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Addis Ababa University

School of Commerce

Department of Logistics and Supply Chain Management

Thesis

***Determinants of oil seeds and pulse export performance in
Ethiopia***

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This is to certify that the thesis prepared by Mr. Mengistu G/HiwotTilahun , *Determinants of oil seeds and pulse export performance in Ethiopia*": a thesis submitted to Addis Ababa University, school of commerce, department of logistics and supply chain management in partial fulfillment of the requirements for the Degree of Master of Arts in Logistics and Supply chain Management, complies with the regulation of the university and meets the accepted standards with respect to originality and quality.

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List of Acronyms and Abbreviations

ACOS	Agricultural Commodity Supply
ADB	African Development Bank
CSA	Central Statistical Agency
DC	Domestic credit
DFE	Dynamic fixed effects
ECM	Error Correction Model
FDRPE	Federal Democratic Republic People of Ethiopia
FAO	Food Agency Organization
GDP	Gross Domestic Product
GMM	Generalized Method of Moments
IFS	International Financial Statistics
IMF	International Monetary Fund
IO	Industrial organization
LDC	Least Developed Countries
LPI	Logistics Performance Index
MDG	Millennium Development Goal
MOFED	Ministry of Finance and Economic Development
MOT	Ministry of Trade
MT	Metric tone
NBE	National Bank of Ethiopia
NEPAD	New partnership for African development
OLS	Ordinary Least Squares
REER	Real Effective Exchange Rate
SSA	Sub-Saharan Africa
SS	Sesame
UNCTAD	United Nations Conference for Trade and Development
UNIDO	United Nation Industrial development
USA	United state of America
USD	US Dollar
WTO	World Trade Organization

Abstract

The performance of oilseeds and pulse export in Ethiopia encountered a number of influencing factors that deter its performance. Among others Foreign price level, production/productivity, quality of the product, Infrastructure/rural feeder road availability and real effect exchange rate are supposed to be critical. The major objective of this study was to identify and analyze to what extent those major determinants affect the performance of oilseeds and pulse export in Ethiopia. Multiple leaner regressions are employed using SPSS version 20 software to examine the effects of the selected variables on the performance of export oilseeds and pulse. From 565, oilseeds and pulse exporters 130 have been taken residing Addis Ababa and Adama towns using simple random sampling (Carvalho's Sample Size Determination table) technique as primary sources of data. The findings implied that the foreign price level' production/productivity, quality of the product and real effect exchange rate were found to be positively and significantly affect export performance. Whereas, and Infrastructure/rural feeder road were found not to be as such influential factors to deter performance of oilseeds and pulse export in Ethiopia. Based on the findings of the study it were recommended that enhancing productivity, keeping quality of the product, making stable foreign exchange rate and improve the foreign price level are all important.

Key words: performance, export, determinants, significant, pulse, oilseeds

Chapter one

Introduction

1.1 Background of the study

Ethiopia is a landlocked country situated in the Horn of Africa. With an area of 1.14 million square kilometers, it is the African continent's second biggest country. Ethiopia is bordered by Somalia and Djibouti in the east, Sudan to the west, Kenya in the south and Eritrea in the north. In 2014, Ethiopia was the second fastest-growing economy in the world, with a gross domestic product (GDP) growth rate of 10.28% (WDI, 2016). Although the country is still one of the poorest countries in the world, with a per capita GDP of only US\$ 573 in 2014, over the period of 2003 to 2014, it has managed to achieve an astonishing 11% GDP growth rate on average. The country is predominantly an agrarian where agriculture contributes more than **70% in total employment** and **more than 40% in total GDP**. The share of international trade to its GDP is more than 40%, of which imports contribute more than two-thirds. This high share of imports to exports creates pressure on the foreign exchange management for Ethiopia. In this backdrop, it is crucial for the country to enhance its foreign earnings where an increase of export can play a vital role.

Ethiopia has a diversified climate that is suitable for the production of a variety of crops. Historically, the country is famous for its production of oilseeds and pulses. Now, these items can be a major source of export earnings for the country next to coffee. However, the export procedures for agricultural products especially oilseeds and pulse are quite long and cumbersome, which undermines the country's competitiveness in the global market. In the face of the sharp reduction of the tariff in international trade, one of the major sources of increasing competitiveness for the traded items of any country remains in the ability to supply goods in the fastest possible time. This fact has shifted the focus of any country towards improving the status of trade facilitation measures EPOSPEA, (2016).

Countries that are pursuing trade-led economic growth and development, improving the determinants of export performance, such as foreign price level, production/productivity, product quality, Real Effective Exchange Rate, infrastructure/rural feeder road/ are crucial factors. Countries can improve their competitiveness by increasing productivity, reducing the time and costs required for transportation and regulatory requirements involved in the process of exporting or importing any goods. Sometimes, these costs can be a substantial part of the value of the traded items, especially if the value of the time required is taken into account. The significance of trade facilitation by simplifying the regulatory process and procedures of cross-border trade, improving the conditions of transit procedures, and increased and efficient use of information and communication facilities has gained momentum and due importance in recent times.

Completion of any cross-border trade requires fulfilling regulatory and documentary requirements involving parties from both private and public sectors. To perform any such transaction completely, it requires harmonization and cooperation among many actors, service providers and regulators from both home country and partner country. Failure to meet these regulatory and documentary requirements or lack of proper coordination among the actors involved entails significant delays to complete the whole process of exporting, which eventually increases the costs of the items being traded. Improving the productivity, quality measures, procedural and regulatory requirements through necessary reforms such as reducing the amount of certification needed and decentralization or online availability of services can have a significant impact on the predictability of the whole business process and profitability for the parties involved. ERCA, (2014)

In a nutshell identifying and examining the factors that significantly affect Ethiopia's export performance should facilitate the design of policies to improve the performance and ultimately overall economic growth. The objective of this paper is thus to look at the factors behind the poor export performance of oilseeds and pulse in Ethiopia. The paper identifies the major supply capacity and foreign market access factors and examines how much these factors affect the country's export performance.

1.2 Statements of the Problem

Studies on export performance have proliferated in the last decades. Significant progress has been made in developing better theory and knowledge of the export performance. However, the field of inquiry is characterized by a diversity of conceptual, methodological, and empirical approaches that inhibit the development of clear conclusions regarding the determinants of export performance. In this paper, an updated review and synthesis of the empirical literature on determinants of Ethiopia export performance is offered. Despite the various constraints facing the export performance of Sub-Saharan Africa, developing countries in general and Ethiopia in specific, these primary commodity exports have a significant importance to the economy. Therefore, in order to improve its performance a close look at these constraints and analyzing them is indispensable (Ibrahim, 2007).

When we look at the case of Ethiopia, according to access capital report (2010), the country's exports reached a notable amount of \$2 billion in the just completed fiscal year, 2009/10. This export level is an impressive 38% increase from the \$1.5 billion in exports registered in the previous year, and nearly three times the average annual export level of the prior decade (2000-2009).

Even though there is improvement in exports since recent years, it is not as such satisfactory. For instance, Exports of goods in Ethiopia are only about 7% of GDP, compared to an average of near 30% of GDP in Sub-Saharan Africa. Growth rates are also very modest if we make a comparison with Asian countries over a decades-long time frame. For example, Ethiopian's total exports were higher than that of Vietnam in the 1980s but are now just a tiny fraction: \$2 billion in Ethiopia versus \$65 billion in Vietnam (ERCA and IMF, 2010).

Ethiopian export is based on agricultural products which constitute a substantial component of external trade generating a significant portion of export earnings. For instance, according to data from MOT during the fiscal year (2015/16), total export in value were \$ 3.081 billion in addition to this when we look at the composition of commodities; coffee, oilseeds, chat, pulses in that order have contributed an average

about 28, 17,9 and 7 percent of total export earnings respectively which is almost 46.11 % together. From this we can see that the country's exports are highly concentrated in few agricultural commodities (MOT report 2015/16) and Ethiopia's total export earnings by value declined by 8.5% in 2015/2016 from the previous year. A fall in global commodity prices is the main reason for this drop.

Countries export earnings are derived from only four principal Agricultural commodities such as coffee, oilseeds, pulse and khat, (Alemayehu, (2006). On the other hand, international organizations have often recognized that Africa's exports still face market access problems in the international markets (UNIDO, 2002; UNCTAD, 2008). However, Ethiopia's exports, declining prices for its exports, and limited destinations for Ethiopian exports. Both supply and demand side problems are typical African problems: For example, more than 50% of African share in total world exports is still very low, amounting to 0.01% in 2006 (WTO, 2007). In this regard, Alemayehu (1999) and Abay and Zewdu (1999) argue that Ethiopia's external trade has major problems both on the supply side – its dependency on few primary products, characterized by large fluctuations in volume; and a very high degree of concentration of exports on few commodities – and on the demand side – a low income elasticity for the type of commodities that Ethiopia exports.

Having the above information , Even though there is a remarkable increase in the export sector it is not as intended and data shows that the export growth rate of Ethiopia is low as compared to African countries with similar features of economic structure and other features. So in considering those gaps, this paper tries to identify the key determinants of export performance in Ethiopia to come up with recent and reliable information that informs for responsible bodies and for deciding correct decision in policy making.

1.3 Objectives of the Study

1.3.1 General objectives

The overall objective of this study was assessing the determinants of oilseeds and pulse export performance in Ethiopia with the aim of establishing the relationship between export performance and its determinant factors.

1.3.2 Specific objectives

- To examine the determinants of oilseeds and pulse export performance.
- Assess the relationship between export performance and its determinants.
- Investigating the relative importance of major factors that determine pulse and oilseeds export performance of the country

1.4 Research Questions

Based on the proposed problems and review of related literature, this study seeks to answer the following questions:

1. What are the major determining factors of oilseeds and pulse export performance?
2. What are the relationships between export performance and its determinants?
3. How do the determinants such as foreign price level, Production/Productivity, Exchange rate, Quality of products and infrastructure/rural feeder road influence export performance?

1.5 Significance of the study

The study has significance in broadening the knowledge about the existing export trade activities, performance and problems of the export trade in Ethiopia, most importantly that of oilseeds and pulse export performance. The major contributions of the study fall into three categories: namely; (1) to provide recent information on the major factors influencing the performance of oilseeds and pulse export in Ethiopia to subsequent research works in the area, (2) as source of information for exporters to take their own internal decisions as to improve their capacity and enhance their performance and competitiveness, (3) the government and other concerned stakeholders may also take their own remedial actions so as to promote export growth in the country.

1.6 Scope of the study

The scope of this study was limited to the analysis of oilseeds and pulse export performance determinants only for identifying the constraints and prospects of oilseeds

and pulses exports towards achieving the country's development objectives. The study excluded the rest determinants of export performances and other types of exportable agricultural commodities. The research was bound in studying the export performance determinants in Ethiopia: using primary data from survey.

1.7 Limitations of the Study

The area, export performance determinants, being vast and crucial for growth and development, many determinant measures could be used for determining export performance. However, a short period of time and budget constraints is other limitations in conducting this research paper and unwillingness of some exporters to give exact information during survey regarding general export performance determinants in Ethiopia another limitation of the study that imposed lots of work on the researcher in organizing the data.

1.8 Definition of Terms

Agricultural product export: Agricultural export means shipping any agricultural commodity or product whether raw or processed out of the port of a country or selling of agricultural goods produced in the home country to other markets.

Export performance: The outcome of a firm's activity in an export market with respect to financial outcomes, the extent to which a firm's strategic goals were achieved and the firm's level of satisfaction with their export.

Pluses: pulse is another name for a number of dried legume seeds from pod plants including kidney beans, chickpeas, peas, lentils, soya beans, peanuts, Horse beans, Haricot beans, dry peas and Vetches.

Oilseeds: Oil Seeds refer to all class of seeds from which oil is derived. Oil Seeds that are grown and traded as commodities include: soybeans, cottonseed, rapeseed, nigger seed, and sesame and sunflower seeds. After the oil seed extraction process, the residue can be

used as a source of protein for animal feed, creating products such as oil-seed cake and press cake.

Export Market Environment: Foreign country market environment.

Determinants: Export determinants in this context are major factors that affect export performance positively or negatively or significantly or insignificantly.

1.9 Organization of the study

The paper has been organized in such a manner to have five chapters. Chapter one deals with a brief introduction of the study. The next chapter is regarding overview of the determinants of oilseeds and pulse export performance. Chapter three is concerned about study methodology, data sources and model specification. The fourth chapter was about Research Result. The last chapter consists of conclusions and policy implications of the study.

Chapter Two

Review of Related Literature

2.1 Over view of Determinants of Export Performance

A conceptual definition of export performance addresses two parts: export and performance. Export is the international marketing related decisions and activities of internationally active firms (Cavugil and Neviv, 1981). The over-tone of the word performance, in the literature sense, does not pose any problem for it is the act of carrying out or accomplishing something such as a task or action. When it comes to economics, this word has been defined in many ways and no unifying principle has underlined its quantification. However, in the context of current study, Export performance is defined as: (i) the success or failure of the efforts of a nation to sell domestically produced goods and services in other nations markets (Zou and stan, 1998); (ii) the export effectiveness, export efficiency and continuous engagement in exporting (Shoham, 1991); (iii) the composite outcome a nation's international sales (Shoham, 1996); and (iv) the three sub-dimensions which encompasses sales, profit and growth (Madsen, 1987).

Many researchers investigating about how firms perform in exporting have identified a lot of factors as determinants of export performance (Aaby and Slater 1989; Zuo and Stan, 1998). These determinants have been classified differently; however, a major classification has been as controllable and uncontrollable. The controllable determinants are internal firm-level and uncontrollable are external environmental determinants (Aaby and Slater, 1989). Siringoringo (2009) identified four groups: external, operational, internal and informational barriers, whereas Leonidou et.al. (2002) moved from the basic distinction between internal barriers associated with organizational resources/capabilities and the company's export strategy and external barriers related to the home and host environment within which the firm operates.

Classifying the determinants of export performance into internal and external factors is theoretically justified as the two categories correspond to different theoretical bases. Specifically, internal determinants are justified by the resource-based theory, while external determinants are supported by the industrial organization theory.

