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College of Business and Economics
MSc in International Business: Specialized in Import and Export
Management

Determinants of Soybean Export Performance in Ethiopia

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Business and Economics, Addis Ababa University in Partial Fulfillment for the
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in Import and Export Management)**

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Addis Ababa, Ethiopia

DECLARATION

I BelaynehKassahun, do hereby declare that this thesis is my original work and that it had not been submitted partially; or in full by any other person for an award of degree in any other University.

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APPROVAL

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ACRONYMS

FDI Foreign Direct Investment

GDP Gross Domestic Product

MT Metric Tone

OLS Ordinary Least Square

USD United States Dollar

ABSTRACT

Export is one of the most important business activities that play a significant role for economic development of nations. Hence, this study aimed to examine determinants of Soybean export performance in Ethiopia. Structured interview with 168 Soybean exporter firms, who were selected using probability sampling technique supplemented by key informant interview, was applied. Descriptive statistics and multiple linear regression model of data analysis are used to identify the determinants of Soybean export performance in the study area. In this study Soybean export performance is measured in terms of annual export income. The descriptive statistics result shows that, the mean Soybean export income is 199,416.50 USD per year. Among the variables from literature land size under Soybean, training, price and stable exchange rate are significantly and positively affecting the Soybean export performance in the study area. On the other hand, quality of Soybean product affects Soybean export performance of firms significantly and negatively. Thus, in the process of exporting Soybean, these variables should be considered by the government decision makers, sector associations and chamber of commerce at different level and individual export firm owners and or managers. Cross-sectional data can only show differences between people at a single point in time. To understand how these differences change over time, future studies should collect time series data.

Key Words: *Export Performance, Multiple Linear Regressions, Soybean*

CHAPTER ONE: INTRODUCTION

In this part, the researcher addressed the general background of the study, the statement of the problem, study objective, basic research questions, and significance of the study, scope and limitations of the study as well as organization of the study.

1.1. Background of the Study

Export is essential to the national economic development of any country. It is widely accepted that the outward looking strategies should be used by poor countries in their transition toward emergence. The East Asian tigers have witnessed wonderful and sustainable exports, as have emerging countries like Chile, Tunisia, Botswana and Mauritius. Even fast-growing countries such as Brazil and China have relied on world markets (World Bank, 2012).

The volume of the global soybean trade, the geographic concentration of exporters and importers, and its relationship to socio-environmental issues have elevated this product to a position of increasing prominence in the debate over sustainable agriculture. Among the world's primary crops, soybean output has shown the highest average growth since the second part of the 1990s (Jia et al., 2020). The amount of soybeans traded globally has tripled during the past 20 years. Soybeans are currently the most traded agricultural product as a result. The placement of China as the world's top importer has been a major driver of growth (Montania, Fernandez-Nunez, and Marquez, 2021).

The south and west of Ethiopia have ideal climatic and soil conditions for soybean production, both for commercial and non-commercial uses (CDI, 2012). A total of 34,264 metric tonnes of soy beans worth 15.7 million dollars were exported in 2016 according to information published by ERCA and the National Bank of Ethiopia (ECX, 2021). Ethiopia has increased its soy production during the past ten years.

In total, according to the CSA, 812,347 quintals of soy beans were produced in 2009. Between 2000 and 2009 productivity (yield per acre) increased by an average 37% per year. Regionally, Amhara (39%), Benishangul Gumuz (36%) and Oromia (24%) produce the most, with SNNPR

(0.33%) being the only other producing region. Kaleb K., (2014) found that the growth in the area of land set aside for soybean production is the main driver of the large increase in the total amount produced. Ethiopia is an agrarian nation due to its many agro-ecological zones, large amount of arable land, and high population in rural areas. Ethiopia began exporting soybeans in 2004; before to that, there is no solid documentation of the export of any soybean-related goods. Ethiopia exclusively exports soy bean grain; no other soybean-related processed goods have yet to begin leaving the country. Thus, this study is aimed to investigate the determinants of soybean export performance in Ethiopia.

1.2. Statement of the Problem

Soybean is one of the most important agricultural commodities for the international trading. Although most of the soybeans are pressed or crushed to obtain derived products, soybeans are also widely traded in the form of grains as an intermediate input. Thus, this product, which has a high geographical concentration in its production, is not consumed where it is produced. Its trade generates linkages between distant places and between different actors of the global soybean system (Montania, Fernandez-Nunez, and Marquez, 2021).

According to Herzberger et al. (2019) few nations have been responsible for meeting the worldwide need. It is possible that these exporters are connected to one another given the absence of new competitors in the global soybean industry and the geographic concentration of exporters and importers. However, due to the connection between soybean production and environmental issues like deforestation and greenhouse gas emissions, this high concentration is impeding sustainable development in particular geographic areas.

Most of the previous works have focused on the main determinants affecting the demand growth of oil seeds (Tilman and Clark 2014). Another important part of the previous literature has studied the productivity through the analysis of efficiency in yields and the harvesting areas (Sanders et al. 2014). Other scholars have centered on the dynamics of the soybean trade of a particular and specific exporter (Goldsmith and Hirsch 2006). Most recently, the focus has been on the soybean exports and its determinant factors.

Studies are conducted on soybean export and most of them are focused on oil seeds, however there is scarcity of studies on the determinants of soybean export performance specifically. Some of the variables show inconsistent values, and we need to investigate this to understand why. Furthermore, some empirical studies used tests like t-tests and one-way analysis of variance. Some other studies take a descriptive approach to studying export performance, without using data analysis models to measure it. Multiple linear regression data analysis can provide insights into the complex relationships between soybean export performance and its determinants in Ethiopia. To address the gaps in the existing literature, this study will use multiple linear regression data analysis to investigate the determinants of soybean export performance in Ethiopia.

1.3. Objectives of the Study

1.3.1. General Objective

The General Objective of this Study is aimed to examine the Determinants of Soybean Export Performance in Ethiopia.

1.3.2. Specific Objectives

- To assess the status of soybean export performance in Ethiopia.
- To identify internal determinants of soybean export performance in Ethiopia.
- To identify external determinants of soybean export performance in Ethiopia.

1.4. Research Questions

- What is the level of soybean export performance in Ethiopia?
- What are the internal determinants of soybean export performance in Ethiopia?
- What are the external determinants of soybean export performance in Ethiopia?

1.5. Significance of the Study

In order to take action to ease the restrictions impacting soybean export performance, it is crucial to identify the decisive elements that influence that performance. This study gives exporting businesses crucial knowledge about the variables that influence their export performance and how to make necessary adjustments to improve their export competitiveness in global marketplaces. The study's conclusions would give decision-makers crucial information to review the existing approach to the agriculture industry and take appropriate action. Additionally, it benefits scholars who want to conduct future research on relevant topics.

1.6. Scope and Limitations of the Study

The scope of this study is limited to Ethiopia. The primary focus of this study was on the soybean export performance status and the determinant factors of soybean export performance. The study's thematic scope was limited to the export performance of soybean products and the determinants of soybean export performance in Ethiopia. During this study, there are limitations that face the researcher. Among this the one is that there were limitations to access organized data on Soybean export performance.

1.7. Organization of the study

The proposal is divided into five chapters by the researcher. The study is introduced in Chapter One, the background information, a problem statement, fundamental research questions, general and specific research objectives, the significance of the study, and the study's scope are all included in this chapter. The study-related concepts and theories are covered in this chapter& the Literature review part is covered in Chapter two. The conceptual framework for the study is precisely defined, and it also covers the empirical literature. The section on research technique and design is included in chapter three. The research's design, sample techniques, data gathering techniques, and analyses are all covered in this chapter. Chapter Four also covers the major findings and result and discussion part. Finally, the last chapter, chapter five addresses the conclusion and recommendation of the study.

