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Determinants of Export performance of Ethiopia’s top export Commodities a “Time Series Analysis”

A Thesis Submitted to the School of Graduate Studies of Addis Ababa
University in Partial Fulfillment of the Requirements for the Master of
Science in International Business (MSc)

By **Tesfatsion Dejene Mersha**

Advisor

Yohannes Workaferahu (Ph.D)

Addis Ababa University

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June, 2023

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Tesfatsion Dejene Mersha affirms that the thesis he wrote is his own particular creation and the result of his own labor. He appropriately cited each and every source of data he used for the project. This research project was not submitted to this university or any other higher education facility to fulfill the requirements for a degree, in whole or in part. Instead, it is described as

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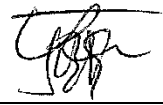
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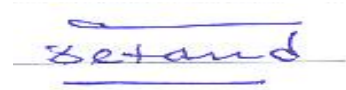
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Abstract

Export Enhancing foreign currency inflow and strengthening the export sector, which will have a favorable effect on all other sectors of the economy, can make the export sector the backbone of the economy and help stabilize it.. However, Ethiopia's economy has poor export performance, the export industry is dependent on simple and limited items, there is no market diversity, and product prices fluctuate. The main objective of the research is to investigate the broad-scale factors that influence Ethiopia's top export commodity export performance. The long-run and short-run models were estimated using a quantitative research strategy, more specifically the descriptive research method. In order to determine the long-term associations between the variables, the co-integration of the time series data was carried out using the ARDL approach. The analysis found that although the nation's export performance increased over time, this change was inadequate to stabilize the economy. The country's export activity is inconsistent, and as a result of this inconsistent export activity, the market is experiencing high levels of inflation and a scarcity of foreign currency. The research revealed that the Real Effect Exchange Rate (REER), Export Diversification, Market Size, Economic Openness (I XGDP), and Infrastructure variables had a positive and significant impact on the export performance of the nation in the long run economic activity. Long-term export performance is influenced by foreign direct investment (FDI) in a positive but not very significant way. The country's export performance is positively and considerably impacted in the short term by infrastructure and foreign direct investment.. It has been determined that the country's exports are insufficient to establish reliable sources of foreign currency inflow. A small number of basic agricultural items form the foundation of the export. Based on the findings, the study suggests that the nation work on export diversification, change the trend of exporting primary products by adding value to export products, change the focus to manufacturing and industrial sector market access facing new markets, use various economic integrations that have not been used effectively before that help the nation to trade with neighbors getting experience to enhance the export demand and to open the economy to strong foreign investment.

Keywords: *export performance, Real effect exchange rate, economic openness, Export diversification*

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Acronyms and List of Abbreviation

SSA	Sub Saharan Africa countries
WTO	World Trade Organization
GDP	Gross Domestic Product
FDI	Foreign direct investment
LDC	List developed countries
ELG	Export Led Growth
NBE	National Bank of Ethiopia
UNECA	United Nations Economic Commission for Africa
UNCTAD	United Nations Conference on Trade and Development
CSA	Central Statistics Agency
ARDL	Autoregressive Distributed Lag Model
CSA	Central Statistics Agency
IXGDP	Economic Openness
REER	Real Effect Exchange Rate
ITC	International Trade Centre
ADF	Augmented Dickey Fuller
ELG	Export-led growth

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Chapter one

1. Introduction

1.1 Back ground of the study

Businesses, countries, and the entire world can benefit greatly from exporting. The capacity to export is crucial for a company's survival or expansion since it gives it a competitive advantage in international markets and improves its export performance both now and in the future. Navarro, & Masanell, (2009).

It has been claimed that increasing exports strengthens production and demand relations, expands economies of scale, and increases efficiency and usefulness by utilizing more advanced technologies. That is to say, the results of education and the growth of human resources, as well as the creation of jobs and increased productivity. This provides demonstrable evidence in favor of export-led growth (ELG). Basu, S. (2000).

In today's world, the relationship between **export performance and economic growth** is becoming a major concern for the development of many countries. Due to the fact that it can encourage greater use of underutilized human and capital resources, increase foreign exchange revenues, concentrate investment in industries where it has a competitive advantage, and provide access to technological advancements, international trade can be a significant stimulus for rapid economic growth. UNCTAD. (2015).

In order to accomplish economic progress, enhancing export performance is particularly advantageous for developing nations like Ethiopia. In addition, Ethiopia has had tremendous foreign exchange requirements recently due to the growing need for capital goods imports as well as the country's need to meet the rising consumer demand for imported consumer products. Degefe, A. (2014).

African countries are facing development challenges which include small and fragmented economies with low incomes (Tumwebaze, 2015) & (Plecher, 2021). In the 2019 fiscal year, Ethiopia had a trade imbalance of around 11.79 billion dollars. A country's trade deficit is calculated as the difference between its total imports and exports. In this sense, the country is

considered to be in a trade deficit since the value of all its exports is lower than the cost of all its imports. (Awan & Mukhtar, 2019)

International commerce has a significant role in helping developing nations accomplish their development objectives. Exports play a big role in these countries' overall growth and are heavily dependent on them. The capacity to predict a country's overall development is largely related to its participation in international trade. Estimating foreign exchange gains is a necessary first step in creating development plans for some developing nations, particularly those where export trade is important. New profit opportunities emerge as an exporting country's exports rise, enabling them to not just supply inputs but also to gain from overseas economic benefits. Hultman, E. (1967)

Adebusuyi, A. (2004). The performance of their exports has been a problem for many Sub-Saharan African (SSA) nations. Their disproportionate reliance on exports of particular commodities can be blamed for their subpar performance. In many African countries, primary commodity exports make up 80–90% of total exports. Long-term price reductions, varying export quantities, worsening trade conditions, and the erratic nature of commodities markets all have a large negative influence on export revenues, impeding African economies' ability to prosper and eradicate poverty.

The export mix of Sub-Saharan Africa has remained largely steady throughout time, with a sizable amount of goods coming from the agricultural, food, fuel, mining, and metals sectors, while exports from the manufacturing and services sectors continue to be insignificant. In the framework of SSA's export efforts, the requirements for entering international markets have not been adequately addressed. Exports of particular agricultural raw materials fluctuate due to seasonality and dependency on imported inputs, such as equipment, herbicides, and fertilizers. Due to decreased input and equipment imports brought on by balance of payments crises, agricultural output and SSA's export performance may suffer Cleaver, G. (1985).

The agricultural sector accounts for the majority of Africa's economy, and the region has had great difficulty competing on the world market. Fundira, C. (2017). Continua. Despite the fact that it was said that agriculture was a crucial sector for eliminating poverty in Africa. Africa must feed itself and export excess to the global market, but despite this, its countries have had a trade deficit as a result of exporting less agricultural goods and buying them more frequently.

Institutional restrictions and a lack of appropriate infrastructure are the root causes. Mwangi, C. W. (2015).

Expansion and diversification of exports play a crucial role in driving economic growth. A thriving export sector aligns a country's economic incentives with its comparative advantage, resulting in efficient resource allocation. Successful exports lead to dynamic efficiency gains through economies of scale, adoption of best practices, exposure to international competition, increased productivity, higher wages, and job creation (Abuka, 2014).

There is no doubt that manufacturing exports remain one of the most powerful engines for economic growth. It acts as a catalyst to transform the economic structure of countries, from simple, slow-growing and low-value activities to more productive activities that enjoy greater margins driven by technology and having higher growth prospects (Albaledjo, 2003).

The country's export performance is significantly influenced by its exchange rate regime, particularly the actual exchange rate. Various studies have demonstrated that as the country's export prices decline concerning world prices, demand for the countries exports rises. The devaluation of its currency against other currencies, particularly the dollar, reduces the cost of its exports on the worldwide market. For example, (Shaik, & Gona, .2021). Discovered that as India's export prices fell, demand for its commodities surged. They also stated that the appreciation of the Indian rupee harmed Indian exports at one point.