The resource-based theory conceives a firm as a unique bundle of tangible and intangible “resources” (assets, capabilities, processes, managerial attributes, information, and knowledge) that are controlled by a firm and that enable it to conceive and implement strategies aimed at improving its efficiency and effectiveness. The resource-based theory contends that the principal determinants of a firm’s export performance and strategy are the internal organization resources. In contrast, the industrial organization (IO) theory argues that the external factors determine the firm’s strategy, which in turn determines economic performance. The logic is that the external environment imposes pressures to which a firm must adapt in order to survive and prosper (Julian and O’cass,2002). Therefore, discussing the findings of this review along the internal versus external and controllable versus uncontrollable dimensions is theoretically sound and practically significant. Hence, in this study, those determinants of export performance relevant to the topic identified from different kinds of literature including both internal factors of exporters and external conditions more specifically government support services and export related facilities are reviewed as follows.

According to the World Bank, Exports of goods and services represent the value of all goods and other market services provided to the rest of the world. It includes the value of merchandise, freight, insurance, transport, travel, royalties, license fees, and other services, such as communication, construction, financial, information, business, personal, and government services.

Alemayehu (2006) has clearly stated different trade theories that answer the question why trade between countries exist. For mercantilist the desire to accumulate precious metal (gold bullion) was an important matter. Against this background the principal of the classical school, absolute and comparative advantages have emerged. The rigidity of

the classical schools assumptions about the structure of costs, among others, led to the evolution of the neoclassical (or orthodox) trade theories. This theory was followed by trade theories based on technological gaps and imperfect competition models Alemayehu (2006).

2.1.1 Export Performance and its Determinants in developing countries

Export performance is the relative success or failure of the efforts of a firm or nation to sell domestically produced goods and services in other nations and it can be described in objective terms such as sales, profits, or marketing measures or by objective measures such as distributor or customer satisfaction, (Allaro, 2010). When we look at the export share of the African continent in the world trade, it has been experiencing a gradual decline since 1960. The share of the Africa's export in the world export which stood at 5.52% in 1960 declined gradually to 2.87% in 2007 before increasing to 3.45% in 2008. This share in total world export is far below the share of the Asian continent in world trade has been enjoying an upward trend the share of the African continent and the developing America continent. Thus the trends showed that Africa has been losing market shares in exports in relative terms. Perhaps, this dismal trend can be linked to the composition of Africans merchandise trade. There is also depressing performance in terms of agricultural raw materials exports. Except for a country such as Benin that has over 50% of its exports in agricultural raw materials, a sizable number of the SSA countries share of the exports are below 20% (Adetunji and Busari, 2011).

Mold and Prizzon (2008) also tried to indicate that one of the most extensively cited stylized facts of African trade performance is that the continents share in world merchandise trade, measured in value terms, has declined steadily since 1980, from around 6 per cent to around 2 per cent in the late 1990s, with a subsequent mild recovery in the 2000s to around 3 percent. That decline in the world share of exports has been particularly marked for Western and Southern Africa. However, as Morrissey (2005) argues, this does not mean that trade is unimportant for Africa: compared to other developing country regions, Sub-Saharan Africa (SSA) tends to have high export/GDP and

import/GDP ratios that are higher ratio of trade to GDP . Based on the trade theory of Comparative advantage, Africa continues to produce and export its raw materials or primary goods, where it is said to have the comparative advantage as Amin et.al (2007) identified. But the comparative advantage theory has been disappointing as African countries have been forced in to the role of exporting raw material and other primary commodities with little or no development impact. Most of the Sub-Saharan African countries depend almost on primary commodities for their foreign exchange earnings. According to Ibrahim (2007), in developing countries, especially Sub-Saharan African (SSA) countries, pattern of exportable goods is dominated by primary agricultural products. There are very limited accesses in the international markets for the export of processed and semi-processed agricultural products; moreover the countries are facing a decline in the prices of primary goods in the international market. However, LDCs basic focus was only to solve problems related to supply side bottleneck without paying much attention to the demand side problems or in some cases taking the demand side for granted. The export sector of SSA is highly affected not only by domestic policies but also by international policies including the performance of the world economy and other exogenous factors like institutions, government's commitment, natural resource and intensity and prevalence of poverty.

On the other hand, according to a study conducted by Babatunde and Busari(2011), SSA countries have significantly liberalized their trade regimes over the past two decades or thereabout. Although, the pace and patterns of trade policy reform vary among countries, the general trend tends towards lower barriers to trade. This is evident in the significant reduction of tariffs and non-tariff barriers, removal of exchange rate control and elimination of export marketing boards among other trade reform measures. While the study was able to confirm the distortions caused by trade barriers on export performance, there is not much evidence that the adoption of trade policy reforms since, the mid 1980th have produced a significant agricultural export response. Declining infrastructure investment, particularly transport infrastructure (air/sea port, railways and roads) have generated substantial transaction costs and dampened the response of agricultural exports to the more favorable trade environment being witnessed, since the

mid 1980s. In addition, factors external to an individual country such as relative prices and income of trading partners appears to be more important determinants of exports than a country own structural adjustment policies. This, however, does not imply that, at the margin, structural adjustment policy reform is not beneficial. The simple point is that there are many factors other than a structural policy that helps explain the poor agricultural export performance of SSA countries. Domestic policies are necessary to reduce the various constraints on supply response increase transport and marketing efficiency and encouraging investment. To benefit from agricultural trade, SSA countries need to increase the flexibility and efficiency of resource use so that they can be competitive in global markets.

Fugazza(2004) also classified determinants of export performance into external and internal factors like Allaro (2010) where external factors are related to market access conditions and other factors affecting import demand. Apart from trade barriers and competition factors foreign market access is also determined by transportation costs, which include geography and physical infrastructures. On the other hand internal factors refer to supply side conditions. Supply capacity is also affected by location -related to elements, which may for example; affect access to raw materials and other resources. It also depends up on factor costs such as labor and capital. He also stated that, besides resource endowment, factor costs are essentially the outcome of economic policy and the institutional environment. Access to technology, which is likely to affect the productivity of the external sector, may be also an important determinant according to the above author.

On the other hand Charles D Jebuni (2006) outlined that the availability and quality of infrastructural services are critical to economic activity in terms of determining the costs, profitability and viability of different economic activities. They also influence the attractiveness of different countries/locations for investment, and the type of economic activities.

In general since the export sector is affected by a multiplicity of causes in low income countries especially Sub-Saharan African countries there have to be a precise analysis concerning this sector.

2.1.2 Ethiopia's oilseed Export performance

Haile, (2011), Oilseeds are high value export products standing as the second foreign exchange earner products of Ethiopia. Growth and improvement of the oilseed sector can substantially contribute to the economic development at national, regional and family levels. Among oil seeds, sesame is by far the major export product in terms of both export quantity and value following coffee. Ethiopia has high quality sesame seed varieties that are suitable for a wide range of applications, the Humera, Gondar and Wellega types being the major ones.

Many smallholders and a limited number of large commercial farms grow sesame seeds. Sesame is utilized as a cash crop both for major and minor producing areas. Sesame production is characterized by labor intensive, low-input rain-fed agriculture. Current productivity levels are low but the potentials to increase the production and productivity are huge. Sesame productivity can be increased with higher input levels and improved technologies. Arable virgin fertile lands are also available and can offer good opportunities for organic and sustainable sesame production. These areas can be cultivated on a large scale and can meet organic certification standards. Sesame seeds provide a good base for acquiring a comparative advantage on the world market. In this regard, the government enhances investments in commercial agriculture with an extended package of incentives for investors.

The major sesame producing regions in Ethiopia are Tigray, Amhara, Oromia and Benshangul Gumuz which contribute more than 90% of total sesame output. Amhara, Tigray and Oromia contribute 94.4% of national aggregate sesame production (i.e. 44.1%, 43.4% and 6.9% respectively) in the year 2009/10.

More than 580,000 small holder farmers are reported to have been engaged in sesame farming who cultivated 185,912 hectares in 2009/10 during the main cropping season and contributed 56.4% of production. Private commercial farms had a share of 43.6% of total sesame production in the stated year. Unlike other cereal crops, the bulk of the harvest (more than 70%), of sesame is marketed. The percentage of yield utilized for sale varies across the producing regions. It ranges between 62.2 % in Amhara and an estimated 79.8 % in Tigray. This signifies that sesame is mainly produced as a cash crop.

Hitherto, sesame trading in Ethiopia was characterized by a long value chain, which includes producers, village traders or collectors, brokers/wholesalers, exporters, retailers and local consumers. Smallholders in the Ethiopian sesame seeds value chain depend on middlemen, due to the small quantities to be sold and lack of efficient market information system.

Under this traditional market, small holder producers had a low bargaining power. Price discovery was not based on forces of demand and supply and do not reflect current international market prices. Information asymmetry and vertical integration of market were typical characteristics of the then prevailing market. This traditional sesame trading practice is now transformed to be traded exclusively through the ECX market (Annual magazine ECX, 2015).

The buying price of sesame for export is largely determined by the evenness (uniformity) of color, taste, dryness and purity. These are important purchasing requirements for importers. In the last five years, both the production and export of sesame is expanding and the country's exports are performing better in the growing world market. In the stated years, Ethiopia ranks 5th in export quantity and revenue following India, Myanmar, China and Sudan. Since sesame contributes more than 89% of the export earning of oil seeds it has become the 2nd foreign currency earning crop after coffee. Ethiopian sesame seed market covers quiet a wide range of countries all over the world. The growing demand in the world market and the available capacity to expand sesame production signify its potential to contribute to the economic growth of Ethiopia.

Despite some operational problems that need to be addressed, the performance of sesame marketing in the ECX market is so far very promising. All stakeholders, specifically small holder farmers and traders (suppliers) are well aware of the new market system and are fully involved in it. However, sesame production and marketing in Ethiopia is still faced with various challenges that need to be addressed. These include fluctuation in foreign price level, a low level of productivity, poor quality, poor market information system and underdeveloped market infrastructure among others. Market infrastructures are poorly developed in the major producing areas. The absence of adequate road network, market information, and foreign market level are still major challenges which need to be addressed to improve the quantity and quality of sesame production and marketing. Hence, sesame exporters are facing problems of impurities such as dirt, branches, stones, etc. This poor quality of sesame supply with high impurity level needs more cleaning costs to get it ready for export. This, in turn lowers the competitiveness of sesame export. Because of the low quality of sesame, importers in many developed countries purchase sesame seeds and resale it at a very high price through adding value in cleaning and hulling. Reducing this wide gap in the selling price of sesame requires quality improvement at all level ECX, (2016).

2.1.3 Ethiopia's Pulses Export performance

According to pulse sector investment profile (2016), Pulses form a substantial portion of Ethiopia's diet, especially for peri-urban and rural consumers, and its domestic demand rises- from time to time, along with its domestic price. White pea beans and chickpeas are important crops within the Ethiopian pulses export sector. Ethiopia exports a sizeable amount of pulses to the global market. The total export volume and value of pulses has increased from 224,875 tons in 2010/11 to 353,646 tons in 2013/14, and US\$ 137.9 million in 2010/11 to US\$ 251.02 million in 2013/14 respectively. Based on export earnings in 2013/14, pulses are Ethiopia's fifth most important export crop. Some chief export pulses are chickpeas, faba beans, field peas, haricot beans, and lentils. Pulses are the fifth largest export crop, after coffee (21.9%), oilseeds (20%), gold (14%) and chat

(9.1%), with a share of 7.7% contributing US\$ 250.7 million to export earnings in 2013/14, EIC, (2016).

Ethiopia exports pulses to numerous African countries, as well as in Asia, Europe, the Middle East and the United States of America. Some chief pulse destinations are Yemen, the Republic of the Sudan, the United Arab Emirates and South Africa. These countries' importance as a destination for Ethiopia's pulses fluctuates from year to year. Whereas demand for Ethiopian pulses rose steadily in Italy, India and Yemen, Romania, the Kingdom of the Netherlands and the Kingdom of Belgium, demand was inconsistent for the United Arab Emirates, the Sudan, the Islamic Republic of Pakistan, the Kingdom of Morocco and the Kingdom of Saudi Arabia. Therefore, Ethiopia must work on ensuring a constant demand for its pulse exports, but it will be challenging to sustain continual demand by country. The export coverage of import has been 33.3%, 28.9% and 26.8% for the years 2010/11, 2011/12, 2012/13 respectively (Seid, 2015).

2.1.4 Internal and External Determinants for Performance of Export

Determinants of export performance can be split into external and internal components. External components include market access/entry conditions and a country's location vis à vis international markets. Internal components are related to supply-side conditions.

Foreign demand is influenced by various elements. Firstly, it is strongly linked to geography (the structural component). Typically, countries at the centre of a fast growing region are more likely to benefit, *ceteris paribus*, than countries situated outside that region. Second, it is likely to be related to competition and trade policy (the market access/entry component), which could have, in principle, a similar impact on trade than geography. Finally, both the quantity and quality of physical infrastructures (the development component) are expected to play important roles (Yishak, 2009)

Internal export barriers are intrinsic to the firm and are usually associated with different firm-level determinants, such as: firm specific characteristics and product characteristics (Julian and O'cass, 2002); firm structural characteristics, market orientation, market

characteristics, managerial attitudes (Chetty et al., 2004; Madsen, 1989); competencies, market orientation, firm characteristics and management perception (Aaby and Slater, 1989); strategy factors, management attitude and perception, export marketing strategy and marketing mix variables (Zou and Stan, 1998).

Even though there are many Export Performance determinants studied by various researchers such as, terms of Trade, (TOT) Trade openness (TO), Exchange growth rate (EGR), Foreign Direct investment (FDI), but keeping these constant and the writers need to analyze other determinants which the researchers face in his regular tasks and informally raised by market actors during field visits like, Foreign price level, productivity, Infrastructure, Real Effective Exchange Rate and product quality are determinants of pulse and oilseeds export in Ethiopia(Yetsedaw,2014).

1. Foreign Price Level

The price of exports on the international market is one of the major determinants of export growth especially for countries which depend on the exportation of agricultural products whose prices fluctuate from time to time. A study in South Africa by Edwards and Golub (2004) found that foreign prices have a strong impact on manufacturing sector's export growth. They used time series data and got a significant positive coefficient of foreign prices. A similar study in Sub Saharan African countries by Rafik and Svedberg (1990) also revealed that protection in form of export quotas and price decline of primary commodities accounted for one third of the total world market share loss by Sub Saharan Africa.

In the same way Ndulu and Lumumba, (1990) who while studying opportunities and constraints to trade and their influence on growth and development of African economies, discovered that foreign prices of primary commodities significantly affect the export performance of country's involved in their production. In summary, when we see the empirical review of different studies conduct on different times in developing countries there have been glaring contradictions on the determinants of export growth

rate and in addition to this a lot of changes are occur in the overall the economy in the recent years so this initiated the researcher to conduct a further research to identify plausible determinants of export growth rate so that information is provided to the concerned authorities hence leading to the formulation of corrective policies to address the problem.