CHAPTER TWO: LITREATURE REVIEW

In this part, the researcher reviewed theoretical and empirical works on the soybean export performance which have received a great deal of attention in international business literature and also contains a summarized conceptual framework of the study.

2.1. Theoretical Literature Review

2.1.1. International Trade

Bowen (2013) the determining element in international trade transactions is the unequal distribution of natural resources among states. World War I had an impact on the future growth of trade and the creation of the global economy. International trade with a free exchange of goods began as early as 2500 BC. He added that cross-national interchange of products and services is what he meant by "international trade.

Kelly (2009) also characterized international trade as encompassing investor cross-border buying and selling as well as the movement of goods and services between nations. Through FDI (foreign direct investment), which organizations make for a number of reasons, including the establishment of offices, manufacturing, operations, and distribution facilities, international business gives people the chance to invest in other nations.

Reuvid (2008) in his study discussed that, there are two kinds of trade between nations, it was explained. One is if the nation cannot or cannot generate enough of the good on its own. The second is that, despite having the ability to produce the commodities, the countries nonetheless choose to import them for a variety of reasons. For instance, if the cost of imported items is lower than that of domestically manufactured goods, the imported goods may be of higher quality, have better designs, or have superior technical characteristics.

Daniels (2015)found that, regardless of the size of the business, all companies are impacted by global events and competitions. They clarified that businesses will conduct worldwide trade in order to increase sales, acquire resources, and lower risks. Companies can conduct their international business activities in a variety of ways. Service exports and imports (non-merchant international earnings such as service exports and service imports at which the supplier and

recipient of payments are recognized as service exporters and the recipient payer is recognized as service importer) and merchandise exports and imports.

2.1.2. Export Marketing and Performance

Allaro (2011) in his study investigated that, the success or failure of a company/nation to sell its products in other nations' markets is referred to as export performance. The export marketing strategy and firm's capacity to implement the strategy influence the relationship between export performance and export ventures in the context of export ventures and its performance. The two issues that need to be evaluated are export performance and export marketing mix.

Beleska-Spasova, (2014) found that, according to the resource-based paradigm, a firm's export performance is influenced by its internal operations. Numerous authors demonstrate the inconsistent nature of studies on the impact of marketing strategy and other factors on export performance. Moghaddam and Foroughi, (2012) also investigated that, exporting helps a country's economy grow. The globe depends heavily on export, which provides numerous advantages for businesses and nations. Export is a crucial strategy for a company's survival or growth, and companies can get a competitive edge in global marketplaces, which will boost their export performance both now and in the future.

Manoj (2010) in his study identified that, the major determinant factors effecting export marketing are economic factors, political factors, consumer factors, geographic factors, social factors, technological factors, and trade factors that include the channel of distribution, the availability of distributors, and the services provided by the distributors.

Johansson, (2009) according to this investigation, emerging markets include China, the Middle East, Russia, the newly democratic post-communist states, and developing nations. Many of the impoverished nations in Nigeria, Zambia, Tanzania, Pakistan, Vietnam, Nicaragua, and Guatemala are classified as typical developing countries. They are addressed here along with the newly democratic countries mostly because they have a significant lack of marketing infrastructure. They are defined primarily by low per capita income levels. Marketing becomes a kind of revolt against the established order in emerging markets where there is a conventional

dominance of producers over consumers, stressing people's mentality. It's still important to use smart marketing techniques to provide clients with high-quality goods and services.

2.1.3. An Overview of Soybean Marketing

Soybean is the earliest crop that humans have ever grown, according to history. Around 5000 years ago, a staple crop with significant commercial value, containing the amino acids required by the human body, was grown in East Asia, particularly in China. Compared to other grains legumes, which only contain about 20% protein, soybean has the highest concentration of protein at roughly 40%. Fish and beef both contain nearly half the protein found in soybeans, which are also high in calcium, phosphorus, and fibre and free of cholesterol (Jonas, *et al.*, 2008).

European countries looked to their colonies in Africa as prospective sites for soybean farming. The most active participants were the English colonies. Soybeans were barely introduced to the numerous French possessions. In Nigeria and the Belgian Congo, soybeans were being raised on a modest scale by 1908. After thorough examination of all British Governmental Experiment Farms in Africa, it was discovered in 1910 that the colonies could successfully compete with imported Manchurian soybeans given the current demand and pricing (Ibid).

According to Susanto, (2006) typically, soybean is categorized as an oilseed, which is the main raw material used to produce oil and meal. These two main goods are where all of its demand comes from. For every 60-pound bushel of soybeans, 47–48 pounds of meal and 10.5–11 pounds of oil are produced. The soybean is cleaned, cracked, dehaulled, and rolled into flakes during the primary processing. In addition, lecithin, a medicinal coating, can be made from soybean oil through extraction.

One of the biggest and most important grain sectors worldwide, the soybean sector has seen tremendous recent growth. In the past forty years, the production of soybeans has increased globally by a factor of five. According to forecasts, this will continue as long as the sectors of food, feed, and fuel experience rising demand. Current global supply and demand projections for soy commodities, primarily for use in food, animal feed, and industry, have an impact on traditional soybean markets. In comparison to global commodity markets, soy foods are often slightly more expensive for human consumption. The size of North American and South

American soybean crops and the supply: demand surplus ratio has a significant impact on the global commodities price system. The other heavy influence on world commodity pricing is the increasing demand from China, which is currently importing over 1 million metric ton per week. This is predominantly from the United States but can be diverted to South American supply by global traders as is required (MGee, 2011).

The entire global production of soybeans, valued at 45,027,521, was 91,021,479 million MT. In terms of importance, the top three global producers are the United States of America, Brazil, and Argentina. According to Hailu and Kelemu (2014), South Africa produced 22.4 million dollars and exported 42.5 million tons of soybeans to other countries. Since there were no records of soybean exports prior to 2004, Ethiopia very recently began exporting soybeans. Ethiopia solely exports soybean grain; no other soy bean-related processed goods have yet to begin leaving the country. In 2011, Ethiopia exported 220,000 tons of soybeans for \$115,744 million (ERCA, 2014).

2.2. Empirical Literature Review

Mershaye Kurabachew (2019) in his study found that the oilseed exporter faces significant obstacles from both internal and external forces. The researcher came to the conclusion that, among the explanatory variables included in the Model Company, production, market, and macroeconomic factor aside from industrial factor were the most significant challenges to affect the oilseed export performance. These challenges were divided into internal factors and external factors. Additionally, company, production, and industry factors have a negative and substantial relationship with the performance of oilseed exports among the variables (company, production, market, and macroeconomic and industry factors).

Mengistu Gebrehiwot (2018) in his study findings implied that the foreign price level, production, quality of the product and real effective exchange rate were found to be positively and significantly affecting the export performance. Whereas, and rural feeder road were found not to be as such influential determinant factor to deter performance of oilseeds and pulse exporting in his study area.

Samuel Rega (2016) found that the volume and sales of Ethiopian soybean exports are inconsistent and hampered by several export marketing mix strategy issues. among the most significant difficulties that were categorized as product marketing strategy, pricing marketing strategy, location marketing strategy, and promotion marketing strategy. The marketing mix strategy had a moderate impact on exporters. Exporters with more experience performed better than less experienced exporters.

