turmeric almost doubled, registering an average of 5,500 MT per annum. By 2017, Ethiopia ranked the fifth leading country in terms of turmeric export value (MoTI, 2017). This was mainly because of the behavioural shift on the part of farmers towards the production of turmeric following the adverse impact of Ginger Bacterial Wilt on ginger crops.

2.1.2 Spice Markets

2.1.2.1 Domestic

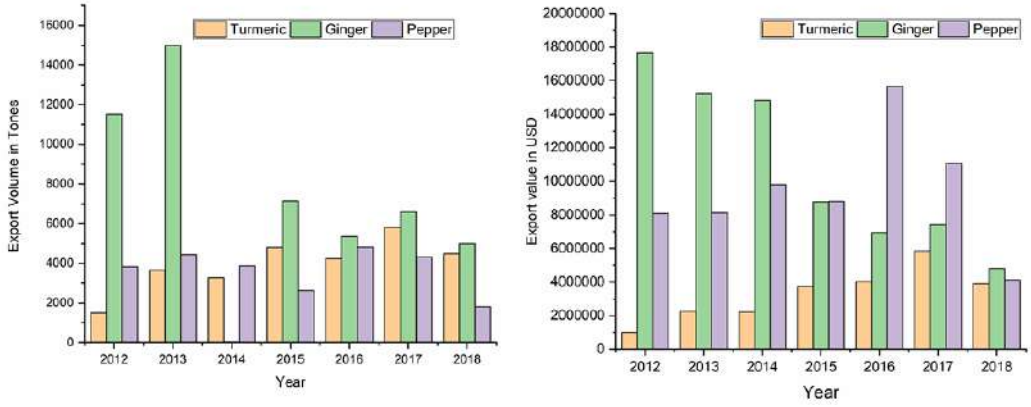
In Ethiopia, purchasing for the domestic trading channel is done by traders at smallholder level. Village traders and woreda merchants make use of larger- markets, mainly in Addis Ababa, Adama, Metema and Dire Dawa. The village traders and woreda merchants either buy for their own account or are liaised by large processors in the aforementioned cities. There is hardly any direct contact between processors and farmers/smallholders in the traditional supply chain, and smallholders are heavily dependent on local collectors, village traders and woreda merchants to market their products. Smallholders who live in the vicinity of a village also bring their produces to rural markets. Between every smallholder farmer and trader, there can be up to six consecutive intermediaries marketing the spices to end-consumers in Ethiopia or overseas (Herms, 2015). For ginger and turmeric, the supply chain is short. As these spices are primarily cultivated for export, they pass through few hands before they reach the exporting company.

The study showed that the domestic market for spices, especially ginger, pepper and turmeric, is increasing from time to time mainly due to suitable environment for the cultivation of varieties of spices, increase in population, rate of urbanization, better awareness on health benefits of spices, and significant use of the spices in many Ethiopian foods.

2.1.2.2 International

Even if Ethiopia is a homeland of numerous spice crops, favourable agro-ecology and long history of spice production, the country is not recognized as a major exporter of spices. Yet the import-export trend of Ethiopian spices can be taken as a positive indicator for the sub-sector. Ethiopia has enormous potential to produce and export various spice crops. Presently, the country mainly produces and exports spices such as red paper (chillies), turmeric, ginger, black pepper, cumin, fenugreek, and coriander.

Figure 2: Export trends of pepper, ginger, and turmeric (volume and value, 2012-2018)



Source: Ethiopian Customs Commission (ECC)

2.1.2.3 Main Spices Exported

1. Ginger

Until 2013, ginger grew primarily in the lowlands of SNNPR, Oromia and Gambella regions, and was the most exported spice responsible for 45% of total export value (US$12 million). But exports have shown a declining trend from 2013 onwards (Figure 2). This was mainly due to the Ginger Bacterial Wilt, which considerably affected ginger production, and the rapid increase in domestic demand of spices.

2. Turmeric

Turmeric now occupies a large share of former ginger farms. Export of the spice increased to a total of 5,851 MT, i.e., by 64 percent, during the period 2013 and 2017. However, the production of turmeric does not fully compensate for the losses in ginger production since the export price is lower (Titus and Wojtek, 2020). After a total absence of ginger production for a few years, there

are now signs of recovery. Farmers are reintroducing ginger on an experimental basis and several pesticides are being tested to prevent the disease (Titus and Wojtek, 2020).

3. Pepper/Chilly

Chillies were the most widely and relatively consistently produced spice in Ethiopia until 2017, with production amounting to about 329,000 MT. However, production dropped in recent years, and exports declined drastically (Figure 2). Ethiopia predominantly exports pepper/ chillies in the form of berbere blend or chilli mix to Ethiopians living abroad.

2.1.2.4 Export Destinations

While a large number of small traders serve the domestic market, a limited number of financially strong exporters are supplying the international market. YSO, Bebeka, Nati and Fasika are among the most important exporters. The main international spice trading centers are Rotterdam, London and Hamburg in Europe, and Mundra, Mumbai and Kattupalli in India. The other important hubs are Indonesia, Saudi Arabia and the United Arab Emirates. Products traded in smaller quantities or according to special specifications with respect to origin and grade are imported directly by agents, international brokers and trade houses. There is active inter-trade among trade houses and international brokers (Titus and Wojtek, 2020).

As a country located closer to Europe than the major spice-producing countries such as China, India, Indonesia and Vietnam, Ethiopia can have a competitive advantage due to the lower international logistics costs. However, this also depends on the cost of transportation from farm gate to the exporter in Addis Ababa, and the cost of exporting a container from Addis Ababa to Djibouti port.

2.1.3 Major Challenges

With respect to export of spices, the problems get more complex as the country engages in export because of the demand of high end consumers. Among the major problems include poor quality and limited volume of produce, lack of knowledge about the supply chain, underdeveloped packaging, weak land and sea logistics (infrastructure, storage, etc.) which results in high transaction costs, lack of market transparency with buyers concentrated at the importer side, increasing competition, and trade barriers especially in Europe market.

2.1.4 Opportunities for Upscaling the Product Market

Despite the above challenges, the spices in the sub-sector are among the important crops that fit the strategy of commercialization of agriculture. The analysis also shows the country's great potential for raising export earnings by selling spices under organic certification, which is in high demand in the developed world. In this connection, the following are key opportunities for engaging in the sub-sector.

1. **Market Potential:** The market potential for pepper, ginger and turmeric spices relies on both local and international consumers and processors. Production is, therefore, expected to recover and the spices remain promising to be exportable products in the near future.

2. **Organic products:** The spice production in Ethiopia is near organic standards, making it attractive for international markets. This can be evidenced by some foreign companies which are setting up an organic chain in Ethiopia (MOI, 2015).

3. **Emerging Foreign Markets:** There are growing market opportunities in Middle Eastern countries like United Arab Emirates (UAE, Dubai) and Yemen.