2. Production /productivity

World supply is the greatest factor affecting farm pulse price changes from year to year. Planting intentions or acres planted area first indicator of what production levels (supply) might be expected. Production, of course, is very dependent on weather conditions. Extreme weather conditions (drought, excessive moisture, early freezing, etc.) impact yields, production and supply levels.

In addition to price expectations, a key factor influencing acres planted in any region is the economic competitiveness of pulse crops compared with other potential crops the producer might consider. Pulse crops are grown in both the Northern and Southern hemispheres, where planting and harvesting seasons vary, again adding complexity to an understanding of the global pulse industry's supply-demand conditions.

Productivity is below potential due to: low input usage, especially chemical fertilizers capable of increasing yields in field trials by 10 to 80 percent; limited availability of seed and limited familiarity with the variety of existing pulse types, and; limited usage of modern agronomic practices.

The recent increase in sesame seed production in Ethiopia, up to 400,000 metric tons, was more as a result of land area used for cultivation of the crop than the increase in productivity. The near stable yield of the past decades is no more the case on the ground and in some area of the North West part of the country sesame yield per hectare is alarmingly low. There are reports indicates that in some mentioned areas the productivity of both commercial and small farmers is going down below 3 quintals/ha. This situation has caused productivity of the crop per hectare to be very far below the

estimated FAO potential yield, which is about 16 quintals/ha, Ministry of Agriculture, annual report (2016).

The challenges facing Ethiopian oilseeds and pulses involve how to increase its yield, considering that the current trend showed increased productivity was not a bumper harvest as a result of farm plots productivity but rather achieved through the unsustainable way of increased land area for cultivation of the crop. It is there for, high time that stakeholders come out with measures and new technologies that can sustain and increase the productivity of the crop in Ethiopia. Twelve species of pulses are farmed in Ethiopia. Of the different varieties, faba beans (commonly known as horse beans) account for the largest share of production, at 36%, followed by haricot beans (17%) and chickpeas (15.3 %). Other pulses, such as mung beans, lupines, lentils, dry peas and vetches, make up the remaining 31.7% Shahidur Rashid et al., (2010).

Lentils and chickpea are predominantly cultivated on dark soils on residual moisture – a prevalent type of soil in Oromiya's North and West Shewa zones, South Wollo, South and North Gonder, the East Tigray zone, Amhara's West and East Gojam zones and the Goro zones of the Southern Nations Nationalities and People's Region (SNNPR). Field peas and faba beans are cultivated throughout the main season on black and red soils, predominantly in Oromiya, Tigray, Amhara and SNNP regional states. Haricot beans are grown in the warmer and fairly dry parts of Ethiopia, mostly along the Rift Valley, and production is increasing in the SNNP region, and Benshangul-Gumuz and Gambella regional states (Ministry of trade, 2015) .

Smallholders cultivate 95% of the harvested area and 90% to 95% of pulses, oilseeds and cereals production (CSA, NBE, MoFED). Cultivation of pulses like chickpeas, red kidney beans and white pea beans is common in Ethiopia and is carried out in both the highland and lowland areas of the country, mainly by peasant farmers. The country also has a number of pulse-processing factories. Pulses, especially red kidney beans, are produced through major cooperatives that exist along the major regions of Ethiopia, such as Tsehay and Mrcha Union in Oromiya. Chickpeas are exported with a contract-based linkage

between large-sized business and small farmers' organizations (unions) such as ACOS Ethiopia. While pulses are grown throughout Ethiopia, production is mostly in the Oromia and Amhara regions – combined, these regions account for 79% of field pea production, 79% of haricot bean (including white pea bean) production, 85% of faba bean production and 92% of chickpea production (NABC and FMECWM, 2015). Ethiopia is among the world's top 10 total pulses producers, the second-biggest faba beans producer after China and the sixth biggest chickpea producer. Small scale farmers in Ethiopia grow various crops for own consumption and economic benefits. Pulses are among the crops produced in all the regions of the country after cereals (CSA, NBE, MoFED, Statistics 2015)

According to the Ethiopian Pulses, Oilseeds and Spices, Exporters Association, the country secured 466 million USD from the export of oilseeds and pulses in 2008/2009 fiscal year, it has shown an over 20% increase compared to the 2007/2008 fiscal year. The significant potential is evident for productivity gains in the pulses sector. National pulses productivity on average was 15.52% in 2014/15. Comparisons between existing yields with worldwide and on-farm trial benchmarks reveal that Ethiopia has significantly lower yields of faba beans and chickpeas than international yields and on-farm trial suggest is possible.

For instance In 2009/10 pulses production is expected to be 16,417 thousand qt, it decreases by 19.7% from 2008/09 and similarly the land cultivated for pulses have also decreased by 19.4%.

3. Product Quality

The most recognized definition of quality is one based on physical specifications, including foreign material, color, damage and degree of soundness. Competition in the international pulse markets continually will push the standards for quality to higher levels as suppliers attempt to differentiate their product from that of the competition. Consistency arguably is the most important aspect of quality and convincing the customer, whether domestic or international, to accept the product.

Estimates suggest that the magnitude of post-harvest loss in Ethiopia was tremendous ranging from 5% to 26% for different crops. This figure is quite large especially for Ethiopia where great majority of people is food insecure. Post-harvest grain loss is the loss of grains (quality and/or quantity) between the moments of harvest and consumption. Grain storage is the practice of keeping grain in store houses, heaps, bulks and bags in such a way that seeds should retain both food and seedling value, provided with certain conditions like ventilation, fumigation and optimum temperature and humidity. Whereas, the purpose of storing seeds is to preserve planting stocks from one season until the next. Crop losses occur at all stages of the post-harvest handling, including pre-processing, transportation, storage, processing and packaging and marketing. Grain losses could arise either from poor post-harvest handling or from production over and above the capacity of the available stores, or both. It is therefore important to recognize that post-harvest grain management (PHGM) practices and capacities (and not just production and marketing) are important for many reasons including the achievement of food security objective MOA, (2009)

Oilseed and Pulses quality is an ill-defined term that means different things to different people. It largely depends on the grain type and its end use. It includes a range of properties that can be defined in terms of physical (moisture content, test weight, kernel size, total damaged kernels, heat damage, broken kernels, stress cracking, breakage susceptibility), sanitary (fungi and mycotoxin count, insects and insect fragments, rodent excrements, foreign material, toxic seeds, pesticide residue, odor, dust), and intrinsic (milling yield, oil content, protein content, hardness, density, starch content, feed value, viability, storability) quality characteristics.

Sesame quality grading was performed by the Ethiopian Quality and Standards Authority until the recent inclusion of sesame in the Ethiopia Commodity Exchange (ECX) system. Export sesame seed types have to fulfill the standards set by the authority as well as the minimum agreed international standards. Ethiopian sesame is identified and graded as Humera/Gondar, Wellega and red sesame each having mixed types and its oil content ranges 43-56%. The minimum international standard of oil content is 52%, 48%, and

45% for first, second and third grades respectively. On the other hand, the minimum acceptable moisture content is 6-8% for all grades (Winands and Biersteker 2007).

Before reaching at export processing and storage level, sesame production in Ethiopia has to pass through a series of long chains as explained in section 5.3. MoARD (2006/07) disclosed that sesame exporters are facing problems of impurities such as dirt, branches, stones etc. The percentage of these foreign bodies is estimated to be 7 - 9%, where as the internationally agreed standard is 2% for first grade, 4% for second, and 6% for third grade sesame. Cleaning this low quality sesame to make it exportable would obviously require high costs of labor and machinery which in turn reduces competitiveness in the global market.

4. Infrastructure/ rural feeder roads

A key component of any logistics program is transportation management and economics- essentially, the logistics and costs associated with the movement of your supplies and products from A to B. Managing your transportation program have never been more crucial to business success. In terms of *logistics*, your competitive advantage depends on an ability to maintain production schedules and the efficient delivery of product to international markets. In terms of cost, transportation constitutes the single largest segment of overall logistics cost and must be managed carefully to avoid negative impact on your firm's bottom line. One of the major factors affecting export supply capacity is the domestic transport infrastructure. It is likely to play an important role especially in the early stages of export sector development (UNCTAD, 2005). Most African countries are characterized by poor transport infrastructure, which is a major impediment to trade, competitiveness and sustainable development (UNCTAD, 2005; Mbekeani, 2007; Bacchetta, 2007), and isolates countries, inhibiting their participation in global production networks (Limão and Venables, 2000). Due to poor internal transport infrastructure African transport costs are high making their exports expensive and uncompetitive (Radelet and Sachs, 1998; Mathee, Grater and Krugell, 2007), and reducing foreign earnings from exports (UNCTAD, 2003; Mathee, Grater and Krugell, 2007). The analysis of African trade flow shows that their relative volume is low due to

poor infrastructure (Limão and Venables, 2001). Therefore, improvements in transportation services and infrastructure can lead to improvements in export performance (Fugazza, 2004; Clarke, 2005; Francois and Manchin, 2006; Edwards and Odendaal, 2008).

It has been shown that infrastructure affects trade via altering transport costs (Limão and Venables, 2001; Edwards and Odendaal, 2008). In this context, Edwards and Odendaal (2008) argue that infrastructure directly affects transport costs by determining the type of transport used (for example, the type and quality of roads determines the maximum size of trucks) and delivery time for the goods. Bougheas, Demetriades and Morgenroth (1999) have analyzed the effects of infrastructure on trade through its influence on transport costs and found a positive relationship between the quality of infrastructure and the volume of trade. Fugazza (2004) also finds that the internal transport infrastructure has a significant and positive impact in raising exports.

The overall logistics performance is low in Ethiopia compared to relevant peers, As per the reports of World Bank Report, 2013, [24] the World Bank Logistics Performance Index (LPI) provides a comprehensive measure of the state of trade logistics in a country facilitates comparisons with other countries. Ethiopia ranks at the lower end of the surveyed countries(141 out of 155 countries in 2012). It is below not only the average for sub-Saharan Africa in all the six key dimensions of logistics performance measured, but also lags behind in the direct comparison with neighboring Kenya and Tanzania; yet it is only slightly lower performing as landlocked Rwanda. Ethiopia is generally considered “logistics unfriendly.” The difference from individual countries in East Asia such as China, Korea, and Vietnam, as well as the grouping of East Asia and Pacific, is even starker. The logistics system in Ethiopia is not improving over time, According to the LPI; the ranking of Ethiopia shows a relative deterioration between 2007 and 2012. In the first LPI of 2007, Ethiopia still ranked 104 out of 150 economies; in 2010, it ranked 123 out of 155 economies; and in the most recent version in 2012, Ethiopia reached only 141 out of 155. The situation gets even more worrisome if one includes the consideration

Djibouti, Ethiopia's only gateway to the world in terms of land transportation. Djibouti ranked 145, 126, and 154, respectively for 2007, 2010, and 2012 (World Bank, 2013).

According to infrastructure development in Ethiopia, the 2012/13 World Economic Forum (WEF) World Competitiveness Report, has ranked 119 out of 144, countries which is far behind Vietnam and China (95 and 48, respectively), but relatively better than Tanzania and Uganda (132 and 133, respectively). (World Bank, 2013).

4. Real Effective Exchange Rate

The price of one currency in terms of another is called exchange rate. Exchange rates play a central role in international trade because they allow the computation of the relative prices of goods and services produced in different countries thereby allowing the comparison of those prices across countries. Changes in exchange rates are described either as depreciations or appreciations.

There are two indicators to measure exchange rate changes. These are Nominal Effective Exchange Rate (NEER) and Real Effective Exchange Rate (REER). The NEER is a weighted average of major bilateral nominal exchange rates, with weights based on the trade shares reflecting the relative importance of each currency in the effective exchange rate basket. Real Effective Exchange Rate (REER) is based on the IMF definition of the real exchange rate that is real exchange rate as price of domestic currency against foreign currency. The calculation of the average real exchange $REER = E \cdot P^* / P$ Where E is the nominal exchange rate, P* is the consumer price index of the foreign country and P is the domestic consumer price index (Ethiopia in this case).

Depreciation of the real exchange rate enhances the competitiveness of the domestic goods and for the foreign goods. On the other hand, an appreciation in real exchange rate will decrease competitiveness of home goods in international markets. Therefore, there is a positive relationship between exchange rate and export growth rate or performance. Meanwhile, the real effective exchange rate (REER) of the Birr has been appreciating since 2010/11 due to higher domestic inflation relative to that of its major trading

partners. Yet, in 2015/16, the REER appreciation was merely 1.1 percent compared to 11.9 percent in 2014/15 due to slowdown in domestic inflation.

2.2 Empirical Literature Review

Export is broadly defined, as the change in the composition of a country's existing export product mix or export destination (Salomon Samen, 2010; Ali, Alwang and Siegel, 1991). Many developing countries follow export led growth strategy; Export diversification is considered as the progression from traditional to non-traditional exports. By providing a broader base of exports diversification which enables to lower instability in export earnings and get better growth through improved technological capabilities via broad scientific and technical training as well as learning by doing, facilitation of forwarding and backward linkages. Developing countries have been struggling with the challenge of expanding and diversifying their export baskets for a long time. When the export is concentrated in a few primary commodities, there can be serious economic and political risks by reducing foreign exchange earning which are relevant to those developing countries that leads scarcity of machineries. Due to unemployment increases and the country may become politically unstable therefore, export diversification aims at mitigating these economic and political risks. By the same taken many researchers put their own findings as stated bellow.

Lages et al (2004) reported Export performances are the relative success or failure of the efforts of a firm or nation to sell domestically produced goods and services in other nations. Export performance can be described in objective terms such as sales, profits, or marketing measures or by subjective measures such as distributor or customer satisfaction. Determinants of export performance can be split into external and internal components. External components include market access/entry conditions and a country's location which include international markets. Internal components are related to supply-side conditions. Foreign demand is influenced by various elements. Firstly, it is strongly linked to geography (the structural component). Typically, countries at the center of a fast growing region are more likely to benefit than countries situated outside

that region. Second, it is likely to be related to competition and trade policy (the market access/entry component), which could have, in principle, a similar impact on trade than geography. Finally, both the quantity and quality of physical infrastructures (the development component) are expected to play important roles.