1.2 Statement of the problem

Ethiopia's economy is founded on dependent on exporting primary agricultural commodities, then importing those exported inputs as rich countries turned to output, as most poor nations lack the ability to compete with wealthy countries on the market. A nation's ability to export goods and services is a key factor in its economic development since it increases employment opportunities, production capacity, income, and the transfer of knowledge and technology from a host nation to the nation's own.

Digafe, A. (2014). Ethiopia, like many other sub-Saharan African countries, primarily relies on agricultural exports, with limited industrial products. For years, Ethiopia's export market has been dominated by a small number of agricultural products, mainly concentrated in Asian and European countries. Although Ethiopia has the potential to produce and export various

agricultural commodities such as flowers, fruits, and vegetables, these have not yet become significant sources of foreign revenue for the nation

Since the economy is focused on importing commodities from industrialized countries, its concentration is on exporting primary agricultural commodities because the manufacturing and industrial sectors are still in their infancy and do not play a sizable part in the export sector of the economy. As a consequence, when countries participate in cross-border commerce, they face intense market competition, making it hard for developing countries like Ethiopia to compete.

With a relatively low share of exports from the manufacturing and services sectors and high shares from all other export categories (agriculture, food, fuel, and ores and metals), the composition of exports from sub-Saharan Africa has remained largely stable over time. However, a detailed examination of export activity in SSA is not yet diversified as the condition for access to global markets. UNECA. (2021).

The external influences on Ethiopia's economy are not very great. The nation has a relatively high level of protectionism, a limited degree of openness to foreign trade, and a lack of experience by domestic enterprises in exporting finished items in place of primary agricultural commodities.

Ethiopia is currently dealing with a foreign currency shortage, which is driving up the cost of imported goods and services and driving up market prices. Because Ethiopia's economy is largely dependent on imports, the high inflation rate has deterred investment and decreased economic activity, Job losses and a drop in living standards.

Ethiopia faces significant amount of foreign exchange shortage and debt burden have been caused by the ongoing trade deficit over the past 20 years, as well as the necessity to borrow to finance it. For instance, the debt to GDP ratio was 55.43% in 2020. World Bank. (2021).

In Ethiopia, the export sector primarily consists of a small number of primary goods, particularly agricultural products like coffee, oilseeds, and pulses. These agricultural products account for more than half of the country's total export value National Bank of Ethiopia. (2020).

Due to weak infrastructure, which leads to high transportation costs and a small market access that makes it challenging to attract investment from larger markets, the country has resources that are not being used as a source of income.

Ethiopia is a landlocked country with poor infrastructure, undeveloped economies, and small marketplaces. The amount of production is very depressing given that nations have not utilized their potential for using natural resources to their fullest extent. World Bank. (2019).

Infrastructure is one of the key elements influencing a country's ability to deliver its exports. The majority of African nations are notorious for having inadequate transportation systems, which is a significant impediment to trade, competitiveness, and sustainable development. Bacchetta, M. (2007).

The components that affect export performance have been the subject of numerous studies. It has been investigated how a particular primary agricultural commodity and export success relate. The great majority of research on export performance that use time series analysis don't look at enough years of data to thoroughly understand the problem. A Studies on export performance usually concentrate on specific agricultural commodities. Years of inquiry by the researcher have not led to a satisfactory explanation for the phenomenon.

Although there are many thesis studies on export performance, most of them don't produce the same outcomes, which refutes the notion that the field has been overworked. In addition, even though there is a wealth of literature and thesis on export performance, this does not indicate that researchers should stop their research because economic variables are dynamic and change over time, necessitating ongoing study.

Using information from a 35-year time series, the top 10 export commodities, their determinants, and other details were examined. Increasing Ethiopian exports, reversing the tendency of exporting primary goods, and sending more commodities abroad are the objectives of this thesis. The improvement of Ethiopian exports, how to change the trend of exporting primary goods, and how to expand the quantity of commodities exported abroad are the main focus of this thesis. Although this is the case, the size of the export market has not yet been assessed in the literature.

It is significant to remember that a variety of factors influence Ethiopia's export success. African commerce is too tiny, but the trade regime also trades the wrong things, such as basic

commodities with little added value, low prices, and little elasticity of demand. Over the past 20 years, there has been a steady decline in the export of primary commodities to SSA Cleaver, & Donovan, (1995).

Focus of the study is on how to improve Ethiopia's export performance in the market, break the tendency of importing everything and only exporting a small number of goods, and encourage social innovation by utilizing the home market for national products. To make the economy robust and stable long-term, Ethiopia must be proactive about expanding its export and investment portfolio and looking for new, more effective ways to stabilize the economy.

Therefore, using time series analysis, this study "tried to explore the factors determining the export performance of Ethiopia's top ten export items in the period between 1988 and 2022."

1.3 Research questions

- What is the effect for foreign direct investment on Ethiopia's Export performance?
- What impact does the market's size have on Ethiopia's export performance?
- What is the effect of economic openness on Ethiopia's Export performance?
- What is the effect Ethiopia's export diversification on Ethiopia's Export performance?
- What is the effect of real effect of exchange rate on Ethiopia's export performance?
- What impact does infrastructure have on the performance of Ethiopia's exports?

1.4 Objective of the study

A number of specific and main research objectives were developed in order to response the study questions

1.4.1 The General Objective of research

The main objective of the study explore The Determinants of Export Performance and Evidence on the top ten export commodities in the period between 1988 and 2022

1.4.2 The specific objectives of research

- Investigate the impact of foreign direct investment on Ethiopia's export performance.
- Examine the impact of market size on Ethiopia's export performance.
- Analyze the effect of economic openness on Ethiopia's Export performance
- Investigate the impact of export diversification on export performance

- Examine the effect of real effect of exchange rate on Ethiopia's Export performance
- Analyze the effect infrastructure on Ethiopia's Export performance

1.5 Significance of the study

At this period in the 20th century, export performance has a significant impact on economic growth. This study assesses Ethiopia's performance in exports and its main export items, making it a useful resource for determining the best course of action for policy to increase the productivity of Ethiopia's export sector.

This study analyze the barriers that prevent Ethiopia from exporting a number of products, not just those confined to a few, but the majority of its exports are primary products. Propose a suitable solution for altering the export trend of primary and limited products, and suggest ways to improve Ethiopia's export capacity. The study also serve as a reference for further research and motivate other researchers to conduct further research in Ethiopia's export trend. Ethiopia's export trend, positively influenced by this research, along with narrowing the gap in the existing literature. In addition to providing a reference for other researchers, it also motivates them to continue their research

1.6 Scope / Delimitation of the Study

The study explores the variables that affect the success of Ethiopia's top ten export commodities from 1988 to 2022, with a particular emphasis on the export performance of coffee, oilseeds, gold, chat, and pulses, which are among the top 10 exports of the nation. Using time series analysis, the following products are analyzed: textiles, meat and meat products, leather and leather products, fruits and vegetables, and live animals. It also discusses the importance of export for a nation's economy and how to increase exports by changing the country's target market rather than importing everything from abroad. Regarding the influence of macro factors, are taken into account, all of which are justified theoretically as influencing the effectiveness of export. Thus, potential macroeconomic elements that can have an effect on a country's export performance include the real effective exchange rate, economic openness, infrastructure, foreign direct investments, export diversification index, and market size. The study's dependent variable is the export performance of the top ten export commodities, and with regard to the study's methodology, descriptive research and explanatory research design

This study emphasis mainly the export performance by emphasizing export related issues of using Time Series analysis countries, the export culture of Ethiopia , and the economic combination as a way of creating an export-friendly environment the study will not focus on the import related issues Ethiopia, Not all factors under this research field were covered in this study. Other aspects, such as the previously mentioned one, are an unavoidable problem for all other researchers when determining the Determinants of Export Performance of Ethiopia's Top Export Commodities Using Time Series Analysis. Additionally, the article does not discuss how export performance relates to microeconomic variables.