LenchoIdris (2022) in his study revealed that the performance of Ethiopia's oil seed exports was found to increase by about 0.207%, 1.98%, 0.424%, 1.93%, 1.02%, 0.188%, and 1.314%, respectively, with a 1% decrease in weighted distance and a 1% increase in lagged EOSE, the real GDP of Ethiopia, population of importing countries, and openness to trade of both Ethiopia and importing countries. Additionally, it was discovered that the continents of Asia, Europe, and then Africa had the largest levels of oil seed export potential. In order to improve the Ethiopia's oil seed export performance, the analysis also suggested measures that would encourage foreign direct investment, supply capacity, trade liberalization, and relatively lower transportation costs.

MaristelaPaula, et al, (2018)his study results indicated that the when compared to other exporters, Brazilian soybean exports throughout the studied period revealed comparative advantages. According to the Constant Market Share, the expansion of global trade was the primary driver of soybean growth. Brazil exhibits excellent standards of efficiency and is competitive in the soy market. Brazil uses resources that are comparable to those of major producers and has the ability to participate more due to its technological advancements, productivity, and territorial expansion, which would enhance production.

HailegiorgisBiramoAllaro (2011) the findings of this study reveal that the country needs to break away from its long lasting heavily depends on traditional export commodities for which it is a marginal exporter and thus a price taker. His study findings also show that the estimated coefficients of real output and nominal exchange rate are statistically significant. This discloses that real output and nominal exchange rate have positive brunt on the export performance of oilseeds in Ethiopia.

Asliyana and Setyowati (2022) in his study analyzed the magnitude of the impact of output, land area, exchange rates, and the price of CPO on Indonesia's exports of crude palm oil from 1990 to 2020. The type of data used was secondary data with time series spanning the years 1990 to 2020, and the analytical technique employed was multiple linear regression with Ordinary Least Square (OLS). The findings of the simultaneous test (F test) demonstrated that land area, production, exchange rates, and international CPO prices all had an impact on the amount of CPO exported from Indonesia. The results of the partial test (t-test) showed that the volume of Crude Palm Oil exported from Indonesia was considerably impacted by international CPO prices, exchange rates, production, and land area.

FiromsaMershaTekalign and DegyeGoshu (2021) in their study revealed that over the long term, it has been discovered that the gross domestic product, oilseed price, and exchange rate have a positive and significant impact on oilseeds export performance, while the consumer price index has a negative impact. Macroeconomic policy reforms aimed at boosting GDP growth, controlling upward price movement, and allowing further nominal depreciation of local currency should place a priority on maintaining a stable exchange rate policy in order to avoid the exchange rate risk associated with the assets. This will improve Ethiopia's oilseeds export performance.

Tobias Sytsma and Wesley W. Wilson (2021) in their study also investigated and found that the cost of transportation and port characteristics are significant factors in both the import demand and export supply assessments, we find. The findings are then used to assess how trade has changed in response to changes in transportation costs and port characteristics. The conclusions of the importer model are only applicable to maritime movements. According to the exporter model, ports on the West coast are more likely to be selected than ports in the Northeast, and ports with a barge option are more likely to be selected than ports without a barge option. The outcomes are also used to gauge how sensitive decisions are to variations in rates and port characteristics.

Murad M. Baker and BeyanA.Yuya (2020) conducted a study on export performance and the estimated results revealed that Ethiopia's sesame export performance rises by 1.63% as real gross domestic product of importing nation's rises by 1%. Based on the findings, policymakers must implement measures to lower transportation costs by enhancing the sector's infrastructure for

shipments and negotiating free trade agreements with faraway nations. To make Ethiopian products more competitive in international markets, the government should encourage the private sector to expand its product offerings and raise the quality of its output.

HaregeweyinAmsale (2017)in his study indicated that there is an increased demand for organic oilseeds in general and sesame seeds in particular in the global market arena. Among other sesame exporting nations, Ethiopian sesame seed continues to be in high demand. Production quality, price volatility on the global market, and infrastructure-related issues are the sector's three main challenges. A further problem for the sector's development is the absence of trade protection, an inefficient work flow among all relevant agencies, a lack of accurate market data, and excessive price bidding on the Ethiopian commodity exchange.

MesseretAbebe (2020) in his study considered the variables likeinflation, exchange rate, trade openness, interest rate and production volume were the independent variable whereas export performance is the dependent variable. Using SPSS, multiple regressions, the distribution error test, and the multicollinearity test were used to assess the data containing these variables. While the remaining four variables inflation, interest rates, currency rates, and production volumewere discovered to have an impact on sesame export performance, trade openness was not found to be a major determinant. The results of the regression analysis demonstrate that the exchange rate has a positive and considerable impact on the profitability of exports.

CosmasWacal (2021) in his study revealed the sesame seed production and area harvested generally increased from 1996 to 2007 but significantly decreased between 2008 and 2018. The literature review also revealed that while the export quantities and values were low, they gradually increased from 2009 to 2016. The decreased production between 2008 and 2016 could have been due to challenges such as pests and diseases, loss of soil fertility, prolonged drought, poor agronomic practices, poor yielding varieties, and lack of access to credit.

2.3. Conceptual Framework

Based on the theoretical and empirical literatures discussed in the above-mentioned paragraphs, we have seen that soybean export performance is determined by a multitude of factors that can reasonably be grouped into different categories of factors that are needed to be understood. To line up the conceptual framework with the research objectives, the relationship between the dependent variable and independent variables is presented in the following figure.