Agasha(2006) used VEC model to analyze the determinants of export growth rate in Uganda using quarterly data from 1987- 2006. The researcher estimated export growth rate as a function of Gross Domestic Product (GDP), Terms of Trade (ToT), Real Effective Exchange Rate (REER), Foreign Price level and Foreign Direct Investment (FDI). The results from the long run co-integrating regression show that Gross Domestic Product, Real Exchange Rate and Terms of Trade to affect export growth rate positively and significantly while Foreign Price level were found to affect export growth rate negatively & significantly. FDI was found to be insignificant.

A more comprehensive study on African countries employed a dynamic panel data set for 48 African countries over the period 1987 to 2006 to identify the key determinants of export performance. The results from the pooled regression reveal that unit price of exports, real effective exchange rate, taxes on trade and diversification index to affect export volumes negatively and significantly while income per capita, and share of manufacturing in GDP and FDI inflows as a percentage of GDP to affect export volumes positively & insignificantly during the period 1987 to 2006. A periodic analysis of the same data shows that elasticity of unit price of exports was significant(126%) and negative during 1987 to 2001 while positive and insignificant during 2002 to 2006, Mold and Prizzon (2008).

Edwards and Alves (2005) analyzed the determinants of manufacturing export supply in South Africa used a panel data set of 28 manufacturing sectors using import substitution model. The researchers used dynamic fixed effects (DFE) & Generalized Method of Moments (GMM).

The outcome from the equation estimated on export supply determinants reveal that South African total manufacturing export volume is positively & significantly influenced

by relative prices or real effective exchange rate, real foreign income, skilled to unskilled labor ratio and import penetration and rail capacity. On the other hand output deviation from the trend was found to have a negative significant impact, supporting the vent for the surplus hypothesis for South Africa. Unit labor costs and output trend were found to have insignificant influence on agricultural export performance. On a study made on the factors affecting export performance in three different export categories; total merchandise exports, manufacturing exports & exports of machinery & equipment on nine East & South East Asian countries; China, Hong Kong, Korea Republic, Malaysia, Philippines, Singapore, Taipei, Thailand & Indonesia, Jongwanich (2007) used quarterly data from 1990 to 2006. The researcher used Imperfect Substitutions Model & estimated the model using General to Specific Modeling procedure due to variables being stationary in different orders. Results from the long run equation reveal that real exchange rate to have different elasticity's in the three export categories, it was found to have the highest elasticity for merchandise export while lowest elasticity for exports of machinery & transport equipments. Real exchange rate impact also varies among the nine countries, it was found to have the lowest elasticity for the Philippines while the largest elasticity for Indonesia. Contrary to real exchange rate influences, world demand was found to have the highest impact on exports of machinery and transport equipment & lowest impact for merchandise export.

Though the impact of world demand on other countries, Export has been significant, it was found to be insignificant for Indonesia's export in all the three categories. The coefficient of world demand was highly elastic for China, more than one, but less than one for the other countries in the group. Production capacity was found to affect positively and significantly all countries exports.

Menji (2010) investigated export performance and determinants in Ethiopia using imperfect substitution model from the period 1981to 2008. The author used an export function, which estimated by using the export demand and export supply equations. Export - demand equation was collectively expressed as a function of domestic price of exports, nominal exchange rate, foreign price level, real foreign income whereas export-supply function is expressed as a function of domestic price of exports, domestic price

level, and a set of other variables which affect export supply such as production cost, trade liberalization, production capacity and others.

The results of the two model showed that merchandise export volumes are significantly influenced by gross capital formation and share of trade in GDP while other variables; terms of trade, real effective exchange rate, foreign income, and foreign direct investment were found to be insignificant. Manufacturing exports equation revealed the foreign income negatively and significantly affected manufacturing exports supply, while the effect of gross capital formation manufacturing export supply was However, the effect of terms of trade, real effective exchange rate, the share of trade in GDP, and foreign direct investment on manufacturing export supply found to be insignificant. The study concludes with recommendations to increase the share of manufactured exports and diversify export base of the country.

Tekeste (2012) in his study using co-integration and error correlation models identified some of the main determinants of agricultural export in Ethiopia for the period 1980 to 2010. Empirically tested the relationship between agricultural export performance and its major selected determinants such as terms of trade, gross domestic product, domestic price, world price, kilometers paved roads, and fertilizer input import, and found that all the explanatory variables significantly affect agricultural export performance.

Muhabaw. (2013) has investigated determinants of export performance in Ethiopia using a time series analysis from the period 1974-2011. The author used export equation as a function of trade openness, terms of trade, real effective exchange rate, capital expenditure, real gross domestic product, and domestic credit. His result shows that trade openness, real effective exchange rate, capital expenditure and domestic credit were the significant determinants of the country's exports.

Similarly Ngouhouo and Makolle (2013) analyzed empirically the determinants of export trade in Cameroon from 1970 to 2008. The author employed the two Stage Least Square methods to show that exchange rate, trade openness and export lag one period are the

main determinants of export in Cameroon. However, their findings as common in most Developing Countries are in contradiction with former studies, mostly because the foreign direct investment was found to be not significant in determining the export performance in the country.

Lakew (2003) assess the prospects for export diversification in Ethiopia by empirically investigating the main determinants of the country's exports, on the one hand, and by highlighting the opportunities that are available both at home and abroad including the challenges that the country's export sector is facing in today's globalizing and integrated world, on the other. The study revealed that real exchange rate, real private sector credit and real private consumption are the significant determinants of the country's exports in the long-run. In the short-run, the main export determinants include real GDP, real private sector credit and real private consumption.

Kiros(2012) has logically examined the export growth rate and its major factors in the Ethiopian context using time series data for the period 1980-2010. The author has adopted co- integration and error correction model and found significantly positive as well as negative relationship between foreign price level, and terms of trade with the export growth rate respectively. The gross domestic product also positive and significant but it is not strong. So the foreign price level, terms of trade and gross domestic product appear to be major determinants, whereas the real exchange rate and FDI have no significant effect on Ethiopia's export growth rate.

2.3 Conceptual framework of the study

With regard to the key variables that have been discussed in the review of literatures, different authors argue differently on each of the identified factors that determine performance of export. Therefore, it has been tried to draw some summary of these arguments on those factors as to link it with the conceptual framework of the study.

The price of exports on the international market is one of the major determinants of export growth and especially for countries which depend on exportation of agricultural

products whose prices fluctuate from time to time (N.Agasha, 2006). When foreign price level increases, the domestic exporters will get incentive to maximize or increase their export. So, we expect positive relationship between the agricultural export and foreign price level.

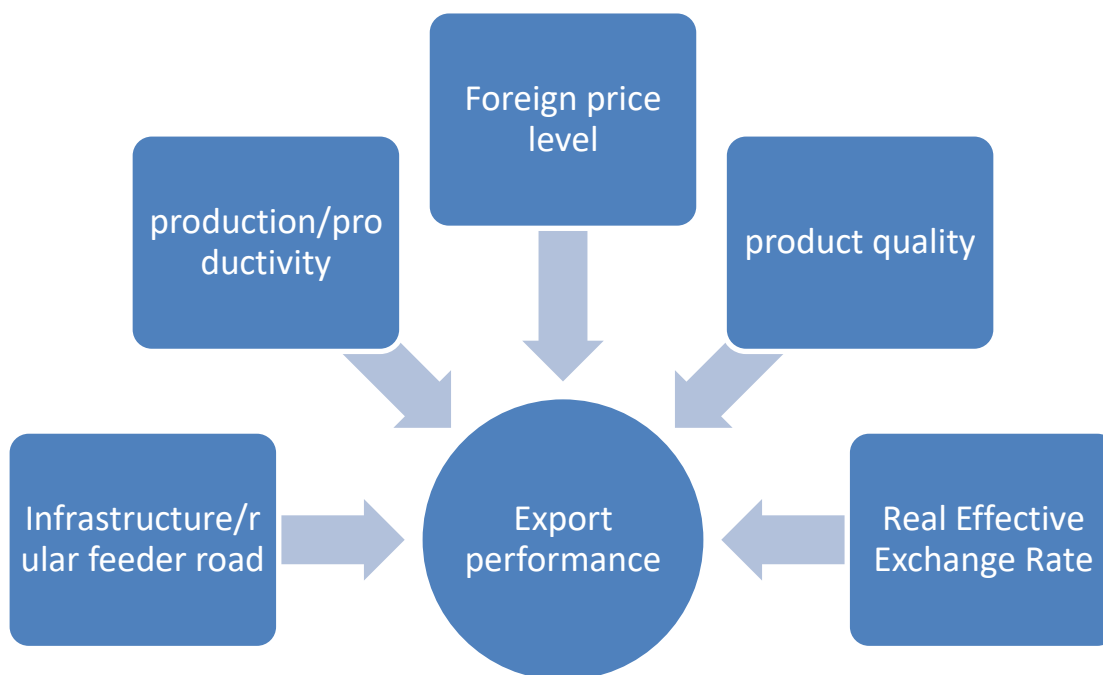
Higher GDP values in the exporting country imply increased capacities for export. It is expected to have to have a positive impact on exports. For instance, Kumar (1998) in his study on the determinants of export growth in developing countries confirmed that GDP has a significant positive impact export volumes. He also underlined that higher level of production is the main cause of export expansion. So, a higher GDP implies a higher production and hence larger volume of exports. Therefore, we expect a positive relationship between the dependent variable and GDP.

Quality of the export products is one determinant of products export competitiveness. Quality is often indicated as one of the most important conditions for entering and remaining in foreign markets. There are different quality standards in developing countries (Christensen et. al., 1987). Export product uniqueness (Zou and Stan, 1998) its quality and design (Leonidou et. al., 2002) are positively correlated with firms' export performance. The firm's ability to offer a complete product or brand mix in export markets is positively correlated with export performance (Leonidou et. al., 2002). Thus, from this it can be concluded that the better the quality levels of the product the better its performance of export is to be likely.

Real Effective Exchange Rate in the literature, it is recognized that depreciation of the real effective exchange rate has positive contributions for increased exports while real appreciation of the exchange rate is generally associated with a retard in exports. Thus, the importance of maintaining a realistic real exchange rate is being propagated as a policy remedy to ensure the competitiveness of exports in the world market (Prasad, 1992). Index of trade weighted real effective exchange rate is included in the present study, to empirically test the relationship between this variable and the level of exports. The expected sign of this variable is positive

Infrastructure is one of the major non-price factors which affects or constrains exports especially in least developing countries. Of the factors that boost production as well as export supply of commodities, infrastructural facilities come at the forefront. Its development is a key element of countries ability to produce and move goods. Weak infrastructure is a major impediment to trade, competitiveness and sustainable development in most African countries, particularly land-locked and small island countries. It reduces the return to trade and economic activity and hinders growth prospects of a given country. Infrastructure variable measured by kilometers of total rural feeder roads /the percentage of paved road to total road. In general the determinant variables are believed to influence oilseeds and pulse export performance either directly or indirectly and the diagram shows that the interaction of those variables affect export performance.

Fig2.1. Conceptual (Theoretical) Model for determinants of export performance



Source: *the researcher own diagram, 2018*

The above figure illustrates how five independent variables merge to accomplish movement toward export performance. Export performance should ultimately result from an increase in foreign price level, production, infrastructure/rural paved road quality of products and Real Effective Exchange Rate.

2.4 Critical analysis/literature gap

It had been observed that some of the reviewed empirical studies, despite of using different approaches the results converge while some of them contradict each other. For instance most of the findings support the notion that FDI has a positive influence on export performance. However Menji (2010) and Agasha (2006) do not support this contention.

Tekeste,(2012),show the relationship between export performance and the determinants, foreign price level and GDP affect export significantly Kiros, (2012) in the other way reviewed GDP affect export performance positively and significant but not strong. On the other hand Lakew,(2003) showed in his study proved that real effect exchange rate is significant determinants of export. But Mold and Prizzon (2008) on their studies found the insignificant relationship with real effect exchange rate and export performance. Hence the findings are contradictory this study may resolve the gap between the two.

Considering data analysis method more of the literatures reviewed above has employed the vector auto regressive models to analyze the relationship between export performance and its determinants and some of the data used in these studies was short span averaging twenty to twenty five years. Auto regressive model would probably have to have more lags to be useful for perdition. Having high number of lags leads to over parameterization of the model implying that there is loss in the number of degrees of freedom, especially that they have used many independent variables.

So the researcher will employ multiple linear regression model of data analysis and instead of using secondary data the researcher use primary data to assess the performance of oilseeds and pulse export in Ethiopia from the perspectives of the real population/ exporters and the study believed to eradicate high number of lags and over parameterization. Furthermore the study believed to fill the gaps of the above researcher's argument by analyzing critically the relationship between the determinants and the significance on the export performance.

Chapter Three

Research Methodology

3.1 Introduction

Research methodology is a way to systematically solve the research problem, a science of studying how research is done scientifically and process used to collect information and data for the purpose of making business decisions.

Quantitative types of data were employed. It also use econometric model to explain the determinants export performance. In a commodity approach, two groups of commodities are taken and the functions and institutions involved in the exporting process were analyzed. This approach focuses specifically on the determinants of export performance. It helps to pinpoint the specific export problems of oilseeds and pulse as well as improvement measures. The research methodology includes the study area, research approach, study design, unit of analysis, population of the study, sampling design and techniques, reliability, methods of data collection and data analysis. In the data collection, sampling techniques, type, source and coverage of data was discussed.

3.2 Study Design

The Study Design encompasses descriptive and analytical study that will be used for investigation and interpretation of research work. Survey research is a procedure in quantitative research in which researchers administer a survey to a sample or to the entire population of people to describe the attitudes, opinions, behaviors, or characteristics of the population (Cresswel, 2012). In this procedure, data was collected using questionnaires and statistically analyzed the data to describe trends about responses to questions and to test research questions and then the meaning of the data was presented and interpreted. Accordingly, this study was employed survey research design assessing Export performance of oilseeds and pulse in Ethiopia.

3.3 Study area

This study was conducted on pulse and oilseeds export. The study engaged in identifying exporter's perceived factors which determine the performance of Pulse and oilseeds export of Ethiopia. To identify those factors data will be collected from exporters found in Adama and Addis Ababa City Administration and its surrounding.

3.4 Research approach

In this study survey research approach was employed. Quantitative research method is the type of research in which researcher quantitative researchers seek explanations and predictions that will generate to other persons and places. E.g. use of quantitative viewpoints, data collection, analysis, inference techniques) for the broad purpose of breadth and depth of understanding and corroboration. Method research uses synthesis and includes ideas from quantitative viewpoints making an effort to recognize the wisdom of these perspectives while pursuing a workable fundamental solution for the investigation (Harrison and Reilly, 2011).