1.7 Organization of the study

This study is structured into five chapters. The first chapter serves as an introduction, providing background information, stating the problem, research questions, study objectives, significance, scope, and organization of the study. The second chapter presents a review of relevant literature. In the third chapter, the research design and methodology are discussed. Chapter four focuses on presenting and discussing the results. The final chapter includes conclusions, recommendations, and a summary of the major findings.

1.8 Definition of Terms

- Export: - The movement of goods and services out of a nation's port is referred to as export. It entails the sale of goods and services by an exporter situated in the exporting country to an importer based overseas. Exports are the sales of goods and services made in one's own nation to markets elsewhere. It includes the transfer of products legally between nations, usually for commercial objectives. Edward. & Alves, (2006)
- Export performance: - Export performance encompasses several aspects, including export sales, which represents the dollar value of a country's export earnings; export intensity, which refers to the proportion of export sales in relation to total sales; and export growth, which indicates the increase in exports over a specific period. Export volume, indicating the proportion of export sales to overall sales, is also considered in analyzing export performance (Katsikeas, Samiee, & Theodosiou, 2000).
- Commodities Exports are goods produced in one country and sold to another country. The World Trade Organization (2023) has divided export commodities into a number of

categories, including manufactured goods, services, agricultural products, and mineral materials.

Chapter Two

2. Literature review

2.1 Introduction

This chapter's goal is to review the literature that has already been written to support the methodology's design, particularly the model formulation and data analysis. As a result, the first section deals with the theoretical underpinnings of key export notions. The empirical research on the variables influencing Ethiopia's export performance is the main topic of the second section. Consequently, the definition of concepts, their significance, trends, and other theoretical bases of trade theories are the main topics of the research's theoretical literature. The empirical research is used to examine the patterns and composition of exports as well as the determinants of export in Ethiopia. It focuses on the efforts taken to boost Ethiopian export.

2.2 Export performance

Export is the act of making or growing products in a country but shipping them and selling them abroad (Griffin, & Ebe. 1995). Exports are often regarded as an important contributor to economic development, since they facilitate the process. Among the components of aggregate demand are exports. Increasing exports will increase aggregate demand and boost economic growth. Due to the fact that exports contribute to improving the payment balance, the employment rate, and the standard of living, a number of governments attempt to help and encourage their exporters to export more (Doaei, Kazemi, & Hosseini Robot, 2010)

Flows of commodities, services, and capital across national borders are involved in international trade. Imports and exports of commodities are considered commodities trade. Activities such as shipping, travel, insurance, or tourist services are provided by companies from one country to residents of another. The concept of capital flows refers to the setting up of factories in foreign countries as well as the acquisition of bonds, stocks, or bank accounts in one country by people living in another country Kreinin, M. E. (1971).

In order to earn more currency for a country, exports are usually the best way to enter international markets. In general, governments favor export strategies for development. Exporters of random orders are companies that respond positively to orders received. However, an active exporter is one who plans and attempts to place an order Farhangi, & Lotfi, (2009) Export performance is conceptually defined in two parts: exports and performances. Using the term performance as a descriptive term in the literature means to carry out, perform, or accomplish something. The word export in the literature refers to international marketing decisions and activities of internationally active firms (Cavugil & Neviv, 1981) when it comes to economics this word has been defined in many ways and no unifying principle has underlined its quantification Gilaninia, Monsef, & Mosaddegh, (2013).

2.3 Theoretical literature review

This section examines various theoretical perspectives and models related to export trade and export performance, focusing on macroeconomic factors influencing export performance

According to this argument, exports produce the foreign exchange reserves necessary for capital formation and domestic production. Increased export revenue has the potential to help a nation's balance of payments while also helping to fill job openings for those who are unemployed. As exports rise, export companies could specialize in their production techniques, which could raise productivity. By putting policies and reforms into place, many nations have devoted special emphasis to export-led growth. In order to achieve balance of payments, exports produce foreign income required for imports that support domestic output and capital development. Kebede, A. (2011).

Brada & Mendez (1988) integration is assumed to raise investment and reduce risks. This can be explained by the fact that a larger market will raise the expected return on investments and reduce uncertainty by enabling firms to lower their costs as a result of increased economies of scale, and a bigger pool of consumers. Schiff & Winters (1998) summarized the definition of the dynamic effects of economic integration schemes as anything that affects the country's rate of economic growth over the medium term.

2.3.1 Theory of Absolute Advantage

Smith, A. (1776). That a country possesses an absolute advantage in the production of a product when it is more efficient than any other country in producing it. This efficiency can be further

enhanced through participation in free trade, leading to global efficiency. Smith highlighted that repetition of tasks improves workers' skills, avoiding time loss from switching between product types, and longer production runs encourage the development of more effective working methods. Neo-mercantilists advocate for higher production, full employment, and every industry generating an exportable surplus, resulting in a favorable balance of trade

2.3.2 Theory of Comparative Advantage

Ricardo, D. (1817). That a country can maximize its economic well-being by specializing in the production of goods and services it can produce relatively efficiently. This specialization, coupled with participation in free trade, enhances global efficiency. Ricardo argued that a country can have both absolute and comparative advantages in the production of a particular product, and by focusing on the product with a greater advantage, it can further improve global output and its own economic well-being. Trade is viewed as a positive-sum game in Ricardo's theory.

2.3.3 New Trade Theory New

Krugman, P. (1980). Krugman Who received the Nobel Prize in 2008, introduced the New Trade Theory in 1980. This theory suggests that firms' ability to achieve economies of scale (cost reductions associated with large-scale production) has significant implications for international trade. Countries may specialize in the production and export of specific products due to the limited capacity of the world market to support a limited number of firms. According to the New Trade Theory, nations can benefit from trade even if they don't differ in resource endowments or technology. Governments are encouraged to consider strategic trade policies that support and protect industries with first-mover advantages and economies of scale.

2.3.4 The Training Ground Theory

The above argument that favors protection for the sake of stimulating industrial development in economic integration schemes of developing countries is more thoroughly discussed or theorized in what is called the "Training Ground Theory". This theory, according to Heimenz, & Langhammer, (1990). Inotai, A (1991). & Inotai, A. (1997).

Depends on the hypothesis that during the first phase of integration between developing countries, international competitiveness of developing countries can be gradually improved by relying on the regional market in the first phase of industrialization. Free trade among member

countries plus the usually high common external tariff on imports from the outside world should provide temporary protection of infant industries as well as a sufficient large market for future industrial development. This process - termed "import-substituting industrialization" by Rueda-Junquera, A. (2006).will secure sufficient time for the development of the industrial sectors of the member developing countries. Entrance or openness to world markets

May then come at a later stage after developing countries have reached a reasonable degree of efficiency and technical development. Thus, economic integration among developing countries may be considered as a transitional period or a stepping stone towards open competition with the outside world after a short period of learning or training; hence the name training ground theory Hosny, A. (2013).

2.3.5 Factor Endowment Theory

Factor endowment theory has contributed significantly to modern international trade theory. However, the validity of this theory relies on a set of assumptions that are unlikely to hold. The neo-classical trade model's six basic assumptions have been criticized for their inability to explain trade between developed and developing countries. Todaro, M. P. (1994)

Prebisch and Singer's study in 1950 Observed a long-term decline in prices of primary products in international markets, worsening the terms of trade for developing countries that

Heavily rely on primary exports. This challenges the classical theory of trade and suggests an inward-looking approach, advocating for diversification of production towards non-primary goods. Empirical studies have been conducted to examine and debate this hypothesis

2.3.6 Traditional trade theory

The traditional trade theory suggests that if each country specializes in producing goods based on its comparative advantage, it will lead to increased global output and shared gains through trade. Developing nations, given the existing distribution of resources and technology, are recommended to focus on producing and exporting raw materials, fuels, minerals, and food, while importing manufactured products from developed nations. However, this specialization often leaves developing nations economically disadvantaged and dependent on developed nations Salvatore, D. (2013).