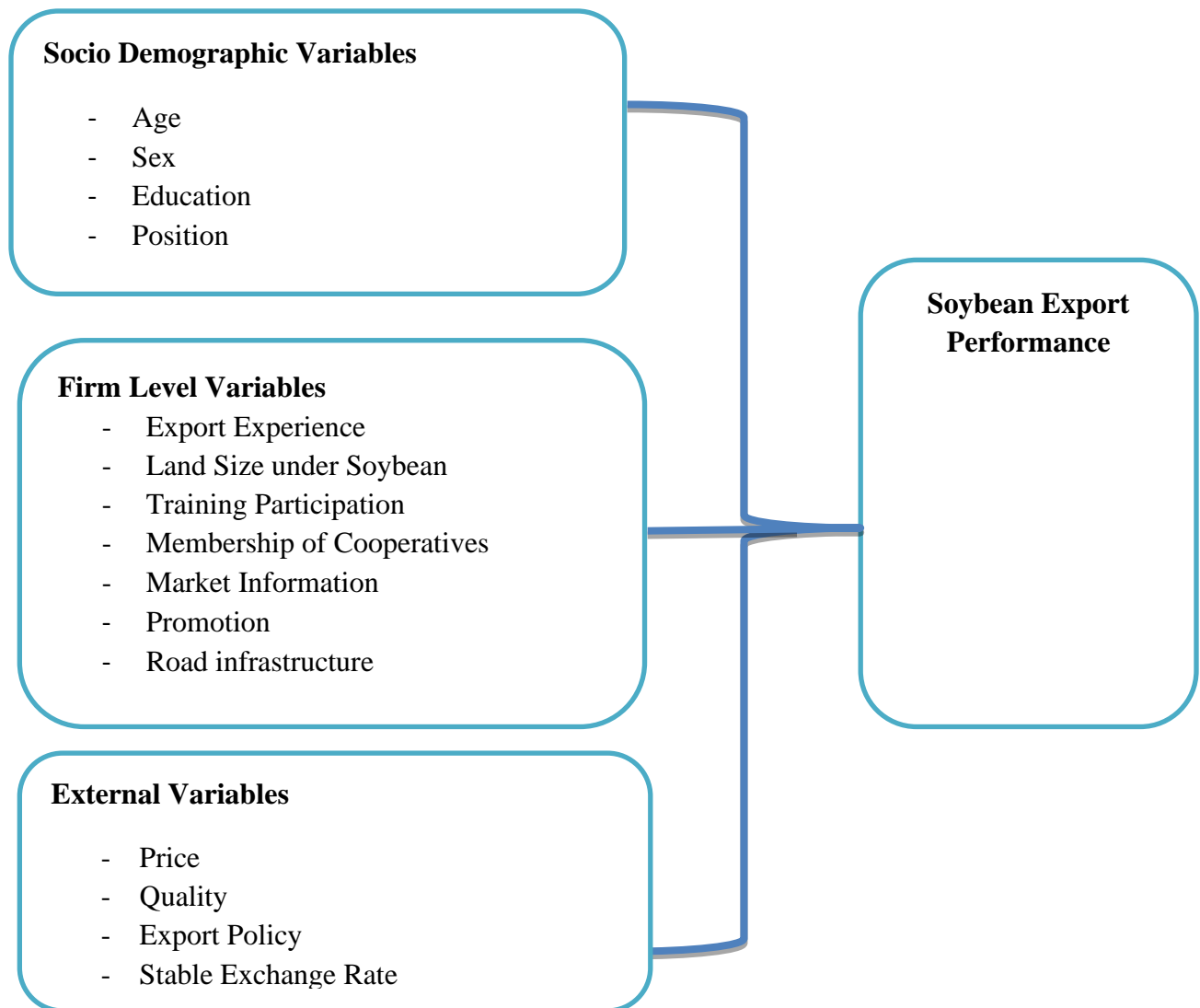


Figure 2.1 Conceptual framework developed by the researcher, /2023/

CHAPTER THREE: RESEARCH METHODOLOGY

This section will discuss the study area and the methodological approaches that the researcher employed to address the study objectives. This section will describe the research design, which is the overall plan for conducting the study. This includes the sampling procedure, data type, data sources and collection instruments, data analysis and interpretation methods, variables, and model specification.

3.1. Research Design

This study used survey research design since it is based on survey as a unit of analysis. Survey research design is a research design that blends quantitative and qualitative data to provide with relevant and accurate information. Therefore, cross-sectional survey research was conducted to examine soybean export performance in the study area and to identify determinant factors among exporters in Ethiopia.

3.2. Research Approach

This study used a mixed research approach, because it is important to address problems of the study from different perspectives. Mixed research approach enables the researcher conceptually and analytically to integrate qualitative research and qualitative data with traditional epidemiological and quantitative methods of research to facilitate translation. Therefore, a mixed research approach was conducted to investigate soybean export performance in the study area.

3.3. Data source, Type and Instruments

The study used both primary and secondary data sources using different data collection instruments that would enable to achieve the objectives of this study. The primary data was collected from sample exporting firms and key informants in the study area. The study used structured questionnaire and key informant interview guidelines for data collection.

Structured questionnaire was prepared and translated to “Amharic” which is the national working language in the study area. This technique was used to collect cross sectional data from primary sources. Key informant interview was also held with senior experts and supervisors that enable the researcher to get qualitative data on soybean export performance.

Secondary sources of data were the other source of data from published and unpublished materials. Manuals, journals, sector reports, previous researches and regulations in relation with this study were reviewed.

3.4. Study Population and Sampling Frame

The study area Ethiopia has been selected purposively; because it is a key business area in the country and it plays a potential role in foreign currency generating. To stick with good statistical validity, the study used a representative sample size. The target population for this study is Soybean exporters in Ethiopia in 2021 Gregorian calendar. According to ECX database, there was 340 Soybean exporters and proposed to select the representative sample size based on the proportional formula (MoT, 2021). Thus, 340Soybean exporters are used as sample frame.

3.4.1. Sample Size and Sampling Techniques

Probability sampling technique has been used to select the samples and non-probability sampling techniques were used to select the study area in this study. Simple random sampling was used from probability sampling techniques. According to Yamane (1967) a formula to calculate sample sizes assuming a 95% confidence interval and $p = 0.05$ level.

$$n = \frac{N}{1+N(e)^2} \quad n = \frac{340}{1+340(0.05)^2} = 178$$

Where ‘n’ is the sample size, ‘N’ indicates the size of population, and ‘e’ is the level of accuracy. Therefore, based on the sample size formula the sample size of the study is made to be 178.

3.5. Methods of Data Analysis

The collected data was analyzed by using qualitative and quantitative methods. The researcher used qualitative analysis to examine the results of the key informant interviews and some of the responses to the open-ended questions on the questionnaire. It was presented in the form of narrations and statements to support different findings of the study. On the other hand, the descriptive statistics were presented as frequency, percentage, tables, mean and standard deviation to describe the characteristics of respondents.

Inferential statistics was used to understand the determinants of soybean export performance. Multiple linear regression models were employed to estimate the level of determination of independent variables on the dependent variable soybean export performance. Then the collected data was entered, cleaned and analyzed using STATA data analysis tool.

3.6. Model Specification

The dependent variable, soybean export performance in this study was measured using annual export income in USD. Soybean export income is continuous variable, best measured in terms of annual export size. Therefore, since the dependent variable in this case is a continuous variable and expected to be a linear function of the variables of the study, multiple linear regression model using the least square estimation will be used to identify the determinant factors on soybean export income performance. According to Gujarati (2004) the multiple linear regression model can be specified as:

$$Y = \beta_0 + \beta_1x_1 + \beta_2x_2 + \beta_3x_3 \dots \beta_nX_n + e_i \dots \dots \dots (1)$$

Where:

Y = predicted variable, β_0 = Constant, $\beta_1, \beta_2, \beta_3 \dots \beta_n$ = parameters of the x predictor $x_1 - x_n$: are the dependent variables of the model and e_i = error term.

3.7. Reliability and Validity of the Instruments

The researcher tries to ensure the reliability of the questionnaires by having them reviewed by a group of academics multiple times. The academics provided feedback and suggestions, which the researcher used to improve the questionnaires. To ensure the validity of the questionnaires, the researcher will design them based on previous studies' questionnaires, a review of the relevant literature, and the objective realities of the study area. Additionally, the researcher will conduct a pilot test with a sample group of respondents to refine the methodology before administering the final questionnaires. The structured questionnaires were tested on potential respondents to make the data collecting instruments objective, relevant, suitable to the problem and reliable.

3.8. Ethical Considerations

The researcher made sure that the data collection process was ethical by obtaining written consent from the participants. The researcher followed ethical guidelines throughout the data collection process. The researcher obtained written consent from all participants, informed them about the purpose of the study, and secured their willingness to participate before filling out the questionnaire or participating in the key informant interview. The researcher also maintained the confidentiality of the identity of each participant.

CHAPTER FOUR: RESULT AND DISCUSSION

This chapter deals with results, discussions and interpretations of the data collected through structured questionnaire, key informant interview and the secondary data sources. The first part of this chapter presents descriptive statistics on the characteristics of the respondents in the study areas, followed by the econometric results of the estimated model on soybean export income, which are then discussed in relation to the findings of previous studies.