4. **Country's Resource Base:** Ethiopia is home to several spice crops. The opportunities in the country include: Favourable weather and fertile soil, strong government commitment for spice investment, extensive incentive packages, and strong commitment of farmers to produce spices.

5. **Value Added Processing:** There is ample scope for absorbing new entrants as there are few spice processing companies operating in the country. Investors can engage in the underinvested spice milling, extracting and packing areas.

2.1.5 Conclusions and Recommendations

Spice production and trading has great importance at macro and household levels in terms of creating employment opportunities and foreign currency earnings. Hence in order to exploit the opportunity of the current growing demand for spices in general, and pepper, ginger and turmeric in particular, developing meaningful programs and approaches is essential. More specific interventions for short, medium and long term periods, which are recommended by the VC and OS studies are summarized below.

Short term

In the short term it is important to focus on the following:

- Address challenges of the sub-sector by taking into account the individual spices: pepper, ginger and turmeric. In this regard, the sub-sector should be given priority in the country's agricultural policy;
- Create awareness among farmers that help to improve or enhance production, productivity and quality, and ensure availability of adequate agricultural supplies to large-scale processing and exports;
- Expand agricultural extension services and fill skill gaps to minimize pre and post-harvest loss;
- Expand and strengthen rural collection centers which play very important role in minimizing the adulteration problems affecting quality of spices; and
- Promoting the spice-sub-sector

Medium to long term

For the medium to long term periods, the study recommends:

- Classify and grade spices (by the pertinent government bodies);
- Increase laboratory and testing centers at regional and national levels to ensure quality of spices ;

- Establish linkage between quality assuring institutions and rural agriculture products collection centres;
- Mobilize large number of farmers into cooperatives and unions;
- Establish spices development authority with clear mandates and responsibilities;
- Develop modern supply chains and logistics management system; and
- Attract Foreign Direct Investment (FDI) through joint venture by easing access to finance and land for commercial farms.

2.2 Soybean

2.2.1 Oilseeds and Soybean Production in Ethiopia

Increasing number of small holder farmers, medium as well as commercial farmers are currently growing oilseeds following strong demand from international and local markets (processing companies).

Table 1: Total country wide production of oilseeds (Tons) by small and commercial farms[3]

Year	Oilseed type	Groundnuts	Linseed	Niger seed	Rapeseed	sesame	soybean	Sunflower
2016/17	Commercial	2,867	1,885	1,269	6,927	224,784	64,272	272
	small holder	129,636	87,912	302,432	43,402	267,867	81,235	7,954
	Total	132,503	89,797	303,701	50,329	492,651	145,506	8,226
2017/18	Commercial	2,474	893	1,163	6,843	231,320	63,217	253
	small holder	145,173	88,210	323,345	32,866	255,903	86,468	9,577
	Total	147,647	89,103	324,508	39,710	487,224	149,685	9,829
2018/19	Commercial	1,395	448	574	7,876	231,984	63,532	350
	small holder	144,091	96,686	296,323	38,216	201,665	149,455	8,039
	Total	145,486	97,134	296,897	46,092	433,649	212,987	8,390
2019/20	Commercial	882	505	602	6,824	227,014	54,805	678
	small holder	156,533	79,695	291,637	42,046	262,654	125,623	9,571
	Total	157,416	80,200	292,239	48,871	489,668	180,429	10,248
2020/21	Commercial[4]	1,139	477	588	7,350	229,499	59,169	514
	small holder	205,069	80,457	214,798	12,576	260,258	208,676	4,288
		206,207	80,933	215,386	19,926	489,757	267,845	4,802

Source: CSA and own forecast

Despite government efforts to boost productivity and expansion of production, however, total production of oilseeds has not shown significant growth. According to the above table, main oilseeds such as sesame and niger have not shown growth in volume of production over the five years. The

[3]The data in the table 1 shows only main season (Meher- from September to February) for small holder farmers and commercial farming. "Belg season" data for small holder farmers is not available at CSA.
[4]Commercial farms data are released in June month but Getachew Consultancy has forecasted 2021year production for commercial farms using historical data.

production volume of sunflower is extremely low despite the popularity of sunflower oil in Ethiopia, which was the most consumed oil in the country in 2020. Only close to 5,000 tons of sunflower was produced in 2020/21, implying that it has no chance of being marketed for commercial processors. On the other hand, the volumes of soybean and groundnut production, have increased by 84% and 56% over the period 2016/17-2020/21.

Total soybean production during main or "Meher" season for 2020/21 is forecasted to increase by 85% compared to last season yield following 92% rise in area covered with soybean oilseed by small holding farmers (161, 000 hectares), and 50% increase by commercial farm (36,000 hectares). The total yield expected will exceed 493,000 tons of soybean oilseed. This is a great leap compared to last season production in 2019/20, which was 267,000 tons.

Moreover, for the first time, irrigation initiatives are being implemented by Ministry of Agriculture (MoA) in collaboration with key investors to produce soybean oilseed in regions with high potentials like Afar, Gambela, and SNNPR on 18,500 hectares of land. Accordingly, a potential total output yield of 47,200 tons is expected in 2021/22 (MOA annual Plan & KII).

2.2.2 Soybean Production by Type of Farming, Region

Soybean is produced by both small farm holders and commercial farms. During the period 2016/17-2020/21, annual soyabean production covered on commercial farming and small holding farmland totalled 24,600 hectares and 55,600 hectares respectively. The difference is visible on their average annual production as small holding farmers produced an annual average of 130,291 tons (68% of the total country production) while commercial farming produced 61,000 tons , 32% of the total (CSA).

Soybean production used to be dominated by two regions, namely Oromia and Benishangul-Gumuz regions. Both regions account for the highest production of soybean in the country, 51% and 40% respectively (CSA). The Survey of 2019/20 Central Statistics Agency indicates that significant change has taken place in terms of regional distribution. The major areas currently growing the crop are situated in Amhara, Oromia, and Benishangul Gumuz regions.

There is a significant increase in the number of farmers growing soybean in Amhara region, following unionized export of the crop. Currently, the Jawi area located in Awi zone of Amhara region harvests the highest output per capita (farmer) in Ethiopia.

In 2019/20 main season, the Amhara region obtained the lion's share (42%) of production, followed by Benishangul-Gumuz (35%), and Oromia (22%). Insignificant volume of soybean is also produced in S.N.N.P, Gambella, and Tigray regions

2.2.3 Comparison of Soybean Production with Other African Countries

Worldwide production of soybean has grown at a compound annual growth rate (CAGR) of 4.68% since 1961, while African production levels are rising 48% faster at a rate of 6.84% per year. Both world and Africa's growth in production mostly result from an increase in soybean acres planted and not from yield.