Nations engage in international trade for similar reasons as individuals, seeking to benefit from specialization. Just like individuals, countries have different capabilities and resources, and they can gain from trade by focusing on what they do best and exchanging goods and services accordingly (Kreinin, 1971)

Countries also engage in trade to achieve economies of scale in production. By producing a limited range of goods at a larger scale, countries can increase efficiency compared to attempting to produce everything domestically (Krugman, Obstfeld, & Melitz, 2012).

Export activities are considered valuable and offer unique advantages in the economy. Exporting generates scarce foreign exchange, contributes to economic growth, and diversifying exports into more sophisticated products, such as manufactured goods, creates positive externalities that enhance current and future growth prospects (Biggs, 2007).

Despite the varying reasons for engaging in trade, every nation aims to optimize its economic activities. This requires identifying their resource endowments, economic performance, and socio-political context. Each country should be mindful of the opportunity cost and make informed decisions about what to produce and trade, considering that the gains from trade are not evenly distributed (Krugman & Obstfeld, 2009).

2.4 Empirical review literature

The literature review focuses on empirical studies conducted by scholars to examine the factors influencing export performance and their findings. These studies have categorized the determinants of export performance into different categories.

Improving export performance is one of the macroeconomic objectives of many countries, both developed and developing. This is because export plays a vital role in economic growth and the means for improving the current account balance. Export is one of the components in the aggregate demand and, thus, low export implies low level of income in terms of GDP. Ethiopian foreign trade is characterized by persistent trade deficit, domination of primary goods in the export basket and domination of industrial goods in the import basket Sayuni, A. (2006).

There is no doubt that manufacturing exports remain one of the most powerful engines for economic growth. It acts as a catalyst to transform the economic structure of countries, from

simple, slow-growing and low-value activities to more productive activities that enjoy greater margins driven by technology and having higher growth prospects Albaledjo, A. (2003).

But its potential benefits are even greater today. With rapid technological change, sweeping liberalisation and the increased internationalization of production, manufacturing has become the main means for developing countries to benefit from globalization and be able to bridge the income gap with the industrialized world Amakom, U. (2012).

According to Allen, R. (1963) & Balassa, B. (1962). listed the principle dynamic effects of integration as large-scale economies, technological change, as well as the impact of integration on market structure and competition, productivity growth, risk and uncertainty, and investment activity. The same view is shared by Kreinin, M. (1963). According to (Brada, & Méndez, 1988). Integration is assumed to raise investment and reduce risks. This can be explained by the fact that a larger market will raise the expected return on investments and reduce uncertainty by enabling firms to lower their costs as a result of increased economies of scale, and a bigger pool of consumers. (Schiff, & Winters, 1998) Summarized the definition of the dynamic effects of economic integration schemes as anything that affects the country's rate of economic growth over the medium term

2.4.1 Export of sub Saharan counties countries

The export performance of Sub-Saharan African (SSA) countries is negatively affected by their heavy reliance on a few primary commodities, making their export products less competitive in the international market. Research by Morrissey, & Mold, (2010) suggests that the challenge lies not in Africa trading too little or having excessively closed trade regimes, but rather in trading the wrong types of products primary commodities with low value added, low prices, and low elasticity of demand in global markets. SSA countries have also faced vulnerability due to the fallacy of composition, which implies that if multiple developing countries simultaneously attempt to increase exports in similar product categories, they may all end up losing due to insufficient foreign demand and depressed international prices.

Ethiopia, like other developing countries in SSA, heavily relies on the export of primary and low value added products. While there has been some growth in total export earnings from 2001/02 to 2012/13, recent years have seen a decline and stagnation in export earnings. The country's trade deficit has been increasing, primarily driven by substantial growth in imports and lower

exports. The declining prices of primary agricultural commodities in the global market have had a significant impact on the value and volume of exports. Manufacturing exports, consisting of low value added agricultural and unprocessed goods, have had limited impact on increasing export earnings and driving economic growth. In response, the Ethiopian government devalued the Ethiopian birr by 15 percent to boost exports. Comparing export percentages of GDP, Ethiopia, Uganda, Kenya, and Tanzania had values of 1.844%, 10.6%, 7.73%, and 4.28% respectively in 2017, indicating a very low export contribution compared to other Sub-Saharan African countries (Worku, 2019).

Over the past three decades, the agricultural sector in Sub-Saharan Africa has not fulfilled its potential as an engine of growth. Instead of stimulating economic growth, the agricultural sector has been a drag on many African countries. Trends in agricultural production and exports indicate a decline in various indicators until recently. Sub-Saharan Africa's share in world exports has been decreasing, leading to a decline in the standard of living for many Africans. Several factors contribute to this outcome, including the structure and composition of international trade, low productivity resulting from poor governance and trade policies, inadequate infrastructure leading to high business costs, declining demand for key exports, erosion of market share, market access constraints, and agricultural policies in developed countries. Additionally, Sub-Saharan Africa remains heavily dependent on the export of primary commodities, some of which have experienced declining prices (Clever & Donovan, 1995).

Despite all these incentives, the gap between Ethiopian imports and export has been widening through time over the last two decades. For example, the value of exports increased from USD 482 million in 2000 to USD 2,785 million in 2016. But the value of imports increased from USD 1,392 million in 2000 to USD 16,244 million in 2016. This implies that the main cause for the deterioration of the trade balance of Ethiopia is the lower growth of export value compared to the growth of import value National Bank of Ethiopia (NBE). (2018).

According to Oyejide, & Ajakaiye, (2000), the sector's performance in the past three decades indicates that it has failed to fulfill its potential as an engine of growth in the sub-region. Instead of stimulating economic growth, the agricultural sector has been a hindrance in many African countries. The decline in agricultural production and exports, as evidenced by various indicators, has contributed to this conclusion. Over the past 30-40 years, the share of sub-Saharan Africa

(SSA) in global exports has been declining, leading to a decline in the living standards of many Africans. Several factors have contributed to this outcome, including the structure and composition of international trade, SSA trade patterns, low productivity due to poor governance, unfavorable trade and economic policies pursued by SSA countries, inadequate infrastructure resulting in high business costs, decreased demand for key SSA exports, erosion of SSA countries' market share, market access constraints, and agricultural policies in developed countries (Cleaver, & Donovan, 1995).

Ethiopia is facing challenges in foreign exchange earnings. The persistent trade deficit over the past two decades, coupled with the need to borrow to finance it, has resulted in a significant shortage of foreign exchange and a burdensome debt. In 2020, the debt-to-GDP ratio stood at 55.43% (World Bank, 2021).

The increasing macroeconomic imbalances have led to a shortage of foreign exchange in the Ethiopian economy, causing a deceleration in growth. While aid, remittances, and foreign direct investment have contributed to foreign exchange inflows, external borrowing has been crucial in meeting investment commitments, especially since 2009. However, with limited access to concessional lending since 2015 and weak export performance, Ethiopia has been compelled to reduce imports, leading to a slowdown in growth. The Growth Diagnostic report highlights that the inability of firms to import key production components is the primary cause of the country's economic slowdown. Foreign exchange shortages have adversely affected various economic sectors and resulted in the closure of businesses (Goldstein, M., 2020)

The performance of Ethiopian exports has been examined in detail. The researchers used a descriptive research design to analyze the data, combining descriptive statistics and inferential statistics, in order to examine determining export performance. In order to assess export patterns and compositions, descriptive statistics uses graphs and charts that display ratios, growth rates, and averages. Multiple regressions, correlation coefficients, coefficients of determination, and other pertinent time series tests are then utilized to estimate a model. The Autoregressive Distributed Lag Model (ARDL) is used to estimate that real GDP, economic openness, and foreign direct investment all have statistically significant positive influence on the performance of the nation's exports over the long term. Verter, N. (2017).