There are three broad classifications of quantitative research: descriptive experimental and causal comparative (Leedy and Ormrod, 2001). The descriptive research approach is a basic research method that examines the situation, as it exists in its current state. Descriptive research involves identification of attributes of a particular phenomenon based on an observational basis, or the exploration of correlation between two or more phenomena.

3.4 Unit of analysis

As the research question aims to answer factors determine the export performance of oilseeds and pulse, the unit of analysis was the oilseeds and pulse export, allowing the research to maintain a level of consistency with data collection techniques.

Exporters are able to see how agricultural products like oilseeds and pulse export lies up on various determinants of export performance and are also able to identify whichdeterminants significantly affect export performance. Hence, addressing exporter's perception on

performance determinants is important and the findings could assist exporters in benchmarking their performance against others they see as competitors, and therefore guide them in improving the volume, value and quality of their export, which had a significant benefit to them in particular and the overall economy in general. Therefore, the units of analysis in this study were determinants of export performance of oilseeds and pulse export in Ethiopia.

3.5 Population of the study

The population of this study includes all exporters of oilseeds and pulse in Ethiopia. Sampling procedure involves all oilseeds and pulse exporters in Ethiopia. Oilseeds and pulse exporters in and around Addis Ababa and Adama was identified as the best sampling frame available in Ethiopia to the target population.

3.6 Sampling Design and Techniques

3.6.1 Sampling techniques

Probability sampling ,simple random sampling technique was employed. It is the ease of assembling the sample. It is also considered as a fair way of selecting a sample from a given population since every member is given equal opportunities of being selected.

Another key feature of simple random sampling is its representativeness of the population. Theoretically, the only thing that can compromise its representativeness is luck. If the sample is not representative of the population, the random variation is called sampling error. An unbiased random selection and a representative sample are important in drawing conclusions from the results of a study. Remember that one of the goals of research is to be able to make conclusions pertaining to the population from the results obtained from a sample. Due to the representativeness of a sample obtained by simple random sampling, it is reasonable to make generalizations from the results of the sample back to the population.

3.6.2 Target Population

The target population of the study was oilseeds and pulse exporters found in Addis Ababa and Adama all. Before the preliminary survey undertaken by the researcher the total population of oilseeds and pulse exporters had been collected from Ministry of trade registration and licensing department and from Ministry of trade IT department data base and the total exporters of oilseeds and pulse are 565 Among the population 250 are oilseeds exporters and 315 are pulse exporters.

3.6.3 Sampling Method

This study used a Probability sampling technique which is simple random sampling. Carvalho's Sample Size Determination table was deployed to identify the number of oilseed and pulse exporters because of its simplicity/convenience to obtain a representative sample and which will result in saving time and money.

3.6.4 Sample Size

Even though there are different methods sample size determination, the study going to use the one which has developed by Carvalho (1984) because of its simplicity/convenience to apply. The method is presented in table here under:

Table.3.1. *Carvalho's Sample Size Determination Table*

Population Size	Sample Size		
	Low	Medium	High
51 - 90	5	13	20
91 - 150	8	20	32
151 - 280	13	32	50
281 - 500	20	50	80
501 - 1200	32	80	125
1201 - 3200	50	125	200
3201 - 10000	80	200	315
10001 - 35000	125	315	500
35001 - 50000	200	500	800

(Source; Abdulhamid, Y, 2013)

A small population size makes variance to the result. Thus I took large sample size, even though taking large samples have high cost and consuming more time the researcher should believed to take in larger population size. Therefore, the samples size which has been selected for the study under consideration will be pulse and oilseeds exporters holds a total of **130**exporters.

3.7 Method of Data collections procedures

The study was used a primary data source. The study was employed structured questionnaires and scheduling methods for primary data collection. Before the commitment of the actual data collection, questionnaire will be pre-tested and fine-tuned based on the findings accordingly. Even though collecting data by questionnaires had its own drawbacks the method also has its own advantage, low cost, free from bias, have adequate time to give well thought out answer, conveniently reach to respondents and large sample can be made use of and other compiled sources, such as reports and working papers of governmental, non-governmental and international organizations, research publications (journal articles, dissertations and thesis), internet and electronic data bases may be used as empirical evidence.

3.8 Variables and measurement

A questionnaire was a form of measurement instrument containing a formal set of questions for attaining information from respondents Malhotra, 2000. To collect quantitative primary data, a researcher must design a questionnaire that deciphers the information needed into a set of specific questions that motivates respondents to complete the questionnaire and minimize response errors Lietz, 2010. The questionnaire was designed to collect information on exporter's perceptions of the export market environment, export determinants, government commitment on export, and foreign and domestic market environment and export performance. The researcher selected measurement items identified as being valid and reliable from the literature (Edmondson and McManus, 2007). The scaling technique to yield the highest level of information in a given situation was used to allow a variety of statistical analyses Lietz, 2010. The widely used Likert rating scale was applied for this research. A Likert

scale necessitates a respondent to indicate a degree of agreement or disagreement or with a variety of statements related to the research investigation, Lietz, 2010. The Likert scale has several merits. It is easy to construct and administer, as respondents readily understand how to use the scale, making it suitable for surveys. The main disadvantage of the Likert scale is that potentially, it takes longer to complete than other itemized rating scales because respondents have to read each statement, Hair et al., 2000. Five point scales was used to capture respondents' assessment on a longer range for statistical analysis to increase the variability in the data and increase validity of the results, Bagozzi et al., 1999.

3.9 Reliability and validity

Reliability is the degree to which an assessment tool produces stable and consistent results where validity refers to how well a test measures what it is purported to measure. In this study the standardized questionnaire which was developed by Ng (2006) was used. However, taking the context of Exporters of oilseeds and pulse, some adjustment was made on the questionnaire as a result pre-testing of the questionnaire was made on some exporters and discussion was made with some exporters in the field then based on the response and comments the questionnaire was amended. Furthermore, in order to insure the reliability of the questionnaire Cronbach Alpha was calculated.

Table3.2: Reliability Statistics

Cranach's Alpha	N of items
.851	20

Source: Research survey,2018

3.10 Method of Data presentation and analysis

Quantitative Approach was used. The available data was analyzed using descriptive types of data analysis, model as per the data, graphs and charts and also try to use econometric model to see export performance and determinants in Ethiopia. According to Marczyk et al.,(2005) descriptive statistical procedures allow researchers to describe groups of individuals and

events, examine the relationships between different variables, and examine and generalize results obtained from a sample back to the population from which the sample was drawn. Furthermore, descriptive statistics of frequency tables are used to describe the data collected in research studies and to accurately characterize the variables under observation within a specific sample. In this study, the analysis was done with the help of Statistical Package for Social Sciences (SPSS) 20 was employed. The responses in the questionnaire were coded into common themes to facilitate analysis. Data was presented in descriptive form supported by tables, frequency distributions, graphs and percentages.

$\hat{Y} = b_0 + b_1X_1 + b_2X_2 + \dots + b_pX_p$, where \hat{Y} is the predicted or expected value of the dependent variable, X_1 through X_p are p distinct independent or predictor variables, b_0 is the value of Y when all of the independent variables (X_1 through X_p) are equal to zero, and b_1 through b_p are the estimated regression coefficients. Each regression coefficient represents the change in Y relative to a one unit change in the respective independent variable. In the multiple regression situations, b_1 , for example, is the change in Y relative to a one unit change in X_1 , holding all other independent variables constant (i.e., when the remaining independent variables are held at the same value or are fixed). Again, statistical tests can be performed to assess whether each regression coefficient is significantly different from zero.

3.11 Econometric Model and Estimation Technique

Multiple linear regressions are a statistical method that allows us to summarize and study relationships more than two continuous (quantitative) variables:

- Two or more variables denoted $X_1, X_2, X_3, \dots, X_n$ are regarded as the **predictor, explanatory, or independent** variable.
- The other variable, denoted y , is regarded as the **response, outcome, or dependent** variable.

Because the other terms are used less frequently today, we'll use the "**predictor**" and "**response**" terms to refer to the variables encountered in this course. The other terms are mentioned only to make you aware of them should you encounter them in other arenas. Multiple linear regressions get its adjective "multiple," because it concerns the study of two or more predictor variables. Reliability statistics, descriptive statistics, correlation ANOVA and residual statistics tests were employed in the study.

3.11.1 Definitions of Variables of the studies

Independent Variables

- **Foreign Price level:** The price of exports on the international market is one of the major determinants of export growth and especially for countries which depend on exportation of agricultural products whose prices fluctuate from time to time (N.Agasha, 2006). When foreign price level increases, the domestic exporters will get incentive to maximize or increase their export.
- **Production/Productivity:** Higher GDP values in the exporting country imply increased capacities for export. It is expected to have to have a positive impact on exports. For instance, Kumar (1998) in his study on the determinants of export growth in developing countries confirmed that GDP has a significant positive impact export volumes. He also underlined that higher level of production is the main cause of export expansion. So, a higher GDP implies a higher production and hence larger volume of exports.
- **Product quality:** Quality is the performance of the product as per the commitment made by the producer to the consumer. Such commitment may be explicit or implicit i.e. in terms of written contract or in terms to the quality management expectation of the average consumer of the product. The performance of the product is concerned with the ultimate function and service which the product must provide to the final; consumer.
- **Road Infrastructure/rural feeder roads:** Infrastructure is one of the major non-price factors which affects or constrains exports especially in least developing countries. Of the

factors that boost production as well as export supply of commodities, infrastructural facilities come at the forefront. Its development is a key element of countries ability to produce and move goods. Weak infrastructure is a major impediment to trade, competitiveness and sustainable development in most African countries, particularly land-locked and small island countries. It reduces the return to trade and economic activity and hinders growth prospects of a given country. In this study the impact of infrastructure is captured by kilometers of total paved roads. Since the availability of road creates marketing opportunities in the international market and also the absence of such facilities does not bring the desired agricultural export performance of the country.

- **Real Effective Exchange Rate:** In the literature, it is recognized that depreciation of the real effective exchange rate has positive contributions for increased exports while real appreciation of the exchange rate is generally associated with a retard in exports. Thus, the importance of maintaining a realistic real exchange rate is being propagated as a policy remedy to ensure the competitiveness of exports in the world market (Prasad, 1992). Index of trade weighted real effective exchange rate is included in the present study, to empirically test the relationship between this variable and the level of exports. The expected sign of this variable is negative.

Dependent variable

- ❖ **Export Performance:**(i) the success or failure of the efforts of a nation to sell domestically produced goods and services in other nations markets (Zou and stan, 1998); (ii) the export effectiveness, export efficiency and continuous engagement in exporting (Shoham, 1991); (iii) the composite outcome a nation's international sales (Shoham, 1996); and (iv) the three sub-dimensions which encompasses sales, profit and growth (Madsen, 1987).

Chapter Four

Result, Discussion and Interpretation

4.1 Demographic Profile of Respondents

This section gives an overview of the demographic profiles of the respondents and the exporters of oilseeds and pulse were undertaken. From the survey information about gender, age, educational level and work experience of the respondents were analyzed.

Table 4.1: Demographic Profile of Respondents

Item	Descriptions	Frequency	Percentage
Gender	Male	98	75.4
	Female	32	24.6
	Total	130	100%
Age	Less 25	8	6.2
	26-35	68	52.3
	36-45	51	39.2
	45-55	3	2.3
	Total	130	100%
Work experience	Less than 2 year	26	20
	2-5 years	44	33.8
	6-10 years	46	35.4
	Over10 years	14	10.6
	Total	130	100%
Educational level	Diploma	21	16.2
	Degree	69	53.1
	Masters	40	30.8
	Missed	-	-
Total	Total	130	100%

Source: Research survey, 2018

As presented in Table 4.1, a sample size of 130 respondents was selected for this study out of which zero respondents were ineligible, non of respondents have refused to respond to the questionnaire and none of them accessible thus, respondents yielded a response rate of 100%. It means they have properly answered and returned the questionnaire to the researcher. Thesample consisted of 32 female and 98 male participants in the study which holds 75.4% of

the respondents are male and the remaining 24.6% were female. This indicates that the majority of the respondents were males as they are involved in business in developing countries. Regarding the Age, 8 (6.2%) of the respondents are less than 25 years, 68 (52.3%) of them are 26-35 years, and 51(39.2%) of respondent's 36-45years and 3(2.3%) of them were 45-55 years old. The frequency of education levels among respondents was 69 (53.1%) holds university degree whereas 21 (16.2%) holds diploma 40(30.8%) holds masters degree. This indicates that approximately above 53% of the respondents of the oilseeds and pulse are bachelor degree holders the rest are Diploma/certificate and masters degree. The frequency of experience of exporters indicate that majority of them have 6 -10 , 2-5 , less than 2 and greater than 10 years of experience which is 46 (35.4%), 44 (33.8%), 26(20%), 10(10.6%) respectively.

4.1.1 Assessment on Foreign price level

The assessments on foreign price level were made on three indicators namely Price volatility of global market, Understanding export procedure and negotiation power of exporters and Understanding export procedure and negotiation power of exporters in the international market. Respondents were asked to evaluate the significance of the above mentioned variables.

Table 4.2: foreign price level table

Variables	Sub-variables	Frequency					Cumulative percentage
		Strongly Disagree	disagree	Neutral	agree	strongly agree	
Foreign price level	Price volatility of global market.	-	2	6	26	97	
			1.5%	4.6 %	19.2 %	74.6%	100%
	Understanding export procedure and negotiation power of exporters	-	2	6	39	83	
		-	1.5%	4.6%	30%	63.8%	100%
	Contractual discipline and honor of contractual agreement b/n sellers and buyers	-	2	6	20	102	100%
		-	1.5%	4.6%	15.4%	78.5%	100%

Source: Research survey, 2018

Foreign price level assessment were made on three indicators namely Price volatility of global market, Understanding export procedure and negotiation power of exporters and Understanding export procedure and negotiation power of exporters in the international market. Respondents were asked to evaluate the significance the above mentioned variables. As presented in Table 4.2, for Price volatility of global market 97(74.6%), 26(19.2%), 6(4.6%), and 2(1.5%) respondents said strongly agree, agree, neither agree nor disagree and disagree respectively. In response to Understanding export procedure and negotiation power of exporters 83(63.8%), 39(30%), 6(4.6%), 2(1.5%) responds and considering understanding export procedure and negotiation power of exporters in the international market was answered 102(78.5%), 20(15.4%), 6(4.6%), and 2(1.5%) strongly agree, agree, neither agree nor disagree and disagree respectively.