South Africa, Nigeria, and Zambia are the top three soybean producers on the African continent. South Africa's 3-year (2015-2017) production average was 38.3 million bushels (1,042,553.16 MT), which is 39% of the African continent's production. Nigeria's 3-year production average was 23.7 million bushels (644,314.85MT), which is 25% of the continent's production. Zambia's 3-year average was 10.4 million bushels (281,712.33MT) which is 11% of the continent's production. While the other 21 countries together, produced 25% of Africa's total soybean production.

2.2.4 Export and Import Trends and Potentials

Ethiopia currently exports soybean to the European Union at average world price. Export prices went down in the observation period of 2013–2017, most likely due to better production as a result of more favorable weather conditions. These prices are competitive with the main suppliers Brazil, USA, and Paraguay. The lack of yield in comparison with these competitors is compensated most likely by lower labour costs. In the five-year price averages from India to the EU, one can appreciate that the premium for organic is almost non-existent. As most soya- beans go into animal feed production, the incentive to pay for organic is probably not high. However, there is also a chance that this situation is an artefact related to the specific trade from India to the EU (Lehr & Sertse, 2018).

India was the largest destination market for Ethiopia's soybean exports, accounting for about 52 percent of the total exports in 2019/20. Vietnam, Turkey, and China were the next important destinations, with respective market share of 13, 10, and 7 percent of total exports. During the 2018/19, China bought 5,000 MT of Ethiopian soybean valued at USD 2.5 million. In 2019/20, Chinese import demand for Ethiopian soybean rebounded after imports slumped in 2018/19. A record level of 23,000 MT of soybean was shipped to China in 2017/18, following the U.S.-China tariff retaliatory actions.

As of October 2019, Ministry of Trade and Industry regulation required soybean trading to be conducted through the ECX, and trading at ECX officially started in January 2019. Recently, local food processors have a special window to purchase soybean for local processing. This regulation is expected to drive up local production, streamline trading, and improve exports. Since then, the directive has enabled soybean price at ECX market to stabilize and go below export price. Local prices are expected to continue in an upward swing owing to strong demand for the beans in domestic and overseas markets.

In the years 2014 through 2018, Ethiopia has exported 27.06 tonnes of soybean on average with an equivalent amount of 13.07 million USD earned. The trend has shown an overall growth in the export of the commodity. The relatively recent three years (2016-2018) average export value also indicated that there was an increase in the export value of the soybean seed, broken or not. The average export value for the three years has been recorded about 57.2 tonnes and equivalently 25.72 million USD. On the other hand, data show that about 75,670 MT was exported in the year 2019/2020. India has been the major destination country for the years 2015-2018, while Vietnam was an export destination country in the year 2014.

On the other hand, Ethiopia imported 3,314 kgs of soybean commodity on average in the years 2014-2018, and spent an average value of 17,219 USD in the years. The import trend has indicated that there is an overall decrease from time to time, though erratic pattern has been experienced. The relatively recent three year average import has shown that there is a decrease in import volume of soybean that was 2,389 kgs and an equivalent value of 10,940 USD. The major countries of origin for the soybean import were China and Zambia.

2.2.5 Value Chain Map

The soybean value chain extends from pre-production (supply of inputs) to processed products marketing and consumption while a lot of actors are embedded in it. The main functions of the soybean value chain identified in this study are input supply, production of soybean, raw or soybean commodity marketing, soybean processing, and consumption. Under these core functions, the actors are broadly classified into four: inputs suppliers, processors, direct market actors, and chain supporters. Major actors involved in input supply functions are farmers, private dealers, NGOs, agricultural research centers, unions, primary cooperatives, and woreda agriculture offices. They mainly supply inputs like fertilizer, seed, and others such as credit, insecticide, pesticide. These actors are processing firms which convert the agricultural soybean commodity into variety of processed products by adding value.

The direct market actors are those involved in soybean trade who order the flow of soybean in time and space. These include producers, local collectors, primary cooperatives, unions, wholesalers, processors and consumers. The chain supporters are involved in technical advice, service provision and policy formulation and implementation of the chain.

2.2.6 Market flow Map

Soybean is traded as agricultural commodity and variety of processed soybean products. Farmers sell their produce directly to local collectors, processors, exporters, unions and ECX. These are the major market for soybean. The collectors, unions and ECX participate in selling soybean commodity to exporters and processors. The raw commodity can also be exported in keeping with international market requirements. The processors perhaps receive their inputs directly from collectors, ECX or unions that supply to local and export markets.

Sample respondents for this study stated that there are diversified marketing channels for soybean production and processing. Accordingly, 33.33% of the respondents said that they follow Farmer →Broker →Wholesaler →Processor →Consumer soybean marketing channel.

Challenges/Constraints in Soybean Value Chain	
Challenges facing the supply market	Challenges to enter the export market
Problems attributable to low level of soybean production and supply in the country. • Input related constraints for the production of soybean • Production constraints like limited knowledge in use of soybean in cropping system • Weak linkage among value chain actors • Supply /marketing constraints • Low access to finance for soybean production	• Inadequate market intelligence • Inability to leverage scale efficiencies due to smaller size • Non-conducive business environment due to missing credit and insurance • Inconsistent export supply : Limited relationship between exporters and importing countries, unstable and erratic demand from importing countries leading to limited number of contracts between exporters and producers • Inconsistent implementation of policy interventions

Major opportunities for value chain actors in soybean production and processing		
Production and processing	Domestic consumption	Demand by processors
• Availability of adequate land and biodiversity for cultivation • Strong government commitment and support • Different value addition alternatives: oil, oilcake, animal feeds • The same is true for their derivatives soybean oil, and oil cake. GMO-free soybean might provide Ethiopia with a competitive advantage, as confirmed by interviews with European importers • Availability of different input suppliers: Agricultural Input Supply Enterprise is the sole importer of fertilizer. • Distribution is through unions and cooperatives Agro-chemicals are supplied by private companies. Ambasel and Chemtex are the major importers and suppliers of chemicals • Availability of extension services • Adequate labor force for soybean production and processing activities • Availability of research centers institutes • Availability of different NGOs that promote production, processing and marketing • Availability of cooperatives and Unions • Availability of local processors	• High demand for vegetable oils and animal feed • A huge potential for household utilization and therefore food/nutrition self-sufficiency • Diet conscious consumers looking for healthier alternatives to palm oil. Most Ethiopian consumers prefer sunflower, niger seed, and soybean oils as healthier alternatives • High demand of soybean by agro processing industries engaged in human and animal feed • Huge soybean demand as a result of integrated agro processing industrial parks and the launch of new edible oil manufacturing plants	• High demand of soybean by agro-processing industries engaged in oil, food and animal feed. • In addition to oil, soybeans are used to make a variety of local foods as well as corn-soy blend for emergency food assistance programs by processor. • Integrated agro-processing industrial parks and new edible oil manufacturing plants as well as other processors demand soybean • Processors are allowed to buy soybean from ECX with special privilege • High demand for processed soybean products on international markets • High demand for processed soybean products on international markets • Infrastructure development could facilitate soybean marketing by creating link between buyers and farmers

2.2.7 Conclusions and Recommendations

Conclusions

The findings in the value chain study have established the importance of soybean as a significant contributor to the economic and social development of Ethiopia. Soybeans have the potential to be a significant driver for smallholder livelihood improvement and food security in Ethiopia.