Tewodros.A (2016). Ethiopia's export performance is being studied to determine the key contributing elements. It was demonstrated that real GDP, economic openness, and foreign direct investment are the variables that have favorable effects and have a significant impact on the historical stage and marketing components of export performance. However, the country's export was significantly impacted by the real effective exchange rate and trade tax. Descriptive statistics, the Autoregressive Distributed Lag Model (ARDL), and explanatory design

Zealelem, M. (2019) in order to create quantitative metrics, a study was done into the export performance of the five export goods that were chosen, as well as its factors. The study focuses especially on the factors that affect the export performance of the five export commodities that were chosen. For the analysis, ARDL (Autoregressive Distributive Lag) was used. Models make it easier to look at both the long- and short-term links between commodities and their drivers. The research has been restricted to the specified scope, fifteen years' worth of time series data, despite the initial intention to cover a longer period of time. Improving the quality and quantity of the product of the commodities would bring a vital outcome for improving the performance of the export of the commodities.

An empirical study was conducted on Ethiopian export performance to study ways to increase exports to the world market. The study aimed to undertake empirical analysis of Ethiopian export performance using time series data. By using analytical tools such as ratios and percentage share growth rates, the study provides a descriptive analysis of Ethiopian export performance. According to the study, Ethiopian export performance is greatly influenced by world demand, which can be achieved by reducing reliance on a few export bases and improving export quality through policy coordination. Among the concerns policymakers should have are restructuring incentives, promoting in a rigorous manner, and diversifying the economy Berhane, T. (2010).

An empirical study was conducted to identify the variables affecting the nation's export performance, and it was discovered that over the long term, the real effective exchange rate, openness, RGDP of the country of origin, infrastructure development, and private credit ratio all have a positive impact on export performance. Belayneh, R. (2012).

Genet .A (2008) In particular, diversification, competitiveness, and openness for the years 1974 to 2004 will be examined as they relate to Ethiopia's agricultural export performance in this article. The primary issue raised here is whether the country's export performance has been positively impacted by the reforms,

2.4.2 Determinants of export performance

In order to achieve remarkable export results, many factors must be taken into consideration. a variety of factors are taken into consideration when determining the performance of exports. These factors include gross domestic product, foreign direct investment, exchange rate, infrastructure development, export diversification, market size and openness, and others. The empirical explanations for their behavior are therefore as follows.

2.6.2.1 Openness of the Economy

Smith, A. (1776) and Ricardo, D. (1817) Economists have acknowledged the positive role of openness to trade on economic growth. Trade can directly increase per capita income when countries specialize in producing goods in which they have a comparative advantage but it also can indirectly encourage development via other channels such as technology transfer, product diversity, increasing scale economies, efficient allocation and distribution of resources within the economy

Romer, P. (1990). Argue that economies of countries with more trade openness grow faster than those of countries with less open. Trade openness can potentially enhance economic growth by providing access to goods and services, and improved technology; achieving efficiency in allocation of resources and knowledge accumulation; and improving total factor productivity
Krugman, P. (1981). (Grossman, & Helpman, (1991).

Opening economic policies to trade and investment with the rest of the world is needed for export Growth. This is because in recent decades there is no country achieving economic success without liberalizing itself to the rest of the world. Hence, Trade liberalization has generally taken place in LDCs as part of the structural adjustment program. Ethiopia has taken many measures to liberalize its economy since the fall of Derg. Trade liberalization implies considerable reduction in tariff and non-tariff barriers, so as to establish a noticeable open market as compared with the pre- liberalization era United Nations Conference on Trade and Development (UNCTAD). (2004).

Theoretically, trade liberalization is the reduction of official barriers to trade that distorts the price of tradable and non-tradable goods and services. Its practical overall measurement, however, is difficult. One of the reasons, being it is rarely the case that all distortionary policies are identifiable. In addition, it is not well known how the promised policy changes have actually been implemented Winters, L. (2000).

Rodrik, D. (2000). Defined trade liberalization as the reduction of both tariffs and non-tariff barriers to trade. In fact there are three variables that are used as alternatives to capture the degree of openness of the economy. These are Import to GDP ratio, Export to GDP ratio and Export plus Import to GDP ratio Chellia, R. (1971). Then the increase of the two is considered as the result of the fall of trade barriers. The problem with this method of measurement is both imports and exports are determined simultaneously with other variables, (Koujianou, Krishna, & Panagariya, 2004).

With liberalization of the economy, the sectors in home countries have a comparative advantage in which they can export their products to the rest of the world, while the import competing sectors face foreign competition. Hence, the empirical researches focusing on the impact of trade liberalization (openness) on export earnings revealed mixed results. For example a literature conducted by Ahmed, A. (2000).exhibited that countries which get on liberalization programs have improved their export earnings. Similarly, (Seyyed, & Moghadam.2011). Using panel data evidence for countries found that open trade policy enhances GDP and export growth. Similarly, According to Winters,A.(2000).

Though there are some critics on policies of trade liberalization/openness in improving welfare, there is a general consensus that in the long run and on average, open economies contributes to long run development. In the short run, trade liberalization might exert pressure on certain sectors, and might even endanger some group of the population by aggravating poverty. However, (Giovani, & Levencko, 2007). Argue that increased trade openness has contributed to rising uncertainty and exposed countries to external shocks and hence, adversely affects country's export

2.4.2.2 Real effect of Exchange Rate

(Abeysinghe, & Yeok, 1998). Proposed that if the exchange rate appreciated, imports would rise while exports would fall, and that the opposite would be true if the exchange rate declined.

According to Rodrik (2008), this finding thus has a stronger tie to the literature on exchange rates and FDI. Possibly the most thorough assessment of the impact of currency rates that are undervalued on economic growth

An exchange rate signifies the rate in which a currency of one country is exchanged for the currency from another country to facilitate business transactions. Rahman, M. (2017).

Real Exchange rate and exports have a relationship which impacts the macroeconomic situations of a country. According to Sukirno (2004) as cited in Rahma (2017). postulates that for the case floating exchange rates system, a change in export or import may occur if the value of the currency depreciates or appreciates. When there exchange rate depreciations, local currency value in terms of foreign currencies will decrease leading to an increase in the export volume, implying that export will automatically increase as the value of exchange rate rise. Similarly, Edward (1989)

The performance of the nation's exports heavily depends on its exchange rate regime, and more specifically, the actual exchange rate. The demand for a country's exports rises as its export prices decline relative to the prices in the rest of the world, according to numerous research. Its exports on the global market are less expensive as a result of its currency's devaluation against other currencies, particularly the dollar. Sharma, V. (2001), for instance, found that when Indian export prices declined, so did global demand for Indian goods. The Indian rupee's gain at one point, he added, had a negative impact on exports from India. Furthermore, it is asserted, export expansion is linked to a competitive exchange rate. Tanzania's non-traditional export (NTE) time series study discovered a Berhanu, G. (2003).

Exchange rate is one of the main instruments used to promote export growth and diversification, as well as to enhance the nation's comparative advantage as part of trade liberalization (Edwards, & Alves, 2006). Santos-Paulino, A. (2002). The devaluation of the currency exchange rates is one of the key factors that should be responsible for the growth of exports values (Athukorala, & Suphachalasai, 2004).

(Edwards, & Alves, 2006). Found that domestic exporters are price-takers in the international market and the export prices would rise with the depreciation of the exchange rates. This means a decrease of exchange rates reduces the price for import products from other countries, where they charge the same price, but importing countries must pay more in their currency. Similarly, exporting countries are able to make more profits with the depreciation of the exchange rates and vice versa. A possible explanation for the positive relationship between exchange rates depreciation and export performance is exchange rates depreciation raise the profitability of export supply

2.4.2.3 Foreign Direct Investment

Belloumi, M. (2014). Foreign direct investment (FDI) is widely acknowledged as a component that boosts economic growth across a range of economies, particularly in less developed nations. Foreign investment inflows into the host nation play a significant role by enhancing the flow of capital for domestic sector investment. It is one of the most active foreign inflows that foster economic expansion. Through its absorptive capacity, it not only supplies the financial resources but also facilitates the flow of foreign technology into the host nations. Through its absorptive capacity, it not only offers financial resources but also facilitates the flow of foreign technology into the host countries. (Abdalla, & Al-Refai. .2018).