4.1.2 Assessment on production/productivity

Table 4.3 presents the result of production/productivity. The assessment were made on 3 indicators including introducing better varieties of oilseeds and pulse, Maximum utilization of oilseeds and pulse cultivated land potential, Using improved inputs. The results on these indicators were presented in Table 4.3

Table 4.3: production/productivity table

Variables	Sub-variables	Frequency					Cumulative percent
		Strongly Disagree	disagree	Neutral	agree	strongly agree	
Production /productivity	Introducing better varieties of oilseeds and pulse	-	-	-	24	104	
		-	1.5%	-	18.5%	80%	100%
	Maximum utilization of oilseeds and pulse cultivated land potential	-	-	-	25	103	
		-	1.5%	-	19.2%	79.2%	100%
	Using improved inputs	-	2	1	37	90	
		-	1.5%	0.8%	28.5%	69.2%	100%

Source: Research survey, 2018

Table 4.3 here above or result of production/productivity assessed in the same way to foreign price level were made on 3 indicators which holds, introducing better varieties of oilseeds strongly disagree 104(80%), disagree 24(18.5%), agree 2(1.5%),and pulse, Maximum utilization of oilseeds and pulse cultivated land potential 103(79.2%), 25(19.2%), 2(1.5%) strongly agree, agree, and disagree respectively respond on Using improved inputs also pinpoint strongly agree 90(69.2%), agree 37(28.5%), neither agree nor disagree and agree 1(0.8%) and agree 2(1.5%).

4.1.3 Assessment on Quality of products

The assessments on Quality of products were made on three indicators: Strong and regular monitoring and evaluation in the value chain, Using Post harvest technologies and knowhow to keep the quality, Traceability of quality control. The results on these indicators were presented on Table 4.4.

Table 4.4: Quality of products table

Variables	Sub-variables	Frequency					Cumulative percentage
		Strongly Disagree	disagree	Neutral	agree	strongly agree	
Quality of products	Strong and regular monitoring and evaluation in the value chain	-	-	-	78	52	
		-	-	-	60%	40%	100%
	Using Post harvest technologies and knowhow to keep the quality	-	-	-	92	38	
		-	-	-	92%	38%	100%
	Traceability of quality control	-	-	1	79	50	
				0.8%	60.8%	38.5%	100%

Source: Research survey, 2018

Table 4.4 indicated that, Strong and regular monitoring and evaluation in the value chain, Using Post harvest technologies and knowhow to keep the quality and Traceability of quality control were the sub variables which measure quality of products. Thus, in response considering Strong and regular monitoring and evaluation in the value chain, 52(40%), 78(60%), said strongly agree and agree respectively and the response given for Using Post harvest technologies and knowhow to keep the quality, 38(38%) and 92(92%) of the respondents assure the former 38% strongly agree and the latter 92%agree in using Post harvest technologies and knowhow to keep the quality and considering Traceability of quality control 50(38.5%) respondents agreed it is strongly agree, 79(60.8%) said agree and 1(0.8%) respondents approve its neutrality.

4.1.4 Assessment on infrastructure/rural feeder roads

The result of responses on infrastructure/rural feeder roads is presented in Table 4.5. The assessment was made on Accessible rural Feeder roads, Coverage of paved roads and Road network and availability of modern market center.

Table 4.5: Assessment of Infrastructure/rural feeder road

Variables	Sub-variables	Frequency					Valid percentage
		Strongly Disagree	disagree	Neutral	agree	strongly agree	
Infrastructure/rural feeder road	Accessible rural Feeder roads	80	50	-	-	-	
		61.5%	38.5%	-	-	-	100%
	Coverage of paved roads	69	61	-	-	-	
		53.1%	46.9%	-	-	-	100%
	Road network and availability of modern market center	74	50	6	-	-	
		56.9%	38.5%	4.6%			100%

Source: Research survey, 2018

The assessment on infrastructure/rural feeder road was made on Accessibility of rural Feeder roads, Coverage of paved roads and Road network and availability of modern market center. The respondents approved in relation with accessibility of rural Feeder roads strongly disagree holds 80(61.5%) and disagree holds 50(38.5%) respectively, other respondents believed that Coverage of paved road covers 69(53.1%) strongly disagree and disagree 61(46.9%) respectively and Road network and availability of modern market center holds strongly disagree, disagree, neither agree nor disagree and 74(56.9%), 50(38.5%), 6(4.6%) respectively.

4.1.5 Assessment on Real effect exchange rate

Table 4.6 presents the result of Real effect exchange rate. The assessments were made on the Nominal effect exchange rate, Real effect exchange rate; Competitiveness of home goods in international market might have an impact in determining export performance.

Table 4.6: Real effect exchange rate table

Variables	Sub-variables	Frequency					Cumulative percentage
		Strongly Disagree	disagree	Neutral	agree	strongly agree	
Real effect exchange rate	Nominal effect exchange rate	-	-	-	82	48	
				-	63.1%	36.9%	100%
	Realeffect exchange rate	-	-	-	75	55	
				-	57.7%	42.3%	100%
	Competitiveness of home goods in international market	-	-	6	37	87	
		-	-	4.6%	28.5%	66.9%	100%

Source: Research survey,2018

As table 4.6 presents assessment on real effect exchange rate were made on the Nominal effect exchange rate, Real effect exchange rate; Competitiveness of home goods in international market. The respondents identifies 48(36.9%) for strongly agree, 82(63.1%), agree for Nominal effect exchange rate, 55(42.3%) strongly agree, 75(57.7%) agree for real effect exchange rate and 87(66.9%), 37(28.5%) and 6(4.6%) for strongly agree, agree and neither disagree nor agree respectively for Competitiveness of home goods in international market.

4.1.6 Model Estimation and Discussion of the Findings

4.1.7 Introduction

Here the results and discussion part of the study has been presented in different parts in line with the research questions. The first part focuses on the background information of the respondents and the second section focuses on the one way ANOVA and its discussion of ANOVA was carried out. In the last chapter, multiple linear regressions were run and its outputs were discussed. To analyze the collected data in line with the overall objective of the research undertaking, statistical procedures were carried out using SPSS version,20.

4.1.8 Descriptive Statistics

The responses of the respondents for the variables were measured on a five point Likert scale: 1= strongly disagree, 2= disagree, 3 = neutral, 4= agree and 5= strongly agree.

Table 4.7: Descriptive Statistics of oilseeds and pulse export performance determinants

	N	Standard Deviation
<i>(constant)</i>	130	.22184
<i>Comp- P</i>	130	.61247
<i>Comp_ PR</i>	130	.49274
<i>Comp_ Q</i>	130	.33767
<i>Comp_ I</i>	130	.39483
<i>Comp_ Ex</i>	130	.31655
Valid N (listwise)	130	

Source: Research survey, 2018

Table 4.7 shows that the descriptive result of oilseeds and pulse exporters in Ethiopia response towards the variables (Foreign price level, production/productivity, quality of the product Infrastructure/rural feeder road and real effect exchange rate using the standard deviation..

Fig 4.1 Linearity test

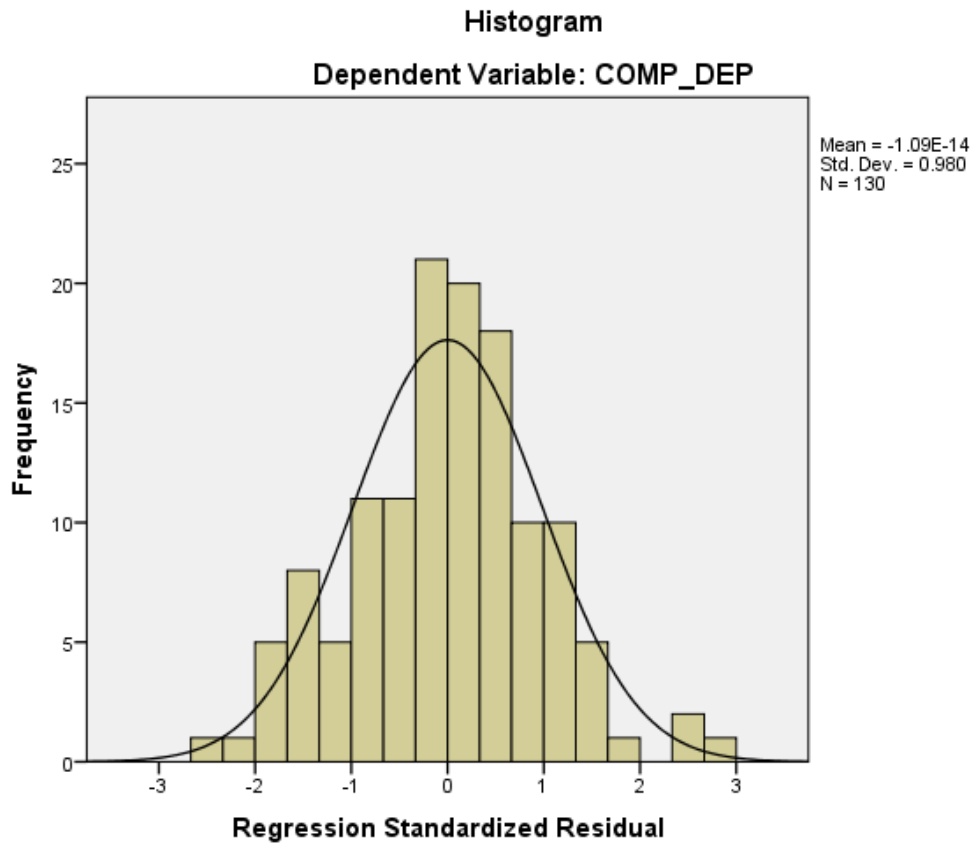


Fig: 4.2 normal p-p plot of regression standardized residual

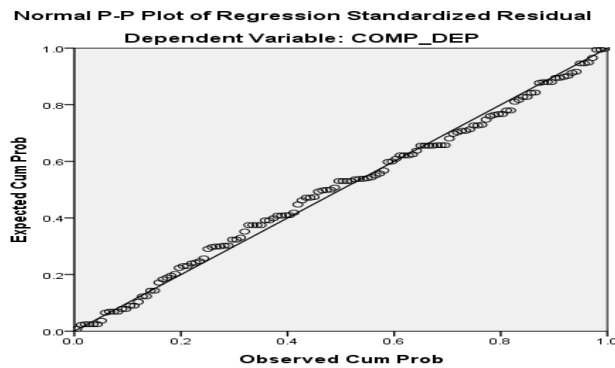


Fig 4.3 Homoscedasticity Test

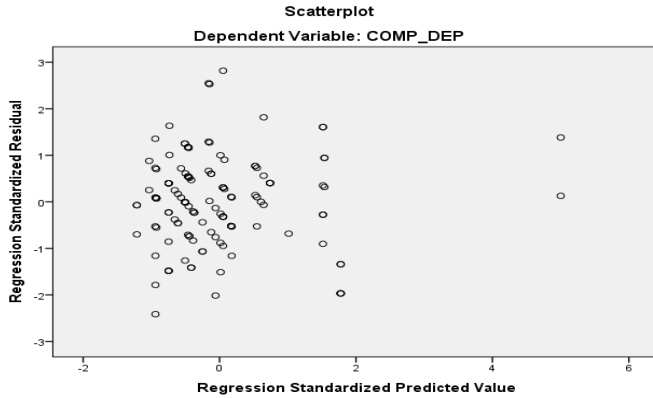


Table 4.8: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.864 ^a	.747	.737	.11378	.747	73.271	5	124	.000

Source: model outcome

a. Predictors: (Constant), COMP_EX, COMP_P, COMP_Q, COMP_I, COMP_PR

b. Dependent Variable: COMP_DEP

Table 4.8 shows that the degree level of variance in the measure of performance is presented by the underlying determinant of export performance.

Table 4.9: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.743	5	.949	73.271	.000 ^b
	Residual	1.605	124	.013		
	Total	6.348	129			

Source: mode outcome

a. Dependent Variable: COMP_DEP

b. Predictors: (Constant), COMP_EX, COMP_P, COMP_Q, COMP_I, COMP_PR

The above table 4.9 shows that the significance value of F statistics value is (.000), which is the p-value is less than 0.05, thus the model is significant.

Table 4.10: Regression Coefficient

model	Unstandardized coefficient		Standardized coefficient	t	sig
	B	Std.error	Beta		
(constant)	.883	0.066		13.314	0.000
Comp- P	.195	0.020	.538	9.810	0.000
Comp_ PR	.143	0.026	.316	5.511	0.000
Comp_ Q	.079	0.031	.120	2.550	0.012
Comp_ I	.027	0.027	-0.047	-0.972	0.333
Comp_ Ex	.164	0.031	.260	5.286	0.000

Source: model outcome

Dependent variable: Comp_ DEP

Table 4.10 Regression coefficient tells us whether the independent variable associated with it is contributing significantly to the variance accounted for in the dependent variable. Thus, Foreign price level, production/productivity, quality of production, Real effect exchange rate were significantly determined and predicted for the performance of oilseeds and pulse export, since their p-value is **0.000, 0.000, 0.000, 0.012** and **0.000** respectively and less than the level of significance **0.05**

Table 4.11 Multicollinearity test

Collinearity Diagnostics^a

Model	Dimen sion	Eigenvalue	Condition Index	Variance Proportions					
				(Constant)	COMP_P	COMP_PR	COMP_Q	COMP_I	COMP_EX
1	1	5.675	1.000	.00	.00	.00	.00	.00	.00
	2	.160	5.959	.01	.39	.07	.02	.05	.02
	3	.073	8.836	.01	.31	.60	.08	.05	.00
	4	.043	11.541	.01	.15	.10	.04	.84	.21
	5	.033	13.115	.01	.13	.22	.38	.02	.65
	6	.017	18.351	.97	.01	.00	.48	.05	.13

a. Dependent Variable: COMP_DEP

4.1.9 Summary of the Result

- **Foreign price level** is significantly determines the export performance. The findings also confirmed that there exists a positive and significant association between foreign price level and export performance. Therefore, the alternative suggestion was accepted. Hence, from this finding, it is possible to conclude that the higher the foreign price level the better their export performance is likely to be. Exporters who got higher price in foreign market is relatively larger will be able to export more compared to those with lower price in foreign market. Therefore, foreign price level is found to be one of the key factors determining the performance of export of oilseeds and pulse.
- **Production/productivity** was strongly found to have a significant and positive effect on export performance oilseeds and pulse. The results of the multiple linear regressions indicated a positive and statistically significant relationship between production/productivity and export performance. Therefore, the assumption was accepted and if production/productivity increases key export performance likely to be. There for production/productivity to be one of the key determinants of export performance
- **Quality of products** is at the same time significantly determines the export performance and had a positive relationship. The quality standard for exportable oilseeds and pulse is critical to promote their export performance. The better quality standards or grades of the oilseeds and pulse the better chance that exporters have to increase their export volume, hence, their performance improved. The results of the model implied that if the quality of oilseeds and pulse improved the performance of export will definitely be improved in a similar way.
- As it is shown in the above table 4.10infrastructures/rural feeder road has, a p-value 0.333, which shows, infrastructures/rural feeder road has a strong negative impact on export performance of oilseeds and pulse export because its significance level is > 0.05 . Thus, the findings of the study implied that infrastructure/rural feeder road is negatively associated with

export performance, also it is not statistically significant. This result is however inconsistent with the findings of other researchers who found that a infrastructure has a positive effect on export performance, it indicated something unique to the characteristics of the rural feeder road accessibility. Therefore, this finding would be able to make conclusions rather it needs` further study as to why infrastructure/rural feeder road accessibility negatively associated with performance of export.