4.1. Results of Descriptive Statistics

4.1.1. Demographic and Socio Economic Characteristics

The study surveyed a total of 168 sample respondents of currently active Soybean exporting firms through structured questionnaires which makes the response rate for the study to be 95% from the total expected sample size. The results presented in this study are based on this number of sample respondents from the study area.

Looking first to the sex of respondents, the estimated result on the demographic and socio-economic characteristics of the respondents, as presented in table 4.1 the highest proportion in this study was contributed by male respondents which makes (95.83%) of the total sample, while female respondents has a lesser contribution (4.17%). The resulting data from respondents also gives a clue that the majority of managers and chief executive officers are males in the Soybean exporting firms in the study area.

The estimated result on educational status of the respondents indicate that (40.48%) and (10.12%) of the study participants have an educational status of first degree and master's degree respectively. Further, (20.24%) and (29.17%) of the respondents were diploma and high school complete below level of education respectively. The resulting distribution indicates that most of the respondents were degree holders followed by diploma. This is partly because of the expansion of access to education in the study area and employees commitment to professional development. On the other hand most of the entrepreneurs are not progressive in education, since they were spending most of their time in doing business at their young age.

Table 4.1: Socio-demographic distribution of respondents

Variable	Freq.	Percent
Sex		
Female	7	4.17
Male	161	95.83
Educational status		
School Com and below	49	29.17
Diploma	34	20.24
First Degree	68	40.48
MSC and Above	17	10.12
Position		
CEO/Manager	93	55.36
Functional Manager	70	41.67
Other	5	2.98
Total	168	100

Source: Field Survey, 2023

Further, the descriptive statistics result show that most of the respondents were firm chief executive officers or managers (55.36%) followed by functional managers contributing (41.67%) of the respondents. On the other hand very few respondents (2.98%) were other supervisors who are delegated by the chief executive manager.

Table 4.2: Distribution of respondents by age

Variable	Obs	Mean	Std. Dev.	Min	Max
Age	168	38.48214	7.70875	29	63

Source: Field Survey, 2023

The result in table 4.2 also shows that, the average age was 38.48 years with standard deviation of 7.70 from the mean age of the respondents. The result show that most of the respondents were adults given the mean value of age with its average variation. When the age variation is considered the respondents have a huge difference in their age where the minimum age was 29

years while the maximum respondent is aged 63. The age gap among respondents enables to better understand the export performance of Soybean exporters.

4.1.2. Firm Level and Domestic Characteristics

The descriptive statistics result in table 4.3 shows that, the average experience in exporting Soybean was 12.16 years with standard deviation of 2.83 from the mean experience of the exporting firms. The result indicated that most of the exporting firms were somewhat experienced given the mean value of export experience with its average variation. When the experience variation is considered the respondents have a moderate difference in their experience where the minimum experience was 5 years while the maximum experience was 16. The wide gap in experience between exporting firms enables to understand the Soybean export performance.

Table 4.3: Export experience and land size distribution of respondents

Variable	Obs	Mean	Std. Dev.	Min	Max
Experience	168	12.16071	2.83758	5	16
land size	168	162.3869	117.7608	30	500

Source: Field Survey, 2023

The result also shows that, the average land size under Soybean was 162.38 hectare with standard deviation of 117.76 from the mean land size. The result indicated that most of the exporting firms were with moderate Soybean farm land size given the mean value of land size with its average variation. When the land size variation is considered the respondents have a large difference in their land size where the minimum land size was 30 hectare while the maximum land size was 500 hectare. The wide gap in land size between Soybean exporting firms enables to understand the Soybean export performance.

The descriptive statistics result in table 4.4 shows that, most of the respondents in Soybean exporters (55.36%) have no access to training on export and international trade and it is leaved to them to do by themselves. On the other hand (44.64%) of respondents in Soybean exporting firms have trainings in export and international marketing.

The descriptive statistics result also shows that, (48.21%) of the Soybean exporting firms are members of the cooperative association. On the other hand (51.79%) of respondents in Soybean exporting firms respond that their firm is not a member of the cooperative association. Thus, the result indicates that most of the Soybean exporters are operating independently and they are not enjoying the benefits of cooperatives and incentives gained from being part of that system.

Table 4.4: Training, cooperative membership and market information distribution

Training	Freq.	Percent
No	93	55.36
Yes	75	44.64
Coop_membership		
No	87	51.79
Yes	81	48.21
Mkt_inform		
Mostly	109	64.88
not at all	31	18.45
Rarely	28	16.67
Promotion		
No	97	57.74
Yes	71	42.26
Total	168	100

Source: Field Survey, 2023

From the descriptive statistics looking in to the market information, table 4.4 indicates that most of the Soybean exporting firms (64.88) was mostly gain market information, followed by not at all (18.45%). The rest (16.67%) of the respondents have rare access to market information in the study area. The descriptive statistics result shows that most of the Soybean exporters are operating by having market information, which enables their export performance in the international market.

Further, the result shows that, most of the respondents from Soybean exporting firms (57.74%) have no promotion to their export product and it is performed directly to the market without promotion works. On the other hand (42.26%) of the Soybean exporting firms are promoting their product in different ways and modalities.

Table 4.5: Road infrastructure characteristics

Road infrastructure	Freq.	Percent
No	92	54.76
Yes	76	45.24
Total	168	100

Source: Field Survey, 2023

Furthermore, the descriptive statistics shows that, most of (54.76%) the respondents from Soybean exporting firms have no access to rural road infrastructure to transport their product and agricultural inputs to their Soybean farm. On the other hand (45.24%) of the respondents have access to rural road infrastructure to their Soybean farm.

4.1.3. External and International Related Characteristics

The descriptive statistics result shows that, (38.69%) of the Soybean exporting firms agree on the price of Soybean followed by strongly agree, which is contributing (33.93%) in the study period. In other words (16.07%) and (10.12%) of the Soybean exporting firms disagree and strongly disagree on the Soybean price in the study period. This category enables the researcher to examine the Soybean exporting firm's performance to generate export income.

Table 4.6: Price, quality and exchange stability characteristics

Intern. price	Freq.	Percent
strongly agree	57	33.93
Agree	65	38.69
Neutral	2	1.19
disagree	27	16.07
strongly disagree	17	10.12
Quality_soyabean		
very good	68	40.48
Good	14	8.33
Neutral	3	1.79
Poor	47	27.98
very poor	36	21.43
Stable exchange rate		
strongly agree	57	33.93
agree	34	20.24
neutral	8	4.76
disagree	36	21.43
strongly disagree	33	19.64
Total	168	100

Source: Field Survey, 2023

Further, the estimated result of this study indicates that (40.48%) and (8.33%) of the respondents explained that the quality of Soybean was very good and good respectively. On the other hand (27.98%) and (21.43%) of the Soybean exporting firms were explained as poor and very poor Soybean quality respectively. The rest (1.79%) of the respondents were in a neutral category to respond on the quality of Soybean.

Furthermore, the descriptive statistics result of this study indicates that (33.93%) and (20.24%) of the respondents strongly agree and agree on the exchange stability respectively. On the other hand (21.43%) and (19.64%) of the respondents disagree and strongly disagree on the exchange rate stability respectively. The rest (4.76%) of the respondents were neutral to respond on the stability of exchange rate in the study period.