Developing economies like Ethiopia host foreign direct investment in order to grow and develop. The accumulation of physical and human capital is accelerated by foreign direct investment by adding to domestic savings. Researchers widely believe that foreign direct investment provides a number of benefits such as the acquisition of new technologies, the creation of jobs, the development of human capital, the integration of international trade, the promotion of domestic investment, and the increase in tax revenue (Jenkins, & Thomas, 2002).

(Skosan,& Kabuya.2014).The advantages and disadvantages of foreign direct investment (FDI) have been hotly debated. The export performance in developing nations, however, is probably going to improve. Experience in a number of nations demonstrates that FDI significantly alters the mix of exports. For instance, through fostering the growth of knowledge-based sectors, foreign direct investment (FDI) inflows into Singapore, China, Lesotho, Madagascar, and Mauritius have boosted the technological content of their exports. The growth of the capital market has been aided by this favorable and strong association between export success and FDI.

FDI is supposed to be used to fund creative projects in an already established sector, so in that sense it does contribute to technological advancement. UNCTAD (2005).

Specifically on trade performance, external capital flows are important to foster a process of diversification and upgrading in the host economies, increasing export volume (intensive margin effect), the number of exported products (extensive margin effect or export diversification), and the quality of exported products, given that foreign multinationals can engage in the production of new and more sophisticated goods that are re-exported on the one side and can contribute to positive spillovers on local firms on the other, reducing for instance their entry costs in foreign markets (Crespo, & Fontoura, 2007). And (Harding, & Javorcik, 2011).

2.4.2.4 Infrastructure

The improvement of a nation's ability to produce and move things depends heavily on its transportation infrastructure. It is generally acknowledged that improved and expanded infrastructure lowers the costs associated with trade-related transactions, one of the key determinants influencing export supply capacity. (Limao, & Venables, 2001). & (Vijil, & Wagner 2012).

The cost of transportation is quantitatively affected by infrastructure. Perhaps the easiest data to use for measuring infrastructure comes from the World Development Indicators database and is drawn from the proportion of paved roads in Ethiopia out of all the roadways.

Mbekeani, C. (2007) in most SSA nations, especially landlocked and small island nations, poor infrastructure is a significant barrier to commerce, competitiveness, and sustainable development. According to (Limo, and Venables, 2000), Africa's comparatively low level of trade flows is mostly the result of subpar infrastructure. According to an empirical study by Babatunde, O. (2009), being a landlocked country in SSA can negatively impact the performance of merchandise export Tesfaye. (2014)

Structural transformation and export diversification into higher value added products and away from primary commodities remain major development objectives for low-income countries (LICs). The apparel sector has traditionally been a gateway to export diversification for LICs and is generally regarded as a first step for developing countries embarking on an export-oriented industrialization process. Given its low entry barriers (low fixed costs and relatively simple

technology) and its labour intensive nature, the apparel sector absorbed large numbers of unskilled mostly female workers. This, in turn, provided upgrading opportunities into higher value added activities within and across sectors. However, the defining characteristics of this sector also mean that it is very competitive, leaving many suppliers with limited leverage and challenges in ensuring longer-term development benefits. (Brautigam, Fafchamps, & Maertens. 2015).

But its potential benefits are even greater today. With rapid technological change, sweeping liberalisation and the increased internationalization of production, manufacturing has become the main means for developing countries to benefit from globalization and be able to bridge the income gap with the industrialized world. Amakom, U. (2012).

According to Allen, (1963). & Balassa, (1962). Listed the principle dynamic effects of integration as large-scale economies, technological change, as well as the impact of integration on market structure and competition, productivity growth, risk and uncertainty, and investment activity. The same view is shared by Kreinin, M. E. (1963). According to Brada, & Mendez, (1988). Integration is assumed to raise investment and reduce risks. This can be explained by the fact that a larger market will raise the expected return on investments and reduce uncertainty by enabling firms to lower their costs as a result of increased economies of scale, and a bigger pool of consumers. Schiff, & Winters,(1998). Summarized the definition of the dynamic effects of economic integration schemes as anything that affects the country's rate of economic growth over the medium term

2.4.2.5 Export Diversification index

Cadotte, De Melo, & Portugal (2011). Utilizing concentration indices, export diversification is quantified by determining whether the majority of a nation's export revenues are derived from a narrow range of export goods (an indication of export concentration) or are distributed more evenly across a specified range of export goods (an indication of export diversification). Both an extensive margin (an increase in the number of export lines) and an intensive margin (an increase in the value of currently offered items) are possible for export growth. Therefore, export diversification may be measured along the margins: a more even distribution of the export basket indicates diversification at the intensive margin, whilst a greater number of export lines indicates diversification at the extensive margin.

When a product, whether new or existing, is exported to new markets, export diversification can be done along the geographic dimension as well as the quality dimension (by raising the quality of current items). These kind of substantial global diversification measurements.(Breton,& Newfarmer, & Bacchetta, 2007

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2.4.2.6 Market size

Market size is an important factor for businesses to consider when making decisions about where to sell their products or services. A larger market means more potential customers, which can lead to increased sales and profits. Businesses can also use market size to help them set prices for their products or services. Latana, S. (2022).

To identify opportunities for growth: A business can use market size to identify opportunities for growth by looking for markets that are growing faster than its current market. For example, a business that is selling a product that is in high demand in a particular market can use market size to identify other markets where the product is in high demand. To set prices: A business can use market size to set prices for its products or services by considering the cost of production, the level of competition, and the willingness of consumers to pay. For example, a business that is selling a product that is in high demand in a particular market can use market size to set a higher price for its product than it would in a market where the product is not in high demand.

.There is a positive relationship between export performance and market size. This means that countries with larger markets tend to have better export performance. There are a number of

reasons for this. First, larger markets have more potential buyers, which means that there is a greater demand for exports. Second, larger markets are more diverse, which means that there are more opportunities for exporters to sell their products. Third, larger markets are more affluent, which means that buyers have more money to spend on imports. Latana, S. (2022).

If trade diversion occurs as a result of integration between developing countries in consumer goods, this would release more foreign exchange to be directed to more imports of capital goods from the outside (developed) world. Once again, on balance the volume of trade with the outside world may not change, or in fact it may increase, but the important thing is that the pattern of this trade will change. Hosny, A. S. (2013).

Developing countries in general are known to be specialized in primary products. Abdel Jaber, M. A. (1971). Argued that there's nothing wrong with specialization in primary products, if the economic surplus from the primary sector could be redistributed or reinvested productively to other sectors. However, as these assumptions are far from reality, developing countries have advocated a policy of diversification and import substitution to different extents in an attempt to accelerate economic growth. However, according to Demas, W. G. (1965). Balanced growth can be achieved by small developing countries by increasing the size of the market, benefiting from economies of scale, and expanding their inter-industry transactions Villamil, J. (1966). as reviewed by Yotopoulos, P. A. (1967). Therefore argued that economic development can be attained to developing countries through economic integration. A study (Pearson, & Ingram, 1980). On the gains from industrial integration between Ghana and the Ivory Coast reaffirms this conclusion

2.5 Export commodities of Ethiopia

The level of economic development, resource endowments, policies, and development plans are some of the elements that affect a country's export structure. Ethiopia's economy is still in its infancy and is primarily reliant on agriculture. Agriculture-related goods, which once made up more than 70% of all exports from Ethiopia, dominate the country's export structure. Ministry of Industry (MOI). (2017).