- **The findings about real effect exchange rate** also confirmed that there exists a positive and significant association between real effect exchange rate and export performance. Therefore, the alternative suggestion was accepted. Hence, from this finding, it is possible to conclude that the stable real effect exchange rate the better their export performance is likely to be. A country who have stable real effect exchange rate is relatively larger will be able to export more compared to those with unstable real effect exchange rate in the country. Therefore, real effect exchange rate is found to be one of the key factors determining the performance of export of oilseeds and pulse.

Table 4.11 Summary of the Result in chart

Independent variables	Measurement scale	Sign
Foreign Price level	Significant	+ve
Production/productivity	Significant	+ve
Product Quality	Significant	+v
Infrastructure/rural feeder roads	insignificant	-ve
Exchange Rate	Significant	+ve

Source: model outcome

Table 14 indicates foreign price level, production/productivity, product quality and Exchange rate were found significant to export performance. This implies that when considering export performance these variables are found sensitive.

4.2 Discussion on other studies

The exchange rate can be a potent driver of export performance. Undervaluation (overvaluation) of the currency can bolster (undermine) export competitiveness, as it raises (lowers) returns to entrepreneurial activity, especially in the area of discovering new, high-productivity exports. What matters for incentives is the real exchange rate, the level of which is often rendered uncompetitive in low-income countries by poor macroeconomic management and turbulence in financial markets. Volatility of the real exchange rate is also very high for the same reasons, creating a risky climate for new export investment, as it makes future returns and payments uncertain and as well as leads to the unstable export growth.(Aghion et al 2004).

The real exchange rate can be an important element in determining export performance, diversification and international competitiveness of goods produced in a country (UNCTAD, 2005). It is a key variable that requires close government supervision in any programme to expand and diversify exports (Biggs, 2007) since its management can influence export performance over a large number of different product groups (Mouna and Reza, 2001).

A stable real exchange rate is conducive to export expansion (Mouna and Reza, 2001).The real exchange rate is often rendered uncompetitive in low income countries by poor economic management and turbulence in financial markets (Biggs, 2007). Ensuring that the real exchange rate adjusts to more realistic levels is a means of enhancing the economy's incentives for exporting and can lead to an increase in the production of export products (De Rosa and Green, 1991; Oyejide, 2007). While an overvalued currency can undermine export competitiveness through a direct loss of price competitiveness for exporting firms undervaluation of the currency can bolster export competitiveness (Biggs, 2007), enhance the incentives for export activities (Oyejide, 2007) and lead to diversification of exports and leads to increase the growth of export (Sorsa, 1999; Mouna and Reza, 2001).

Kumar (1998) conducted a study on the determinants of export growth in developing countries and confirmed that GDP has a significant positive impact on volume of exports.He

further said that higher level of production/productivity is the main cause of export expansion since surplus output can be exhausted in the international markets. Ngeno (1990) carried out a study on determinants of exports and one of his findings was that export growth is positively related to output level since higher production leads to increased export volumes.

Fugzza(2004),examines the export performance and its determinants using the quintile regression techniques by taking a sample of 149 countries to check robustness of the results for the period of 1988-1999 and result shows that gross domestic product has positively affect the export growth rate for the developing countries . A similar study by Ngeno (1990) in neighboring country Kenya, using export growth as a function of gross domestic product and real exchange rate found that both are significantly affect export performance.

Chapter Five

Summary of Findings

5.1 Conclusion

The vital question investigated in this paper is which factors significantly determine the export performance of Ethiopia. To address this question we use primary data to investigate factors that deter export performance. That is why this study has made an attempt to identify the factors that determine oilseeds and pulse export performance of Ethiopia. In other words, the central question investigated in this paper is whether or not oilseeds and pulse export performance is significantly affected/determined by the major selected explanatory variables such as foreign price level, production/productivity, Quality of products, Real effective exchange rate. To address this question, primarily collected data was utilized. The study used primary data collected from exporters of oilseeds and pulse in Ethiopia. In this study oilseeds and pulse export performance was used as dependent variable and the above mentioned variables expected to determine oilseeds and pulse export performance of the country are used as explanatory variables. The study employed multiple linear regression models. The model passes Reliability statistics, descriptive statistics, correlation ANOVA and residual statistics test, Multicollinearity test, linearity test, Homoscedasticity test. The estimation begins with the testing of variable.

The evidence from this study suggests that foreign price level, production/productivity, quality of products and real effect exchange rate significantly influence oilseeds and pulse export performance. It was also revealed that during the reform period oilseeds and pulse export has shown improvement there was inconsistency in export performance. It was inferred that oilseeds and pulse export performance demands an appropriate macroeconomic incentive environment and complementary structural policies. Thus, Ethiopia's oilseeds and pulse export performance will be determined primarily by its domestic policies. It was scrutinized that despite the generally open trade regime, industrial countries tend to have restrictions on imports of agricultural products, where much of Ethiopia's export potential is con-contracted.

Further, it is argued that a country's oilseeds and pulse export may fail to grow as rapidly as the world average for three reasons. First, exports may be concentrated in commodity groups for which demand tends to grow relatively at a low rate. Second, export may be going mainly to relatively stagnant regions/blocs. Third, the country in question may have been unwilling or unable to compete effectively with other sources of supply in the international market. For this purpose, exports from rest of the world are treated as competitor to Ethiopia. Therefore; regional trading arrangements (within Africa) should be set to put in economic efficiency, trade, investment, and growth in the region.

The findings also confirmed that there exists a positive and significant association between foreign price level, Production/Productivity, Product quality, Exchange Rate and export performance. Therefore, the alternative suggestion was accepted. Hence, from this finding, it is possible to conclude that the higher the foreign price level the better their export performance is likely to be. Exporters who got higher price in foreign market is relatively larger will be able to export more compared to those with lower price in foreign market. Production/productivity increases key export performance likely to be. The stable real effect exchange rate the better their export performance is likely to be. The results of the model also implied that if the quality of oilseeds and pulse improved the performance of export will definitely be improved in a similar way. Therefore, foreign price level, Production/Productivity, Product quality and Exchange Rate are found to be the key factors determining the performance of oilseeds and pulse Export in Ethiopia.

5.2 Policy implications

The immediate policy recommendation that emerges from this study is that the government in power should attempt to diversify and promote exports in order to fully exploit the benefits of the sector and promote export performance. To resolve the impact of determinants on export performance, a concerted effort should be directed toward productive channels of oilseeds and pulse in the economy so as to enhance sustainable economic growth through increased oilseeds and pulse export and other agricultural products as well. There for,

Access to foreign markets (foreign price level) is a critical determinant of export performance. Here, the term “foreign price level” is seen as representing the foreign market potential of a country. In that sense, it is a broader notion than the term “market access” as used in trade negotiations. It relates directly to the characteristics of the trading partner countries, such as the size of their market and transport facilities, and inversely to their own internal transport costs. It also depends positively on the size of the export basket and the number of differentiated items and their prices, which in turn are affected by market entry conditions. Tran’s border costs, which also include tariff and non-tariff barriers, have the expected negative impact on foreign price level. Ethiopia is one of the countries with excessive challenges in cross border trade. Since, the high cost of doing business across borders in Ethiopia and foreign price fluctuation has become a major constraint.

- ❖ The Exporters should focus on trade facilitation procedures which requires the examination of the dynamic gains associated with lowering trade transaction costs and identifying the relative importance of related trade policy reform measures in Ethiopia.
- ❖ In particular, the current state of the law and practice in trade facilitation and the international trading environment in Ethiopia should be examined again. The article focuses on customs law, border institutions, transport and logistics services and various issues related with investment and trade policy. In so doing, it attempts to examine how Ethiopia’s WTO Accession and trade facilitation instruments should be streamlined with domestic reform.
- ❖ To provide adequate market to the exporters and farmers ECX should play an important role in market transparency, quality, and aggregation for exports. However, exporters association and other relevant agencies assume the responsibility of tracking both domestic and international markets.

The pulses and oilseeds sector could be strengthened by enhanced on-farm productivity and developing a more efficient chain of inputs and off-take, driven by a strong, stable export sector (with a minimum of three to five strong export players) to ensure consistent

international demand. Effective on-farm production practices and decision-making would include use of phosphate fertilizer on appropriate soil types, use of improved seed in areas with the capacity to support it, increased adoption of modern agronomic practices (e.g., weeding, depth of planting etc.), full crop rotation to ensure healthy soils, and consideration market demand as well as household needs when choosing varieties. Capable aggregators would support improved farmer production and commercialization, through standardization in inputs aligned with agro-ecology, and transparent and nationally-consistent off-take contracts with accepted, published market pricing. Finally a broad range of well-developed exporters would have strong links to the international commodity markets. In order for the sector to play a key role in increasing farm income, contributing to improved food security, and improving the balance of trade, coordinated and integrated effort by multiple actors along the pulse value chain is required.

The Exporters interventions are suggested to emphasize development of the production/productivity structure by focusing on creating both a demand pull and a supply push:

- ❖ Increasing productivity through improved input usage
- ❖ Linking the export market to producers to stimulate quality and supply
- ❖ Strengthening the export sector
- ❖ Moreover, Modern production technologies of oilseeds and pulse must be quickly introduced to upgrade the traditional methods currently used and Encouraging large commercial farms through providing new potential land and enforcing the implementation of different export incentives given for the exporters.
- ❖ Moreover, exporters emphasize towards value addition than exporting raw oilseeds and pulse since the relationship with economic growth is inelastic with the bidirectional relationship between economic growth and pulse` and oilseed exports, the exporters should increase the growth of non-exportable goods and services to enhance real effect exchange rate which have a direct impact for promoting export performance of oilseeds, pulse and other agricultural products.

Taken as a whole, these interventions the exporters represent a cohesive set of actions that can be pursued to strengthen the Ethiopian pulses and oilseeds value chain. Improving production is key to stabilizing and growing the pulses and oilseeds value chain, while commercialization provides a demand pull, with the middle of the value chain an enabling mechanism to improve production.

Quality is an important parameter that determines both the price and volume of pulse and oilseeds exports. Exporters estimate that they reject 10 to 25 percent of produce due to quality standards, which impinges upon both the profitability of exporters and ultimately the prices paid to farmers. The most important quality parameters dictating pulse and oilseeds export quality include: seed size, color, appearance, and existence of mixtures. Most of these parameters are dictated by the type of pulse variety (traditional versus improved), management practices and post-harvest handling.

Most of the sample exporters had been exporting lower grade standards of oilseeds and pulse. This quality standard is the lower level of quality which affects the gains from export. Hence, the quality improvement and standardization aspect should be given due attention as to promote the performance export of oilseeds and pulse. Therefore,

- ❖ Spinning firms or exporters should be established to improve the quality standards of the exportable oilseeds and pulse. Appropriate quality testing and control system should also be maintained to promote better quality oilseeds and pulse export.
- ❖ In general the paper highlights the possibility of exposure to international competition and external shock in an export diversification endeavor. Thus, exporters should have strong information sharing mechanism and technology oriented and flexible to meet the requirements of the market in terms of quality and quantity (product differentiation).
- ❖ The exporters should enforce the sector or the stake holders specially Ministry of Agriculture, Ministry of Trade, and others should do for the improvement of the

product/productivity which was found to have significantly & positively influence the total export.

By the same token the exporters should force the government to take measure the country to have a stable exchange rate. Since, factors such as stable exchange rate, higher foreign price level will lead to improvement in the export performance as the findings of the study depict. Thus, the exporters should give due emphasis to all determinants, especially those have significant effect such as foreign price level, production/productivity, quality of products (oilseeds and pulse in this study), and exchange rate which significantly affect the export performance of oilseeds and pulse in the country.

- ❖ The gap between the official and parallel exchange rate need to be narrowed by maintaining a realistic exchange rate. This will reduce the implicit import subsidy and increases the competitiveness of exports.

5.3 Suggestion for further study

Based on the scope, limitations and the findings of this research, the following areas of future research are highlighted.

This research was limited to only assessing the determinants of performance of oilseeds and pulse export. Hence, it did not include other commodities other than oilseeds and pulse and focused only on those selected factors from the exporters or the supply side. Therefore, it would be better for future if:

- Other export items to be included
- The effect of infrastructure/rural feeder road on performance of export has to be further investigated as there exist a negative association in this study.

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Appendices :

ANNEX-1

**Addis Ababa University
School of Commerce**

Department of Logistics and Supply Chain Management

Questionnaires for MA thesis Research

Dear respondent,

I am a student in Addis Ababa University School of commerce Department of Business and Economics a Masters degree in Logistic and supply chain management. As part of requirement for degree, I am carrying out a thesis research work in titled. "***Determinants of oil seeds and pulse export performance in Ethiopia***". You or Your Company is being selected for this study. This questionnaire is, therefore issued purely for academic purpose. Hence, you are kindly requested to cooperate by filling in questionnaire attached herewith. All information you provided will remain strictly confidential and will be used for intended purpose only. Your cooperation in ensuring that the questionnaires are answered is highly appreciated.

Thank you in Advance

Mengistu G/Hiwot

MA student (2018)

Addis Ababa University

Section I General information

1. Background Information of the Respondent

1.1 Gender of the respondent

Male

Female

1.2 Indicate your age group

25 years or less

26-35 years

36-45 years

46-55 years

55 years above

1.3 Educational level

Diploma

PhD.