The growing demand for export and the relative proximity of Ethiopia to growing markets are opportunities to substantially boost earnings. Diversification by small-scale producers rotating staple cereal production with cropping soybean is an important income opportunity. Increasing soybean production can enhance the protein consumption of the rural poor, thus ensuring food security. Finally, from macroeconomic perspective, soybean can boost exports to improve foreign exchange earnings and allow for continued import substitution.

It is thus important to realize the full potential of the crop as a component of Ethiopia's long-term food security; and growth relies on clear direction and execution capacity of the Government of Ethiopia and a wide number of stakeholders. To achieve the latent potential in the sub-sector, several constraints must be addressed. A common vision among all stakeholders and the road map to undertake the respective roles of different actors across the value chain is critical.

Recommendations

The soybean sub-sector can be strengthened through enhanced on-farm productivity and development of a more efficient chain of inputs and off-take driven by a strong and stable export sector with strong export players that ensure consistent international demand. The following are recommended to improve the performance of the soybean value chain:

- Enhance the use of improved inputs such as improved seed, fertilizers, pesticides, etc.;
- Increase adoption of modern agronomic practices (e.g., weeding, depth of planting full crop rotation to ensure healthy soils, etc.);
- Expand and develop market through the application of different soybean marketing strategies;
- Encourage commercialization of soybean production;
- Strengthen linkage and vertical integration among the actors along the value chain;
- Enhance export promotion, local and international market intelligence;
- Reduce bureaucracy and ensure transparency and value chain governance in delivering services by government offices;
- Enhance strong linkage between a broad range of well-developed exporters to the international commodity markets; and
- Awareness creation on importance and impact of producing quality and safe soybean.

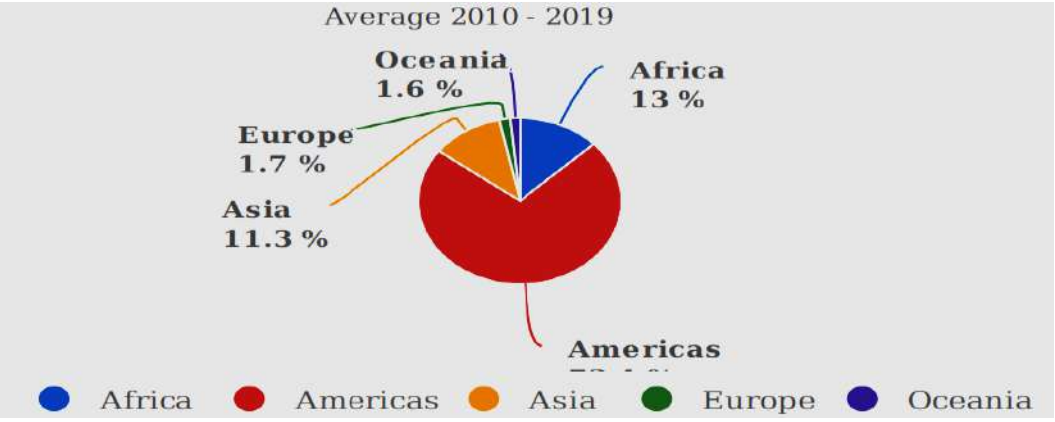
2.3 Avocado

The south western part of Ethiopia is the key production belt for avocado. Some 10 percent of the national fruits produced in the country annually are avocados. Sidama region was selected for the study as it is a state with high avocado production (36% of the national production, Mitiku, 2017). Besides, the Yirgalem Integrated Agro-Industrial Park is found in this selected geographical area (IAIP).

2.3.1 Worldwide Avocado Production

The production of avocado is increasing worldwide as a result of the high demand for the product. The Americas dominated the production of avocado in the world, followed by Africa and Asia. Mexico was largest producer of avocado in the world in 2019.

Figure 3: Production share of avocado by region



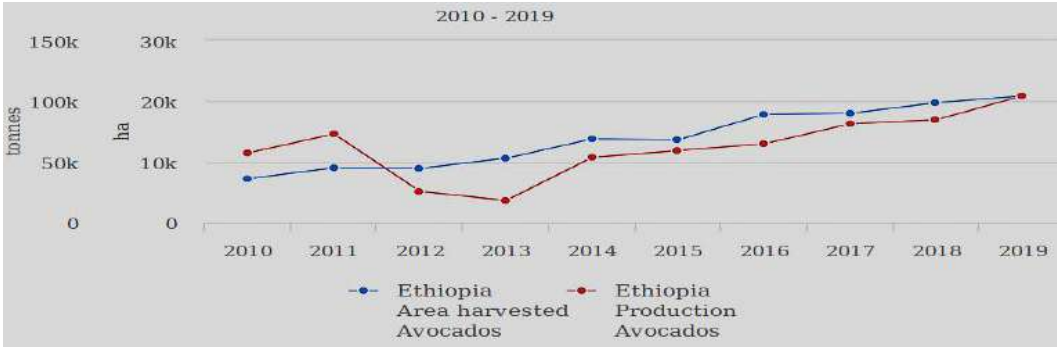
Source: FAOSTAT accessed in June, 2021

2.3.2 Avocado in Ethiopia

Avocado has become the top promising fruit in Ethiopia due to its high yield per hectare, quality, and niche market for the country to enter the world market. The volume of production has quadrupled during 2015-2019 commensurate with the increase in areas of cultivation (Figure 3). Some 84,793.7 tons of avocado was produced on an estimated 19,758.75 hectares of land with 4.2 tons/ha productivity (CSA, 2019; Wale, 2019). The CSA (2019) report states that about 17% of the total average of fruit crops in the south western production belt part of Ethiopia was covered with avocado. The major avocado varieties are Hass, Pinkerton, Fuerte, Bacon, and Ettinger.

Given the potential, some researchers note that the current production rate at 767,300 hectares (Faris, 2016; Trienkenes, 2011) is far below the potential. The large chunk of existing land is covered with local variety with low productivity.