Table 4.7: Export income characteristics

Variable	Obs.	Mean.	Std. Dev.	Min.	Max.
Export Income	168	199,416.50	97,712.49	10,707.48	498,339.00

Source: Field Survey, 2023

Table 4.7 shows that, the mean annual export income from exporting Soybean was 199,416.50 USD with standard deviation of 97,712.49 USD from the mean export income. The result indicated that most of the Soybean exporting firms are generating good foreign currency given the mean value of Soybean export income with its average variation. When the export income variation is considered the respondents have a difference in their income where the minimum export income was 10,707.48 USD while the maximum export income was 498,339.00 USD. The gap in export income between Soybean exporting firms enables to better understand the export performance of firms.

4.2. Results of Inferential Statistics

4.2.1. Model Fitness and Assumptions

In this study, the determinants of Soybean export performance were measured in terms of the annual export income. Therefore, multiple linear regression models were run to examine the determinants of export performance in Ethiopia. The fitness of the model to describe the data was assessed through different methodologies as presented here under. First the assumption of OLS, normality, was assessed through histograms looking skewness and kurtosis values.

The fitness of the model was assessed by looking on the R^2 and F-statistics. The resulting R^2 value shows that the predictors in the model have 68% ability to describe the outcome variable which is very good in a cross-sectional data. Moreover, the F-statistics value of 17.52 with a p-value of 0.000 significant levels at 1% level of significance shows that jointly the explanatory variables have the power to explain the outcome variable annual export income from Soybean and their coefficient is significantly different from zero.

Getting further, no multicollinearity is another assumption of Ordinary Least Square Regression. To this end, partial correlation of independent variables and variance inflation factor (VIF) were checked and it was 2.70. The result indicated that the independent variables have a variance

inflation factor of below 10 which indicate that multicollinearity was not a problem. In addition, suspecting the problem of heteroscedasticity robust option was used to enable to avoid the prevalence of this problem and enhance the robustness of estimated coefficients.

4.2.2. Determinants of Soybean Export Performance

The estimated econometrics result shows that land size under Soybean has a significant and positive effect on Soybean export performance. This was significant at 5% level of significance. The result indicated that an increase in land size under Soybean would increase the Soybean export performance by 172 times. This implies that the exporter with large land size tend to increase their Soybean export than those Soybean exporters with small land size. This may be attributed to the fact that, large land size under Soybean leads them to good export performance that enables them to generate more foreign currency. It may also be because of increased production and reliance on own production to improve Soybean export performance. The result is in line with the findings of MurniAsliyana and EniSetyowati (2022); AgegnehuBelayneh, EngidaYeshe and KusseGemeyida (2022), argue that land size under Soybean has a significant relationship with Soybean export performance.

The regression result also shows that training on export and international marketing has a significant and positive effect on Soybean export performance in this study. It was significant at 5% level of significance. This indicated that access to training would increase the Soybean export performance by 34,723 times. The finding implies that exporter with access to training tend to increase their Soybean export performance than those with no access to training in this study. This may be attributed to the awareness and knowledge of the nature and context of Soybean exporting and international marketing as well as knowing competitors in the international market. The result is in line with the findings of AgegnehuBelayneh, EngidaYeshe and KusseGemeyida (2022) they argue that training on export marketing and international trade has a significant effect on the Soybean export performance of firms.

Table 4.8: Determinants of Soybean export performance

Linear regression	Number of obs	=	168
	F(16, 151)	=	17.52
	Prob> F	=	0.000
	R-squared	=	0.6866

Robust					
ExportIncome	Coef.	Std. Err.	t	P>t	[95% Conf.
land_size	172.1571	54.66394	3.15	0.002	64.15219
Training	34723.66	15551.69	2.23	0.027	3996.649
coop_membership	-17855.7	13468.39	-1.33	0.187	-44466.6
mkt_inforrmation					
not at all	13255.09	10931.1	1.21	0.227	-8342.57
rarely	12989.35	16822.99	0.77	0.441	-20249.5
Experiance	1857.292	2032.789	0.91	0.362	-2159.09
price_agreement	11181.27	5724.312	1.95	0.053	-128.824
Promotion	5824.409	10987.59	0.53	0.597	-15884.9
Infrastructure	17481.41	10500.21	1.66	0.098	-3264.89
policy_support					
Neutral	16424.42	13120.43	1.25	0.213	-9498.9
Poor	-10811.6	15758.66	-0.69	0.494	-41947.5
quality_soyabean					
Good	-71966.2	18406.88	-3.91	0.000	-108335
Neutral	-8784.37	29142.54	-0.3	0.764	-66364.2
Poor	-53692.8	19163.64	-2.8	0.006	-91556.3
very poor	-34803	21931.31	-1.59	0.115	-78134.9
stable_exchange	20840.38	6334.609	3.29	0.001	8324.469
_cons	76618.03	35365.37	2.17	0.032	6743.18

Source: Field Survey, 2023

Further, the regression result indicate that price of Soybean has a significant and positive effect on Soybean export performance in this study. It was significant at 5% level of significance. Thus, the result indicated that price would increase the Soybean export performance by 11,181 times. This implies that exporter agreement on the Soybean market price tend to increase Soybean export performance in the market. This may be attributed to the fact that the market fairness and reasonable Soybean price motivates the Soybean exporters to supply more products to the market. The result is in line with the findings of MengistuGebrehiwot (2018); FiromsaMershaTekalign and DegyeGoshu (2021) they argue that price has a significant effect on the Soybean export performance.

Moreover, looking to the quality of Soybean, the estimated multiple linear regression result shows that perception of Soybean quality (good and poor) affects the Soybean export performance in a negative direction, considering very good quality as a base category. The regression result indicated that moving from the base category very good quality to good and poor quality negatively affects the Soybean export performance, which is significant at 1%, and 5% level of confidence interval respectively. The negative direction may be attributed to the decreasing quality of Soybean (considering the very good quality as a base category) to poor quality production.

The predicted regression result indicted that holding other factors constant, going from very good to good Soybean quality decreases the Soybean export performance by 71,966 times. In addition, when the Soybean quality is going from very good to poor, the export performance decreases by 53,692 times. The result is in line with the findings of Murad M. Baker and Beyan A. Yuya (2020) they argue that quality production has a significant relationship with Soybean export performance.

Finally, the regression result show that the availability of stable exchange rate affects the Soybean export performance in a positive direction. Stable exchange rate increases the performance of Soybean export which is significant at 1% confidence interval. The result indicates that, the availability of stable exchange rate increases the performance of Soybean export by 20,840 times. The positive direction may be because of the stable and sufficient access to exchange that is essential for fulfilling export requirements.

The result is in line with the findings of HailegiorgisBiramoAllaro (2010); MurniAsliyana and EniSetyowati (2022); FiromsaMershaTekalign and DegyeGoshu (2021) they found and argued that the availability of stable exchange rate has a significant relationship with Soybean export performance.

CHAPTER FIVE: CONCLUSION AND RECOMMENDATIONS

5.1. Conclusion

As per the findings of the study, different determinant factors were identified as responsible for Soybean export performance in Ethiopia. To give conclusions about the factors determining the Soybean export performance, the researcher applied descriptive and inferential analysis results together. Also, the researcher focused on mean value of variables and percentage of the categorical response.

From the descriptive statistics of the study the result can conclude that, the mean annual Soybean export income was 199,416.50 USD with standard deviation of 97,712.49 USD from the mean annual Soybean export income.

The result indicated that females' managers share in the Soybean exporting firm is (4.17%), which is too low compared with males. The observed dominance of male is partly associated with the long time dominance of men in the leadership positions. Most of the respondents (40.48%) of the study participants were degree holders and (20.24%) of respondents were diploma holders. The average export experience of firms was 12.16 years, which indicates the young age of Soybean exporting sector in Ethiopia.