2.5.1 Coffee

The Global Agricultural Information Network (GAIN). Coffee is one of the most important exports for Ethiopia and a significant foreign exchange generator. Ethiopia's diverse coffee

varieties, flavors, and environmentally friendly production methods give it a comparative advantage in the international market. Although Ethiopia's coffee export performance lags behind countries like Colombia, Brazil, and Vietnam, it holds a significant share in the global market. Ethiopia is the second-largest organic coffee exporter by volume. Ethiopia exports coffee to over 60 countries. Based on the coffee export data in 2017/18, the principal export markets for Ethiopian coffee were Germany (22%), Saudi Arabia (16%), United States of America (11%), Belgium (7%), Sudan (6%) and Italy (5%)

2.5.2 Oilseeds

The two most common oilseed exports are sesame and nigerian seed. Ethiopia is a significant linseed and sesame seed producer. Safflower, castor, linseed, and Niger seed are also produced there. These goods are in high demand on the global market. The possibility for strengthening Ethiopia's economy lies in increasing oilseed output. Sesame seed is the main oilseed exported. The US is the main destination for seed from Niger. Ethiopian oilseed exports grew in 2005 and 2006, with China emerging as a new market. Sesame seed exports have been expanding quickly. Greece, Germany, the Netherlands, and the UK are the top importers of Ethiopian sesame seed in the EU. Ethiopia is not one of the top sesame seed importers in the world, despite Japan being the largest. market. Abule, T. (2012).

2.5.3 Chat

Ethiopians grow a plant known as chat, which is used as a stimulant. It is a widely consumed beverage in several Middle Eastern and African nations. Chat is a significant crop exported from Ethiopia. The export of chat began to increase in the late 1990s and has kept increasing ever since. Chat ranked as Ethiopia's fourth-largest export crop in 2018 and brought approximately \$263 million. Ethiopia's rich soil is ideal for cultivating chat. Numerous chat kinds are produced in the nation and are popular with consumers worldwide. Neighboring nations including Somalia, Djibouti, and Yemen are the main destinations for Ethiopian talk. Additionally, chat is shipped to various Asian nations, including Saudi Arabia and the United.

Ethiopia's administration supports the expansion of the chat business. In addition to creating infrastructure to assist chat exports, the government has given farmers who grow chat subsidies. In order to promote chat in new markets, the government is also working on this. Ethiopia's economy is being helped by the chat industry's expansion. Farmers and exporters benefit from

the chat industry's employment and revenue generation. Additionally, Ethiopia's trade balance has been helped by the chat industry

2.5.4 Fruits and vegetables

The export of fruits and vegetables is very significant to Ethiopia. A broad variety of fruits and vegetables can be produced in the country due to its diversified terrain and climate. Due to its potential for domestic food resources and export opportunities, the industry has recently attracted more and more attention. Since 2010, the sector's performance has improved, with an estimated 780,000 pounds of fruit produced annually. Compared to production figures from the previous crop year, this is slightly less. Fruit crops occupied a total of 104,000 hectares in MY 2017/18, a 4% decrease from the previous year. When compared to the production of grains, the overall area and volume of fruits is extremely tiny Central Statistics Agency (CSA). (2023)

2.5.5 Meat and Meat Products

The livelihood of Ethiopians is heavily dependent on livestock, with almost 70% of the population depending on livestock in some capacity. Women, in particular, assist the production of smaller ruminants and provide animals for the household's assets, which both contribute to the production of livestock. The primary sources of meat in Ethiopia are cattle, goats, sheep, camels, and poultry. Oromia, Amhara, and SNNP have the biggest populations of livestock, with Tigray trailing behind. The majority of the animals used for meat exports, however, come from pastoralist regions (Central Statistics Agency, 2023).

2.5.6 Gold

According to the World Bank Group (2014), mining scarcely makes up 1% of Ethiopia's GDP. The foreign exchange earnings, which make up around 10% of the total, have, however, been significantly boosted by the gold mining industry. Over 65% of the gold produced is produced through artisanal mining, which is important. Ethiopia has seen an increase in its gold exports and production over the years, with an estimated 1.24 million people working in both legal and illegal gold mines. According to rough estimates, the main gold-producing regions of the nation produce about 18,000 kg of gold year (World Bank Group, 2014).

2.5.7 Leather and Leather Products

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2.5.8. Garment and textile

According to Abebe (2016), the garment and textile industry is one of the priority sectors mentioned in the industrial strategy of Ethiopia. It was expected to earn more than 1 billion USD in the last year of the first Growth and Transformation Plan (GTP). However, the total export amount was not more than 110 million USD in that calendar year and an average of 100 USD in the five consecutive years of first GDP. Moreover, it doesn't show significant improvement in the first year of second GTP. This shows us that the export performance of the garment and textile factories in Addis Ababa and other parts of the country is too low compared to the potential of the country in this sector, the development of infrastructure, and the availability of convenient policies and incentives given to this sector.

Textile, One of the first widespread economic sectors that sparked industrialization was the textile industry centuries ago. It is also the first manufacturing sector to have a global scope. The geographic spread of this industry throughout established and emerging nations is the greatest of any. Simple technology and unskilled labor may be used to create textiles. Larger industries were founded on the old crafts of hand spinning, weaving, and sewing. In the 18th century, English inventors started automating the carding, spinning, and weaving operations used in the small-scale textile industry. (UNCTAD). (2008).

2.5.9 Live Animal Ethiopia

Live Animal has more than 59 million cattle, 30 million sheep, 30 million goats, and 56 million birds in its livestock population. The biggest number of draft animals in Africa are also found in this nation. With a 12% share of the country's overall GDP and a 33% share of the agricultural GDP, livestock is a substantial contributor to Ethiopia's economy. Additionally, 65% of the population relies on the cattle industry for their daily needs, and it generates 12–15% of all export revenue. Millions of people rely on the livestock industry for a living, and it contributes

significantly to the Ethiopian economy by bringing in billions of dollars in export revenue. The government is investing in the sector to support its growth because it has the potential to contribute even more to the nation's economic prosperity. Zelke, B. (2017).