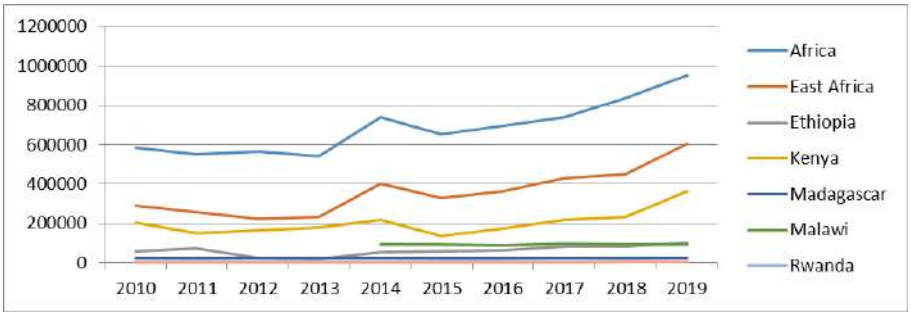
Figure 4: Production/Yield of Avocado



Source: FAOSTAT accessed in June, 2021

In Ethiopia, the production of avocado is not only nascent but also suffers from low productivity like other crops in the country. Consequently, the country's avocado production is far below those of many avocado growing African countries. Kenya is the leading African country in the export of avocado. Compared to Kenya, Ethiopia started the production of avocado late and is picking up slowly (figure-4).

Figure 5: Ethiopia's standing in Africa in terms of avocado production



Source: Computed by author from FAOSTAT data

The per capita consumption of fresh fruits in Ethiopia is one of the lowest in Africa. This is mostly because of low income and weak dietary habits resulting from inadequate awareness of nutritional benefits. Ethiopia's per capita consumption of fresh fruits is approximately 7 kgs per person in a year. This is far below the WHO and FAO recommended minimum level of dietary intake, i.e., 146 kgs per person in a year (Michel, 2020). Also, the per capita consumption is eight times lower than the average figure for the East Africa region, which stands at 55 kgs per person in a year. Likewise, Ethiopia's consumption level is well below neighbouring countries such as Sudan with 79 kgs per person and Kenya with 55 kgs per person (Demissie et al, 2009; Fanos et al, 2015; FAO, 2020).

2.3.3 Value Chain Linkages

Almost all of the linkages in the avocado value chain are informal. Farmers have in general two options: one, top quality fruit is collected and transported by traders destined for Addis; and two, the

remainder is sold at local town markets or to small retailers who may also purchase from the town markets. The former channel fetches higher price while the latter brings lower price. Often farmers meet local traders – they barely have relationship with Addis traders, get cheap (minimum) price for their produce. The lack of other channels for selling fruits forces them to sell the fruits at low prices or dump them. However, processing factories do not exist in many fruits producing areas, except in Yirgalem of Sidama region. In general, the local market situation could be described as saturated and of low value, with non-existent value adding channels.

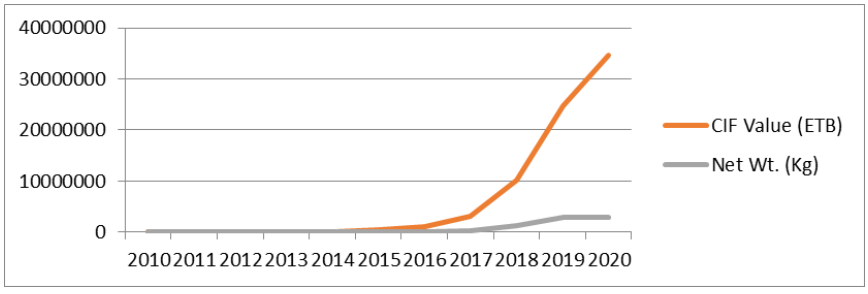
The market in Addis is dominated by the wholesale markets in Mercato and Lafto .These markets deal in fruits and vegetables from all over the country. Industry sources mentioned that the Addis wholesalers are organized under groups that have strong ethnic ties and tend to operate in ways that have been described as 'cartels[5]'. One of the major value addition activities in this market is re-packaging and grading fruits on arrival in Addis as produces most often arrive in 'bulk' having not yet undergone any systematic grading or packaging. These are, however, functions that can be carried out at farm level, and farmers in the areas could perhaps be able to extract better prices and generate more value in the chain. The main sales channels from the Addis wholesale markets are direct to consumers, hotels, large retailers and supermarkets as well as small retailers and kiosks. Knowing the share of each channel (in future studies) may help to understand whether the country is moving in the direction of supermarket (most powerful buyer) or retailer dominance, as it is the case in many developed countries.

2.3.4 Export and Import

Export

In Ethiopia the export structure is highly concentrated on a few traditional agricultural commodities such as coffee, hides, skins, oilseeds, and pulses. In its diversification endeavour, however, the country has recently embarked on horticulture and other non-traditional high-value agricultural export goods. Although crammed with challenges of various types, avocado production and export is increasing over time (Figure-6) despite challenges in poor productivity, shortage of packaging material, and limited refrigerated containers.

Figure 6: Volume and Value of Avocado Export



Source: Author's computation from Customs data

[5]The supplier dominance of the past is giving way to retail control of the agri-food value-chain and a focus on consumer choice. This has driven supermarkets to move from predominantly price-based competition to emphasise innovation-based competition focused on creating value in the eyes of the consumer (Wright and Lund 2003 cited in Collins et al, 2016).

Ethiopian's export mainly goes to relatively lower standard requiring countries such as Djibouti in Africa, with few exports to Europe and Middle East. In term of competitiveness Ethiopia's export is hindered because of higher prices when compared to Kenya or Egypt and rendered the country to secondary or additional supplier to back up supply from regular countries. Yet Ethiopia can still raise its export earnings by selling fruits under organic certification, which is at high demand in the developed world.

Import

Ethiopia's import of fresh fruits, especially apple, pear, orange, and grape, etc., has been increasing overtime. The import of avocado is little. The country satisfies almost all of its demand for fresh avocado from local production. On the other hand, the country imports a variety of canned fruits from abroad. Nevertheless, the quantity of canned avocado imported to the country could not be known due to problem of data aggregation.