From the multiple linear regressions result the researcher can conclude that land size under Soybean, training, price and stable exchange rate has a significant and positive effect on the Soybean export performance of firms in Ethiopia. In other words the increase in these variables results in increases the Soybean export performance of firms. On the other hand quality of Soybean has a significant and negative effect on the dependent variable Soybean export performance of firms. The increments in this independent variable underestimated the Soybean export performance of firms.

5.2. Recommendations

Based on the conclusion reached above this study suggests the following recommendations as per the cross sectional study findings in the study area. Thus, the following actions are suggested for the Soybean exporters, the trade and regional integration sector actors and other stakeholders to improve the Soybean export performance in Ethiopia.

Integrated effort is needed among the governmental and sector associations as well as chamber of commerce with full involvement of the private sector actors to improve the current level of Soybean export performance in the study area.

The land coverage under Soybean should be enhanced to enable more production and export in the study area. Training and education should be enhanced among the management teams and international trade experts of the Soybean exporting firms, since it enhances export performance and competitiveness of Soybean exporting firms. Further, government support is essential to enable Soybean exporter's supply and compete in the international Soybean price. The government can also play its vital role in stabilizing the exchange rate to enable the performance of the Soybean exporters in Ethiopia. Therefore, the regulatory bodies of the government should play their role in stabilizing it and improve the Soybean export performance in the study area.

On the other hand the quality of Soybean should also be improved and maintained to reduce its negative effect on the Soybean export market competitiveness of firms. This should be done in all chains of Soybean production starting from farming, cultivation and storage as well as transportation to gain the right value from quality.

Recommendation for further research: Soybean export performance is usually not a onetime process to happen. Hence, it is better to consider time serious data in future studies rather than depending on cross-sectional data.

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ANNEXES

Addis Ababa University
College of Business and Economics
MSC Program in International Business (Import and Export Management)

Dear/Sir/Madam,

This is a structured questionnaire prepared to undertake a study entitled “Determinants of Soybean Export Performance in Ethiopia.

Dear respondent, I am BelaynehKassahun, a graduate student inInternational Business, Addis Ababa University. Currently, I am planning to undertake a research in order to complete the requirements for my MSC in International Business (Specialized in Import and Export Management) given by Addis Ababa University. The research is conducted purely for academic purpose and all the information given are treated as confidential and will not be used for other purposes. I also assure you that no personal identity will be disclosed to third parties. I am so grateful to you by giving reliable and appropriate data and information.

Thank you for your time and cooperation

Code -----

Date of interview -----

I. Structured Interview Questionnaire

1. Demographic and Socio-Economic Characteristics

S.No	Items	Options
1.1.	Sex of the respondent?	1. Male 2. Female
1.2.	Age of the respondent in years?	-----
1.3.	What is your level of educational?	1. High School & below 2. Diploma 3. First Degree 4. Master's Degree 5. PhD
1.4.	What is your position in the firm?	1. CEO/Manager 2. Functional Manager 3. Other Supervisor

2. Internal Firm Level Variables

S.No.	Items	Options
2.1.	What is your annual soybean export income in USD?	-----
2.2.	What is your firm export experience in years?	-----
2.3.	How much hectare of land do you have under Soybean?	-----
2.4.	Do you have training on export and international trade?	1.Yes 2.No

2.5.	Is your firm a member of cooperative association?	1. Yes 2. No
2.6.	How frequently get market information?	1. Most frequently 2. Frequently 3. Neutral 4. Rarely 5. Not at all
2.7.	Do you have a promotion mechanism for your product?	0. No 1. Yes
2.8.	Does your Soybean farm have access to rural road infrastructure?	0. No 1. Yes

3.

External Variables

S.No.	Items	Options
4.1.	Do you agree on the current price of Soybean in the export market?	1. Strongly agree 2. Agree 3. Neutral 4. Disagree 5. Strongly disagree
4.2.	Do you have access to exchange rate?	1. Yes 2. No
3.3.	How do you rate your satisfaction on government export policy support?	1. Very Good 2. Good

		3.	Neutral
		4.	Poor
		5.	Very Poor
3.4.	How do you rate the quality of Soybean product?	1	Very good
		2	Good
		3	Neutral
		4	Poor
		5	Very poor

Annex II. Key Informant Interview Guidelines

1. How do you explain the Soybeanexport sector?
2. What are the major Soybeanexport barriers in your business?
3. What type of government support do you get?

Thank you for your time!

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. sum Experience ExportIncome
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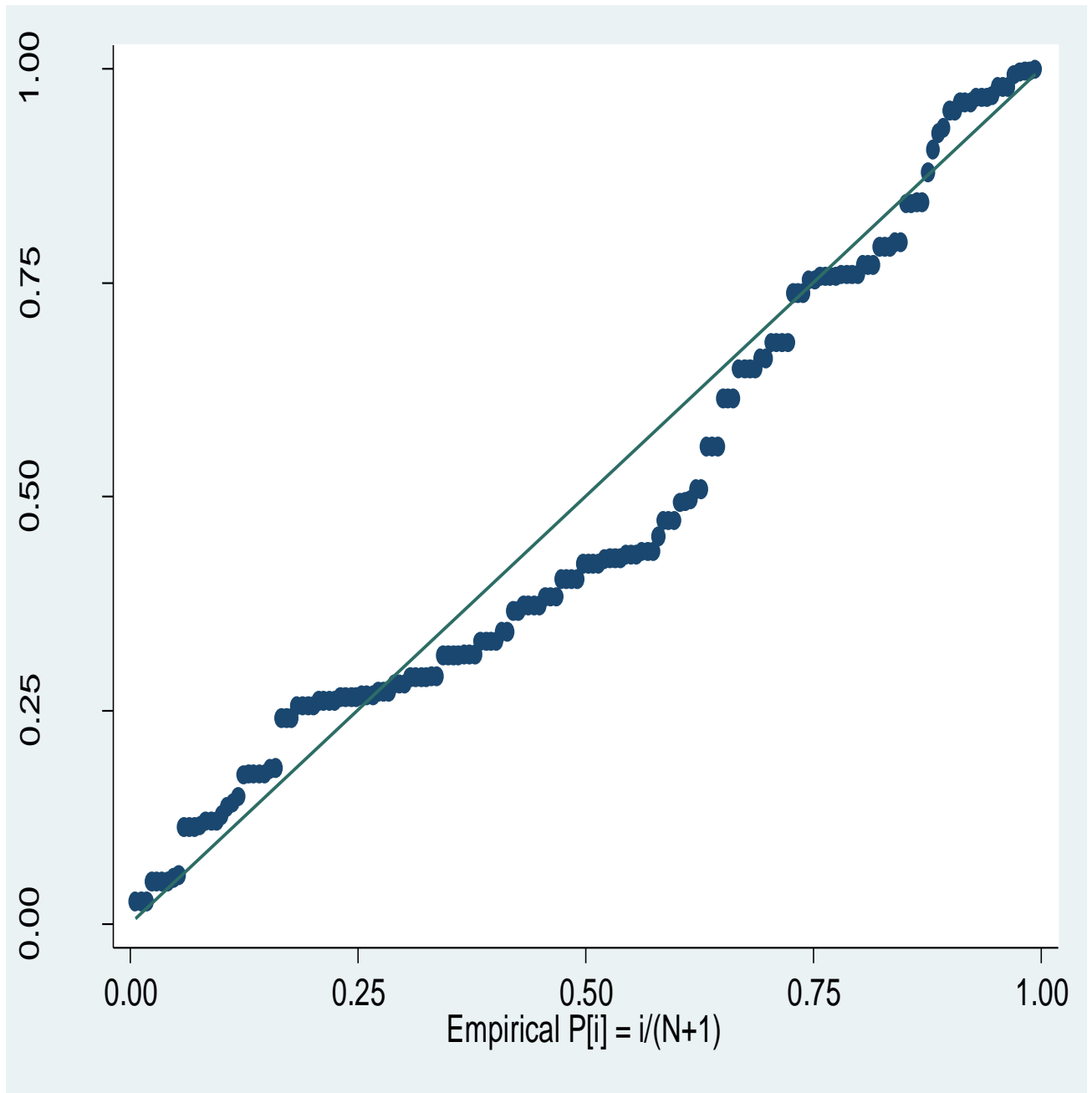
Variable	Obs	Mean	Std. Dev.	Min	Max
Experience	168	12.16071	2.83758	5	16
ExportIncome	168	199416.5	97712.49	10707.48	498339