Degree

Other

Masters

(please specify) -----

-

1.4 How long have you been in exporting oilseeds and pulse?

Less than 2 years

2-5 years

6-10 years

Over 10 year's

Section II Performance evaluation

Encircle your choice that holds convenient answer, how much you agree on the operation of export performances.

2. Exporters agreement

Dimension	Measurement Scale 1) Strongly disagree 2) Disagree 3) Neutral 4) Agree 5) Strongly agree				
2.1 Export policy frame work					
2.1.1 There is convenient export policy framework in Ethiopia.	1	2	3	4	5
2.1.2 The government evaluates the export performance of oilseeds and pulse in Ethiopia annually.	1	2	3	4	5
2.1.3 Exporting Pulse and oilseeds are preferable because of a huge support from the government side.	1	2	3	4	5
2.2 foreign transactions					
2.2.1 Compared to domestic sales, your foreign transactions are generally much more profitable.	1	2	3	4	5
2.2.2 The extent of foreign competitors in this export market can decide foreign price level.	1	2	3	4	5
2.2.3 Allows exporters to open a retention account to hold a specified amount of their export earnings for a defined period and use their forex holdings for their export business promotion.	1	2	3	4	5
2.3 Relationships between export					

performance and its determinants						
2.3.1	There is a strong relationship between production/ productivity and export performance.	1	2	3	4	5
2.3.2	Foreign price level, production, real exchange rate, product quality and infrastructure/rural paved road can be considered as major determinant to export performance in exporter's perceptions.	1	2	3	4	5
2.3.3	The level of infrastructure/rural feeder road is key success factor for export performance.	1	2	3	4	5
2.4 Quality standards of exported pulse and oilseeds.						
2.4.1	There is convenient quality assurance processes in Ethiopia, which help to enhance export performance	1	2	3	4	5
2.4.2	In Ethiopia there is fair cost paid for quality testing and certification.	1	2	3	4	5
2.4.3	Exporters have enough knowledge on quality standards of exported pulse and oilseeds performance	1	2	3	4	5
2.5 exchange rate strategy						
2.5.1	The degree of adaptation of your real effect exchange rate strategy for this export market venture is crucial.	1	2	3	4	5
2.5.2	There is stable Real Effective Exchange rate in Ethiopia.	1	2	3	4	5
2.5.3	A proactive real exchange rate policy is an important macroeconomic policy instrument that governments can use to influence the specialization pattern of a country.	1	2	3	4	5

Section III- Export Performance Determinants

This section deals with determinants of Export performance. Therefore, based on your exposure on oilseeds and pulse export please rate the significance of each indicator in determining the export performance. Please mark or encircle the value level of your perception in the table.

3. Determinants

Descriptions	Measurement Scale				
	1) Strongly disagree 2) Disagree 3) Neutral 4) Agree 5) Strongly agree				
3.1 Foreign price level					
3.1.1 There is no price volatility of global market	1	2	3	4	5
3.1.2 Exporters in Ethiopia all know export procedure and Negotiation power of exporters.	1	2	3	4	5
3.1.3 There is good Contract discipline and honor of contractual agreement sellers and buyers in our export practice.	1	2	3	4	5
3.2 Production/Productivity					
3.2.1 Introducing better variety of oilseeds and pulse	1	2	3	4	5
3.2.2 There exist Maximum utilization of oilseeds and pulse cultivated land potential to increase its Volume.	1	2	3	4	5
3.2.3. All Farmers use improved input to produce oilseed and pulse in Ethiopia.	1	2	3	4	5
3.3 Product Quality					
3.3.1. There is Strong Regular Monitoring and Evaluation at various levels in value chain.	1	2	3	4	5
3.3.2. Farmers have post harvest technologies know how to keep the quality of the product.	1	2	3	4	5

3.3.3. quality control is traceable in our country.	1	2	3	4	5
3.4 Road infrastructure					
3.4.1. Rural feeder road is accessible in the country.	1	2	3	4	5
3.4.2. coverage of paved road is	1	2	3	4	5
3.4.3. Road network and modern market centers are moderately accessible in Ethiopia	1	2	3	4	5
3.5 Real effect exchange rate					
3.5.1. Nominal Effective Exchange Rate (NEER), is stable.	1	2	3	4	5
3.5.2. There is efficient Real Effective Exchange Rate (REER) in Ethiopia.	1	2	3	4	5
3.5.3. There is better Competitiveness of home goods in international markets.	1	2	3	4	5

ANNEX- 2

Table 3.2:Reliability Statistics of oilseeds and pulse export performance

Reliability Statistics	
Cronbach's Alpha	N of Items
.851	20

Table 4.7: Descriptive Statistics of oilseeds and pulse export performance determinants

Descriptive Statistics			
	Mean	Std. Deviation	N
COMP_DEP	1.6692	.22184	130
COMP_P	1.3538	.61247	130
COMP_PR	1.2718	.49247	130
COMP_Q	1.6436	.33767	130
COMP_I	1.4641	.39483	130
COMP_EX	1.5282	.35165	130

Correlations							
		COMP_DEP	COMP_P	COMP_PR	COMP_Q	COMP_I	COMP_EX
Pearson Correlation	COMP_DEP	1.000	.750	.672	.232	.112	.416
	COMP_P	.750	1.000	.535	.119	-.011	.105
	COMP_PR	.672	.535	1.000	.028	.228	.289
	COMP_Q	.232	.119	.028	1.000	.158	.183
	COMP_I	.112	-.011	.228	.158	1.000	.287
	COMP_EX	.416	.105	.289	.183	.287	1.000
Sig. (1-tailed)	COMP_DEP	.	.000	.000	.004	.102	.000
	COMP_P	.000	.	.000	.089	.450	.117
	COMP_PR	.000	.000	.	.377	.005	.000
	COMP_Q	.004	.089	.377	.	.036	.018
	COMP_I	.102	.450	.005	.036	.	.000
	COMP_EX	.000	.117	.000	.018	.000	.
N	COMP_DEP	130	130	130	130	130	130
	COMP_P	130	130	130	130	130	130
	COMP_PR	130	130	130	130	130	130
	COMP_Q	130	130	130	130	130	130
	COMP_I	130	130	130	130	130	130
	COMP_EX	130	130	130	130	130	130

Table 4.10: Model Summary

Model Summary ^b									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.864 ^a	.747	.737	.11378	.747	73.271	5	124	.000

a. Predictors: (Constant), COMP_EX, COMP_P, COMP_Q, COMP_I, COMP_PR

b. Dependent Variable: COMP_DEP

Table 4.9: ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	4.743	5	.949	73.271	.000 ^b
1 Residual	1.605	124	.013		
Total	6.348	129			

a. Dependent Variable: COMP_DEP

b. Predictors: (Constant), COMP_EX, COMP_P, COMP_Q, COMP_I, COMP_PR

Residuals Statistics^a

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	1.4367	2.6283	1.6692	.19175	130
Std. Predicted Value	-1.213	5.002	.000	1.000	130
Standard Error of Predicted Value	.014	.062	.023	.008	130
Adjusted Predicted Value	1.4371	2.6221	1.6690	.18987	130
Residual	-.27476	.32079	.00000	.11156	130
Std. Residual	-2.415	2.819	.000	.980	130
Stud. Residual	-2.457	2.903	.001	1.007	130
Deleted Residual	-.28453	.34016	.00026	.11778	130
Stud. Deleted Residual	-2.509	2.995	.001	1.016	130
Mahal. Distance	.851	37.229	4.962	5.191	130
Cook's Distance	.000	.191	.010	.022	130
Centered Leverage Value	.007	.289	.038	.040	130

a. Dependent Variable: COMP_DEP

Fig 4.1 Linearity test

Histogram

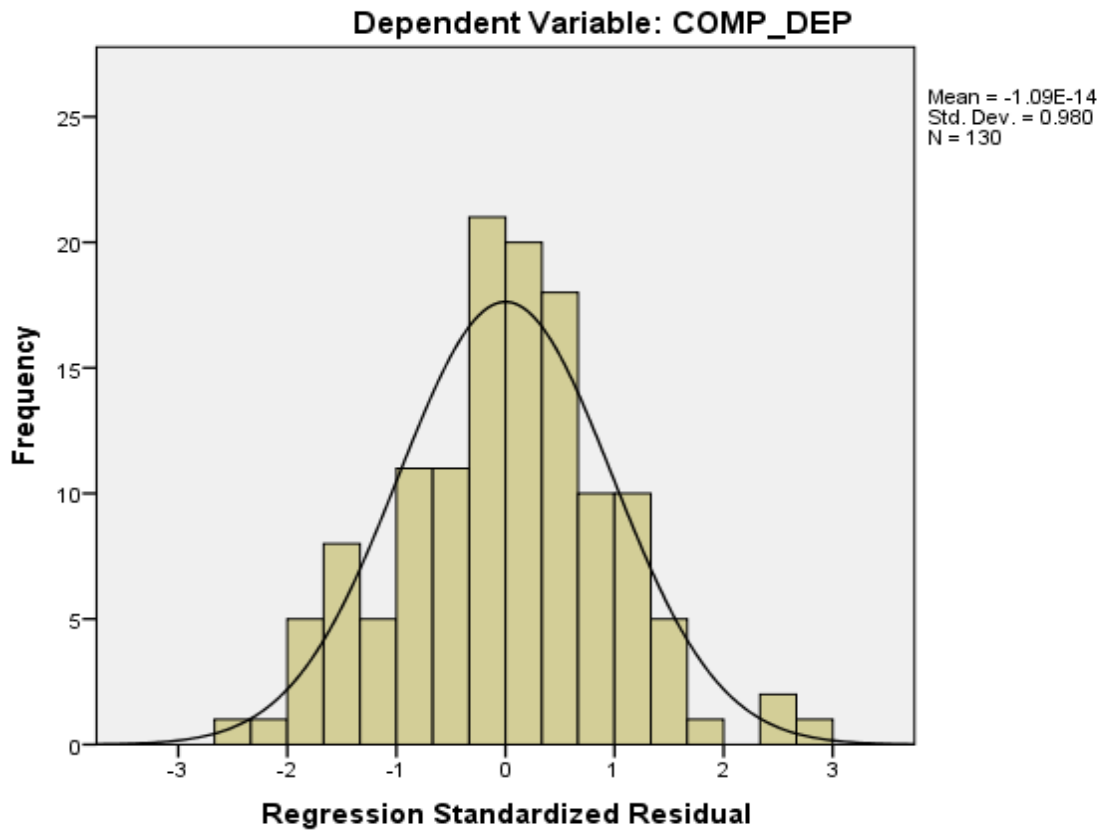
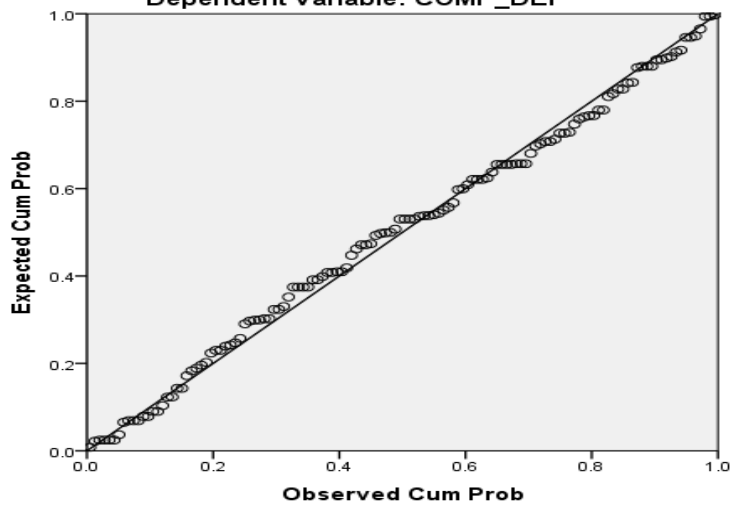


Fig: 4.2 normal p-p plot of regression standardized residual

Normal P-P Plot of Regression Standardized Residual
Dependent Variable: COMP_DEP



Scatterplot
Dependent Variable: COMP_DEP

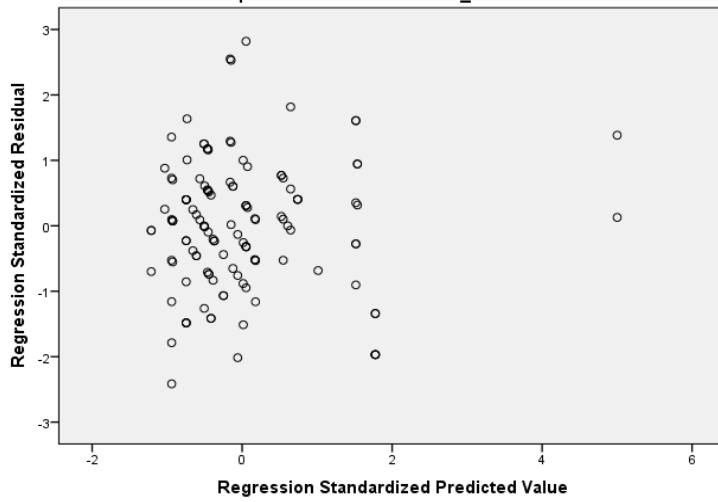


Table 4.11 Multicollinearity test

Collinearity Diagnostics^a

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions					
				(Constant)	COMP_P	COMP_PR	COMP_Q	COMP_I	COMP_EX
1	1	5.675	1.000	.00	.00	.00	.00	.00	.00
	2	.160	5.959	.01	.39	.07	.02	.05	.02
	3	.073	8.836	.01	.31	.60	.08	.05	.00
	4	.043	11.541	.01	.15	.10	.04	.84	.21
	5	.033	13.115	.01	.13	.22	.38	.02	.65
	6	.017	18.351	.97	.01	.00	.48	.05	.13

a. Dependent Variable: COMP_DEP

Declaration

This is to certify that, Mengistu G/Hiwot has carried out his thesis work on the topic entitled "*Determinants of oil seeds and pulse export performance in Ethiopia*" under my guidance and supervision. To the furthest extent of my knowledge and conviction, it contains no material previously published by any other person in its current or similar form, neither has it been accepted as or part of a dissertation for the award of any other degree or qualification within the university or any other institution of higher learning. Where reference is made to previous academic work, due acknowledgement of the respective authors is made both in the text and in bibliography of this dissertation. Errors and omissions in this document remain my personal responsibility.

Declared by:

Name: Mengistu G/Hiwot

Signature: _____

Date: April, 2018

Place: Addis Ababa, Ethiopia

This thesis has been submitted for examination with my approval as an M.A thesis.

(Ph.D.)

Research Advisor

Signature

Date