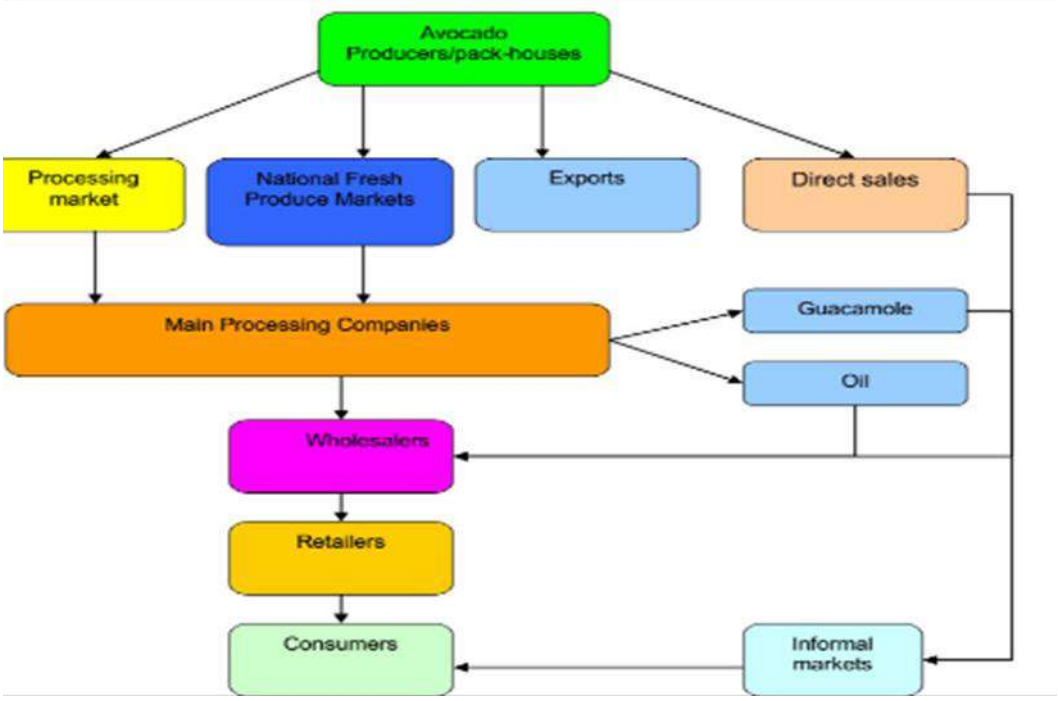
Processing

Hardly any avocado processing is undertaken at factory level in the country. Recently, however, the global front runner in organic ingredients Trading Organic has opened a new Sunvado factory, a processing facility for premium organic avocado oil, in Yirgalem IAIP in Ethiopia. The processing facility is working with more than 30,000 local organic smallholder farmers.

2.3.5 Value Chain Map

The objectives of the value chain are to map production of avocado value chain known for their high but unexploited potential for development of avocado fruit. The mapping will help develop a set of interventions to implement the value chain development in the respective areas. The value chain mapping process centered on establishing opportunities, current status, constraints and projection of the future of the industry. Accordingly, the research team discussed with different actors and stakeholders about tracing chain links and conducted individual interviews with key informants using a set of guiding questions. Thus, the simple avocado value chain map in Sidama and the SNNP regions under the field visits demonstrates that various chains, including avocado producers, collectors, cooperatives/unions, marketers, (both formal and informal), exporters and processors, are involved.

Figure 7: Avocado Value Chain Map



2.3.6 Opportunities and Challenges of Avocado Value Chain

Opportunities	Challenges
Ethiopia is found in a strategic position in global setting which reflects its central location in the global economy.	Unavailability of registered nurseries and poor regulatory system.
The growing demand for avocado is expected to rise sustainably in Europe, Asia and the Middle East. This would provide a potentially high-value international market for Ethiopia.	Logistic problem (for export trial).
Ethiopia can supply high quality fruits on the counter season.	Shortage of packing material (cartons).
The natural (non-manipulated) ripening season of avocado in Ethiopia is June-September, a season which keeps North Hemisphere suppliers out of competition.	Limited understanding of long-term business partnership.
Export to Europe gives 2.4 USD/kg and to Arab countries/ Asia 3 USD/kg. When we see the avocado price build-up, the transport-flight unit cost to Europe or the Netherland seems high and the profitability of avocado export largely depends on the rooms for reduction on packaging, logistics and transportation costs.	Prevalence of disease and insect pests: Fruit fly, Whit mango scale, avocado root disease as well as low yield / quality.
Actual profit for exporter 0.2% - 10%.	Shortage of planting materials (scion, particularly HASS avocado variety).

2.3.7 Conclusions and Recommendations

Conclusions

The major part of the country's avocado export still goes to relatively lower standard requiring countries in Africa, with few exports to Europe and the Middle East[6]. Among the main reasons for this are: poor quality and limited volume of produce, lack of know how in activities throughout the supply chain, under-developed packaging and cold chain, weak land and sea logistic that result in high freight cost, lack of market transparency with buyers concentration at importer side, increasing competition, and trade barriers, especially in Europe.

The study discovered that there are few linkages in the sector. Even if there are thousands of actors in the chain, the good chunk of the benefits often goes to the downstream actors. Information flow is high obstructed and informal, little transparency in operation, prevalence of opportunistic behaviour made the chain unhealthy and weak. That is, it is operating in the conventional supply chain principles with little sense of holistic value chain tenants.

Recommendations

The following are the key recommendations based on the findings of the study:

a) At the early stage of the chain:

i) Improve the operation of nurseries to churn out quality seedlings. Incentivized by the frenzied demand for the seedlings, many hit-and-run entrepreneurs[7] joined the business churning out poor quality seedlings. To curb the problem, the regional bureau of agriculture, particularly the horticulture department, should develop and implement requirements for nursery business. This has to be supported by provision of license by the regional bureau of trade and industry.

ii) Boost extension support. The department of horticulture, both federal and regional, should be provided with enough budget and personnel to provide quality service (nursery and orchard management, and disease control, etc). Besides, the universities, especially Jimma and other that recently joined training horticulturalist, should focus on practical based training on disease, increased productivity and soil type analysis.

b) At the later stage of the chain:

iii) Improve the regulatory system: As stated earlier, horticulture sector has not got stable institutional ground both at federal and regional level. Based on the interviews unfold that the position may be reviewed again and the sector related policies, regulation took longer time to get approved and implemented and this has to be adjusted in the short run.

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[6] Export to these countries is mainly vegetables (strawberries) than fruits (FAS USDA, 2018).

[7] Following public hype for avocado, demand surged for seedlings and many entrepreneurs joined the nursery business in Sidama region. However, their success was not satisfactory as expected. Although the nursery owners grossly complain about demand shortage, the real problem is the poor quality of the seedlings. The nursery owners are often driven by immediate cash benefits they garner from a small plot of land. For example, in one standard block (50m length * 1.5m width), they can produce over 5,000 seedlings. In the current average price, a block can generate 200,000 Birr/ year (5000*50.00 birr/seedling). Such churning out of seedlings with little control made thousands of poor quality seedlings reach farmer lands. The puzzle, however, is that the negative side effect won't manifest itself until the end of the third year. By then the nursery investor might have to quit the business – could be classic example of principal-agent problem.

iv) The government needs to take practical support toward addressing the bottlenecks on logistic, packaging materials, financing, etc. Ministry of Trade and Industry should add avocado to its top export products list items like coffee and oilseeds, and extend export related incentives.

v) Linkages should be transits from the informal operation to formal system like in SUNVADO avocado oil processor in Yirgalem. The experience is a good start that unfolded the challenges in formalizing the system.

vi) Buyers require certificates to assure quality through traceability and labelling. Ministry of Agriculture, Ministry of Trade and Industry, Ethiopia Conformity Agency, Food & Medicine Control Agency should work to assist exporters acquire certificates of Global Gap, BRC (British Retail Consortium), IFS (International Fire Consultants), FSSC2200 (Food Safety System Certification), and SQF (Safe Quality Foods). For the niche markets, organic certification and fair trade may be required.