Linear regression

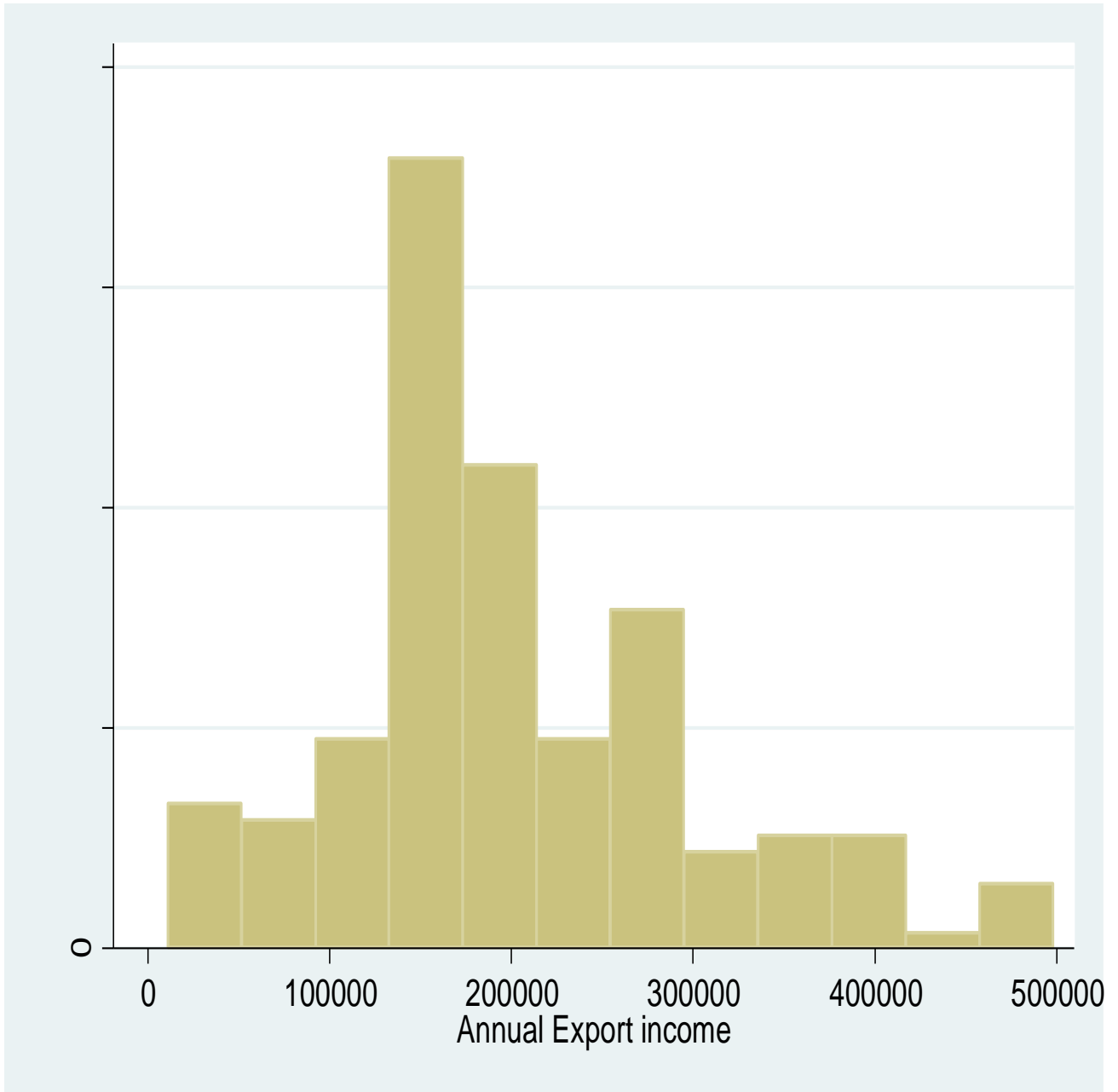
Number of obs = 168
 F(16, 151) = 17.52
 Prob > F = 0.0000
 R-squared = 0.6866
 Root MSE = 57530

ExportIncome	Robust					
	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
land_size	172.1571	54.66394	3.15	0.002	64.15219	280.1621
training	34723.66	15551.69	2.23	0.027	3996.649	65450.68
coop_membership	-17855.74	13468.39	-1.33	0.187	-44466.56	8755.083
mkt_information						
not at all	13255.09	10931.1	1.21	0.227	-8342.57	34852.75
rarely	12989.35	16822.99	0.77	0.441	-20249.49	46228.19
Experiance	1857.292	2032.789	0.91	0.362	-2159.09	5873.674
price_agreement	11181.27	5724.312	1.95	0.053	-128.8243	22491.35
promotion	5824.409	10987.59	0.53	0.597	-15884.87	27533.68
infrastructure	17481.41	10500.21	1.66	0.098	-3264.892	38227.71
policy_support						
Neutral	16424.42	13120.43	1.25	0.213	-9498.899	42347.75
Poor	-10811.55	15758.66	-0.69	0.494	-41947.5	20324.4
quality_soyabean						
good	-71966.22	18406.88	-3.91	0.000	-108334.5	-35597.93
neutral	-8784.372	29142.54	-0.30	0.764	-66364.17	48795.43
poor	-53692.84	19163.64	-2.80	0.006	-91556.33	-15829.35
very poor	-34803.02	21931.31	-1.59	0.115	-78134.89	8528.84
stable_exchange	20840.38	6334.609	3.29	0.001	8324.469	33356.3
_cons	76618.03	35365.37	2.17	0.032	6743.18	146492.9

. pnormExportIncome



. histExportIncome



. estat vif

Variable	VIF	1/VIF
land_size	1.55	0.646524
training	4.27	0.234213
coop_membe~p	2.91	0.344017
mkt_inforr~n		
2	1.11	0.902682
3	1.53	0.652267
Experiance	1.60	0.624954
price_agre~t	2.15	0.465461
promotion	1.95	0.513547
infrustruc~e	1.46	0.684449
policy_sup~t		
2	1.21	0.823350
3	3.74	0.267606
quality_so~n		
2	1.98	0.506016
3	1.49	0.669009
4	4.88	0.204947
5	5.08	0.196921
stable_exc~e	6.38	0.156795
Mean VIF	2.70	