2.4 Honey

2.4.1 Honey Production Potential

Ethiopia has huge apicultural resources which made it the leading honey and beeswax producer in Africa. Opportunities for beekeeping in the country are the natural forests with adequate apiculture flora and water resources, many bee colonies, farmers with indigenous knowledge, the socio-economic value of honey, and demand for honeybee products. There are over 7,000 melliferous (honey yielding) plant species in Ethiopia. Due to bimodal rains, honey can be harvested in the country at least twice in a year. With five wild bee species identified, it is estimated that there are more than 2 million bee colonies in forests and crevices. In addition, special stingless bees produce medicinal honey in the forest and farmland periphery (MoARD 2006).

Ethiopia has the potential to produce up to 500,000 tonnes of honey and 50,000 tonnes of beeswax per year (CSA 2010/11). This, however, requires several successful interventions by diverse actors at all levels through identifying constraints in the value chain and acting on the bottlenecks. Currently, the country has realized only about 10 percent of its potential.

2.4.2 Honey Production and Productivity

Beekeeping has been practiced for centuries in Ethiopia and its potential is well documented. Except in areas with extreme weather conditions, beekeeping is practiced in most villages and by most smallholder farmers in the country. According to CSA (2020/21), Oromia, Amhara and SNNPR are the top three regional states in terms of number of beehives, accounting for about 54, 19.8, and 14.4 percent of the total beehives in the country, respectively. In terms of honey productivity, Oromia, SNNPR and Amhara account for about 49, 29.1, and 14.6 percent, respectively, indicating higher productivity in SNNPR. Despite its long history, beekeeping is still an undeveloped sub-sector of agriculture. The knowledge and skill of honey and beeswax production is still very traditional and beekeeping practices traditional. The annual production of honey remained in the range of 53.7-66.2 million kgs per year for over a decade, but jumped to about 129.3 million kgs in 2019/20.

The apiculture sub-sector is characterized by a large number of smallholder farmers with low average yield per hive. It is estimated that approximately 1.4 million farm households are keeping bees for income generation using traditional beehives (MoARD 2007). Honey production from honeybees is very low with an average of 5-6 kgs per hive in a year, while an average of 15-20 kgs is obtained from the improved one. Nationally, honey and beeswax are collected during the main season from October to December. In the south and eastern parts of the country, however, there is additional minor harvesting period from May to June.

2.4.3 Natural Honey and Export

Honey has been Ethiopia's source of foreign exchange for a long period of time. However, the share of honey export in the total honey produced (refined honey) has become very low and even declining overtime, especially since 2015/16. The share of export, which was 2.52 percent in 2011/12 has declined to 0.23 percent in 2019/20.

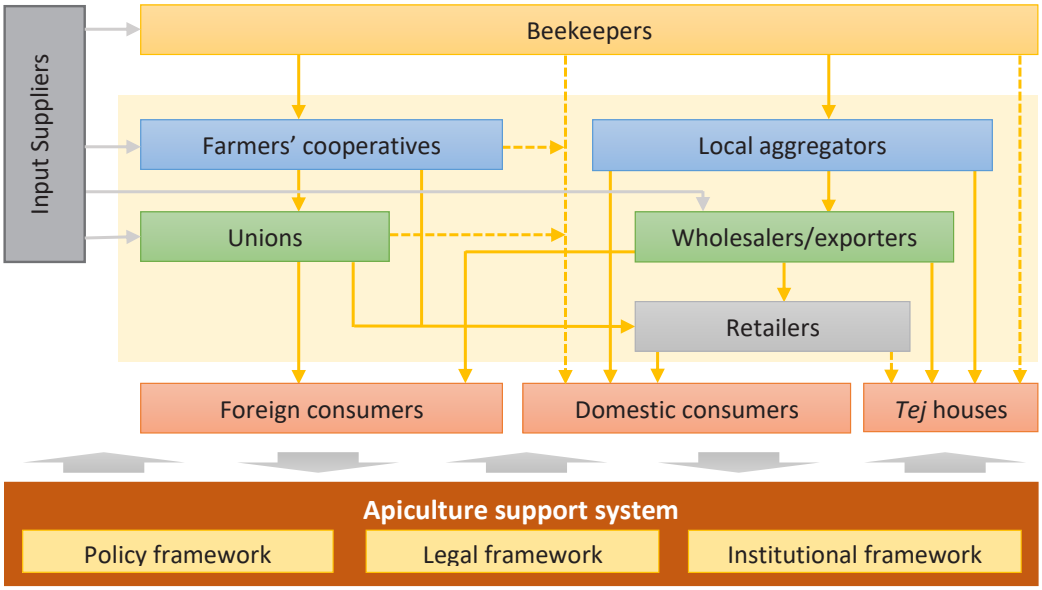
Over the period 2010/11-2019/20, the average share of export to the total honey produced (refined honey remained at about 1 percent, and the volume of export declined by 7.4 percent per annum on average). This goes contrary to the country's high resource potential for production of honey, market access opportunities, long practice of honey production and exporting, etc.

2.4.4 Analysis of the Value Chain

There are a number of players involved in honey production, processing and distribution activities. The honey value chain map primarily consists of four major actors: input suppliers, producers, middlemen/processors, and consumers. In the following diagram, flow of inputs is represented in grey lines and flow of honey and honey products in orange. Product flow in the honey market system primarily follows two main channels to reach from the primary producer to end consumers, either in the domestic or foreign markets. The first one is the conventional way that goes from producers to consumers through local aggregators, wholesalers/processors, and retailers.

The other (contemporary) way is the flow of honey products from primary producers to final consumers through farmers' cooperatives and unions. Generally, the main actors engaged in the honey value chain in the country include input suppliers, beekeepers, cooperatives, unions, processors, local aggregators (middlemen), retailers, consumers (domestic and foreign) and tej houses (sellers of locally brewed honey wine). Sometimes, there is no strict division of functions among the different value chain actors.

Figure 8: Honey Value Chain Map



2.4.5 Opportunities and Challenges in Apiculture

Business Elements	Challenges	Opportunities	Areas of Intervention
Support environment: Policy, legal and institutional environment	• Currently, there is no specific Ethiopian legislation covering export of honey and other bee products (Hive Products Marketing Proclamation is still in process). • Poor lobbying and advocacy capacity of beekeeping associations (Ethiopian Beekeepers Association, Ethiopian Honey and Beeswax Producers and Exporters Association as well as Ethiopian Apiculture Board) to further influence policy, legal and institutional environment. • Poor communication, collaboration and partnership among active supportive institutions in the sector.	• Generally, there is a favorable policy environment and strong government commitment to the development of the sub-sector. • Supportive NGOs providing funds and technical support for different actors of the value chain.	• Strengthen beekeeping associations to bring tangible changes (develop strategic plan, members and stakeholders' engagement guidelines, strengthen organizational systems and resources). • Strengthen collaboration and coordination platforms (regularly arrange forums and consultative meetings with stakeholders). • Establish national/regional apiculture information and resource centers to be used by existing and potential actors in the sub-sector.

Business Elements	Challenges	Opportunities	Areas of Intervention
Suppliers: Importers, manufacturers, workshops, MSE, TVETs, Associations GOs, and NGOs.	• Lack of demand for improved inputs: underdeveloped input market mainly due to subsistence beekeeping system by smallholder beekeepers. Small holder beekeepers are also hard to reach by input suppliers as such entities are mostly found in urban centers (in regional and zonal towns). • Lack of raw materials, technology (such as machineries) and expertise to produce quality products and proper technology. • Lack of investment capital, especially for local workshops which are engaged in producing improved and modern beekeeping and honey processing materials and equipment. • Quality problems with imported as well as locally produced inputs affecting productivity and reliability.	• Established knowledge centers (Research Centers, TVETs, Farmers' Training Centers, and workshops) to promote innovation and production of modern technologies. • Extended institutional arrangement that reaches every farm household (cooperatives, kebele community, agriculture extension workers). • Availability of rural MFIs accessible for rural households. • Evolving and developing community awareness and growing demand for modern inputs. • Availability of local versions of improved technologies (eg. Ethio Ribrab beehive).	• Support innovation and research activities (research grants, funds, training, etc.). • Improve the performance of woreda and kebele extension warders through continued training support. • Establish structures to ensure enforcement of inputs quality standards before they are distributed to users (local government offices and associations which can play quality assurance roles). • Create access to capital as well as infrastructure for input manufacturing firms. • Educate rural communities about the economic importance of the sub-sector and modern practices. • Promote local technologies
Producers: Smallholder beekeepers, cooperatives, private companies	• Subsistence beekeeping practice and honey production system and low motivation resulting from the mind-set that apiculture cannot be a sole source of income. • Low modern inputs adoption behavior due to lack of awareness and access to modern technologies by smallholder beekeepers. • Low productivity resulting from subsistence beekeeping practices. • Inadequacy of training and extension services. • Crop intensification and usage of agro-chemicals leading to environmental degradation. • Lack of business development services and capacity limitations by cooperatives. • Low participation of the private sector in production and distribution of beekeeping products. • Lack of finance for private investors.	• Diverse ecology and flora, green economy and afforestation initiatives. • The sector being low land, labor and technology intensive sector smallholders can simply use their own land and labor to enter the sector. • Accumulated wealth of important indigenous knowledge. • The large number of rural labor (including women and elders) available can be utilized by providing basic beekeeping skill training.	• Conduct promotional campaigns for apiculture as livelihood option. • Integrate forestry initiatives with beekeeping and other non-timber products. • Create access to capital for modern inputs acquisition for smallholder beekeepers. • Develop detailed business case models (profitability analysis) for beekeeping practices using Payback Period, Net Present Value, Benefit-Cost Analysis, etc. • Strengthen associations by conducting organizational capacity assessment to analyse their organizational competency (system and structure) and provide need-based support. • Create access to finances to stimulate private investment. • Strengthen extension service delivery structures (FTCs, associations, extension workers).

Business Elements	Challenges	Opportunities	Areas of Intervention
Processors/ exporters: Private companies, Unions,	• Very low supply of honey and poor quality (relative to demand), inability to meet quantity and quality requirements of the export market. • Very low supply of honey also induces illegal acts (adulteration, illegal trade routes, etc.). • Cooperatives are preferred channels for supplying natural and quality honey, but lack capacity to financially compete with local collectors from which adulteration and illegal trade activities mostly emerge. • Only few beekeeping products (honey and bee-wax) supplied. • Adulteration and poor quality of honey due to backward beekeeping practices. • Lack of value addition: knowhow and technology to produce other high value beekeeping products. • Disproportionately high demand of poor-quality honey by Tej houses, deterring honey producers to engage in value additions. • High quality standards to supply for foreign markets and volatile export prices. • Absence of infrastructure (laboratory, logistics, etc.)	• Growing domestic and foreign markets. • Opening of new foreign markets, including the European Union (but so far honey is exported to only few EU countries). • High willingness by consumers to pay for pure and natural honey. • Organic products with high acceptance in local and foreign markets. • Wide room to produce specialty and mono-flora honey varieties. • Untapped demand potential for high value beekeeping products such as pollen, bee venom, royal jelly and propolis.	• Institutionalize, formalize and legalize trading partnerships between processors/exporters and unions and or cooperatives. Legal backups for contractual agreements. • Make the adherence to the three bees and honey related standards mandatory. • Ensure legal accountability for wrong doers. • Develop detailed business cases (profitability analysis) for processing and export businesses. • Conduct organizational capacity and sustainability assessment for existing businesses and provide need-based support. • Create access to investment capital. • Support promotion of Ethiopian honey in the international market and assist in market intelligence. • Capacitate existing laboratories and facilitate accreditation.
Market system: Domestic and foreign markets	• Illegal cross-border trade routes to Sudan and Kenya. • Absence of market information centers and extended market chain resulting in low producer prices and high retailer prices. • Poor information infrastructure: producer prices determined by local collectors. • Absence of grading and scientific specification of honey varieties to respond for customer and price segments.	• Infrastructural developments such as roads and telecoms can facilitate effective marketing. • Expansion prospect of direct channels. • Opening of foreign markets (such as EU) for Ethiopian honey.	• Control illegal trade routes and activities • Strengthen licensing and inspection activities to legalize and formalize honey marketing activities. • Facilitate contractual agreements among actors in the value chain by providing information. • Establish grading and specification standards and make them mandatory.

2.4.6 Conclusions and Recommendations

Overall, the apiculture and honey sub-sector has huge unrealized potentials from the natural endowments. If exploited, this untapped potential could generate increased income for producers, processors, traders and all those engaged in the sub-sector along the whole value chain. It can also generate the much-needed foreign exchange and significant employment for the youth. The main points one needs to keep in mind in addressing the challenges for honey production, processing and export in the country are: Production and productivity, quality and pricing of products, coordination mechanisms and addressing policy, accountability and human resource development issues.

Finalizing and approving the honey marketing system and its legal framework of the country by the Ethiopian parliament in the coming years can help to open up broader investments in the sub-sector. The pertinent government regulatory bodies have to give due attention toward standardization, testing and grading system to improve the quality of honey supplies and production and supplies to the domestic and international markets. That means, due attention should be paid to quality and independent certification system by forming an independent agency. Since Ethiopian honey production is confined to traditional honey and wax production, it suffers from lack of skilled manpower and poor quality assurance; thus failing to earn the income that befits its potentials. Therefore, the country should replace the traditional honey production with modern technologies and re-orient the sub-sector to a high quality pharmaceutical/medical, nutritional and cosmetic values of the products by investing in skill development and making strategic investments to achieve the desired objectives of the country.

Sources of the Compendium

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