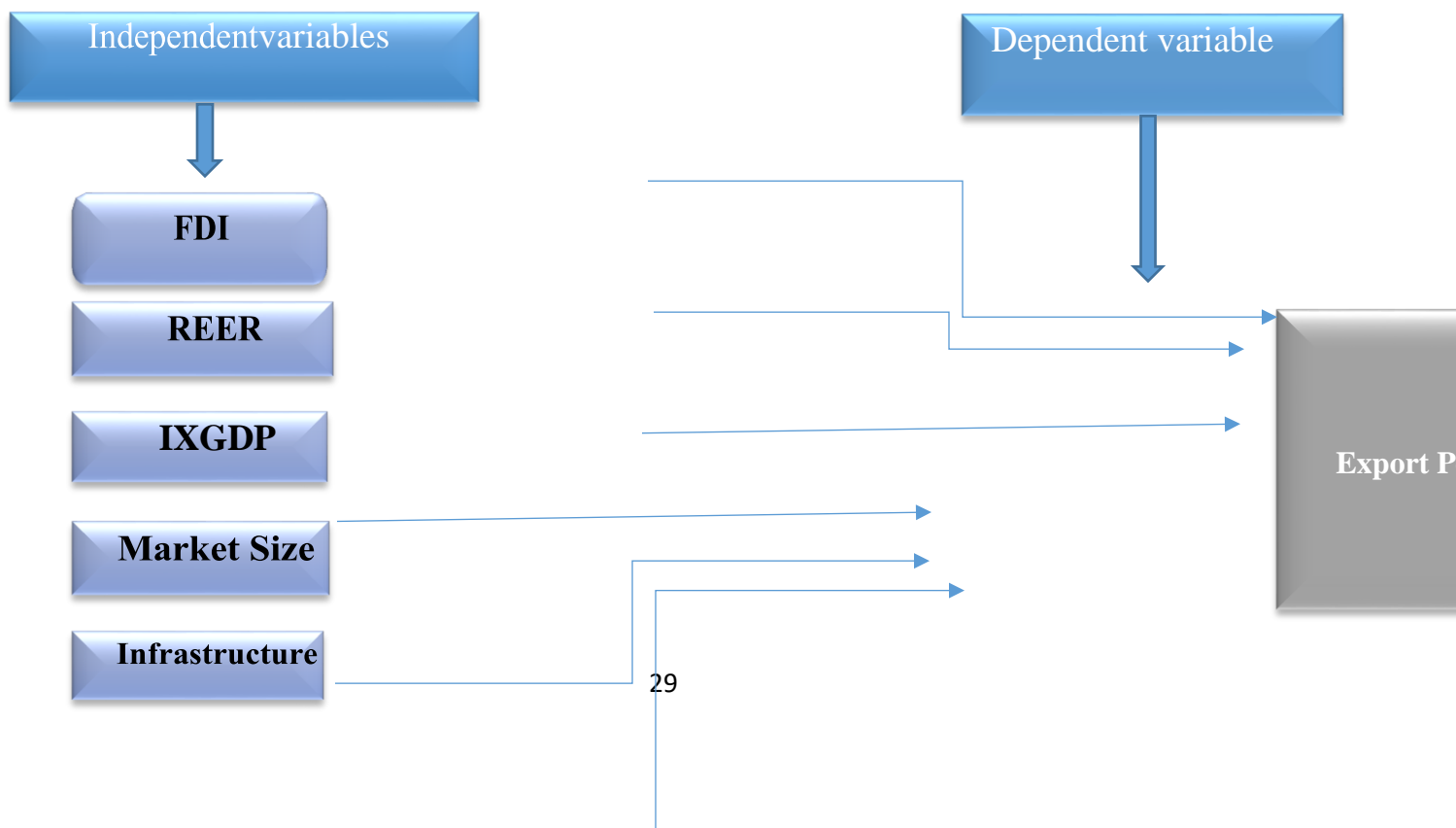
2.5.10 Pulses

Pulses play a significant role in the Ethiopian diet, particularly for those who live in rural and per urban areas. Pulses are in high demand domestically, and prices change in line with that demand. The most significant crops in Ethiopia's pulse export industry are white pea beans and chickpeas. Pulses are a major export from Ethiopia to markets worldwide. Pulses' overall export volume and value climbed from 224,875 tons in 2010/11 to 353,646 tons in 2013/14 and from US\$ 137.9 million to US\$ 251.02 million, respectively. Ethiopia's most significant export crop in 2013/14 was pulses. Ethiopian Ministry of Agriculture. (2014).

2.6 Conceptual formwork

According to (Grant, & Osanloo, 2014). Conceptual frameworks illustrate the relationship between the core ideas of an investigations. Conceptual frames are ordered logically or sensibly to illustrate how issues under examination relate to each other. Based on this point,

Figure 2, 1 conceptual frame work



Export Diversification

Source: Researcher: 2023 G.C

1.7 Research Hypothesis

Based on the studies conducted previously and reviewed in the literature this study is examined

To test the following hypotheses.

- **Ha** the Feign direct investment is anticipated to have a favorable impact on Ethiopia's export performance.
- **Ha1** Market size is anticipated to have a beneficial impact on Ethiopia's export performance.
- **Ha2** Economic openeness is anticipated to have a positive effect on Ethiopia's export performance.
- **Ha3** Export diversification is expected to correlate positively with the Ethiopia's Export performance
- **Ha4** the Real effective exchange rate is anticipated to have a favorable impact on Ethiopia's export performance.
- **Ha5** Infrastructure is expected to have a favorable correlation with Ethiopia's export performance

Chapter Three

3 Research Methodology

3.1 Introduction

Research methodology refers to the scientific study of how research is conducted. It involves the various steps that were adopted by the researcher and their logic behind them. C.R. Kothari's book "Research Methodology: Methods and Techniques" provides a detailed explanation of the methodology of the study, detailing the research design, study area, study population, study period, data collection methods, validation of instruments, and data analysis .

3.2 Research approach

Quantitative analysis based on time series data for the period from 1988 through 2022 is used in this research According to Kothari (2004), time series data is a series of successive observations over time which usually is the result of the effect of long-term trend and short-term trend. Short term trend is occurred as a result of fluctuations such cyclical, seasonal and irregular or random fluctuations that is unpredictable in nature. Analysis using time series data is done in order to understand the dynamics of the market and business to achieve both long- and short-term goal of the firms. Usually historical data is used in time series analysis and this past trend analysis has a power to measure the success and failure of the management policies practiced. The benefit with quantitative method is that, the collected data can be reliable and valid; we can also formulate hypotheses which can empirically testable through using statistical methods. The finding of the study when using the quantitative method would reduce biases. The quantitative method also used to describe the numerical data collected on selected observation McMurray, A. (2010)

3.3 Research design

Both descriptive statistics and inferential statistics, or Econometric analysis, are used to analyze the data. By displaying graphs and charts, descriptive statistics is used to assess the composition and trends of exports using ratio, growth rate, and averages. It also employed mean, minimum, maximum, and standard deviation to look at the features of both dependent and independent variables.

The specified objectives, inferential statistics including multiple regressions, correlation coefficients, coefficient of determination, and other pertinent time series tests mentioned in the model testing section are used. To obtain the results of the regressions and tests carried out to determine the validity of the model, STATA 15, a tool for time series econometric analysis, is utilized

In order to evaluate the numerical and statistical components of the study, a quantitative approach will be used. Explanatory research will then be used to evaluate and explain the situations that exist among the variables and the relationships between them.

According to Sekaran, & Bougie, (2016). Descriptive research studies are those sorts of researches that have an interested in describing the attribute of a particular individual, and or of a group

Explanatory research looks for causes and reasons and provides evidence to support or refute an explanation or prediction. An explanation study, questions such as "why" and "how" are asked Grey.D.(2014)

3.4 The target population

Areas of emphasis for the collection of relevant research data for the study from 1988 to 2022.the Ethiopian Chamber of Commerce, the National Bank of Ethiopia, the Ethiopian Customs Commission, World Bank development inductor, and Ethiopian investment commission

3.5 The study period

The study analyze time series data between 1988 and 2022. A regression analysis can be made with the help of this sample period it is appropriate and sufficient. This resulted in the evolution of a free market economy from a variety of economic systems. The export performance of

various governments has been promoted and diversified through a variety of export reforms. In this way, it is possible to identify the main macroeconomic Determinants of Export Performance an Evidence on top ten Commodities using Time Series analysis. As a result of this study, recommendations are developed that assist the government in boosting export performance

3.6 Techniques of Estimation

To analyze the long-run relationships and dynamic interactions among the dependent and independent variables, the model is estimated by using Bound testing (Autoregressive Distributed Lag Model (ARDL) approach to co integration. ARDLs are standard least squares regressions, which include lags of both the dependent and independent variables as repressors. This model is developed by Pesaran, Shin, & Smith, (1999).

Pesaran, Shin, & Smith, (2001). It is more versatile than the conventional Johnson approach to co integration and can be used to test whether there is a long-term relationship between the variables, regardless of whether they are integrated at order zero (I (0)), order one (I (1)), or are cointegrated. Third, it also makes it easier to include dummy variables in the co integration test process and estimate both the long run and error correction model.

The Autoregressive Distributed Lag (ARDL) model is increasingly becoming popular as a means of testing the presence of a long run relationship between Ethiopian export items and its main determinants. In addition to this, ARDL Model is found to be an appropriate model since it is very important method to estimate the influence of continuous devaluation on export supply Abule, A. (2012).

3.7 Model Specification

There are four main goals of regression analysis: description, estimation, prediction, and control. Regression may, as its name implies, explain how dependent and independent variables are related. Estimation is the process of determining the value of the dependent variable using the observed values of the independent variables. Based on the interactions between dependent and independent variables, regression analysis can be beneficial for forecasting outcomes and changes in dependent variables. Finally, when exploring the link between one independent variable and the dependent variable, regression allows for the control of the effect of one or more independent variables Ali, & Younas, (2021).

Multiple regression a single dependent variable and a number of independent variables can be analyzed using multiple regression, a statistical approach. In order to forecast the value of the single dependent value, multiple regression analysis uses independent variables whose values are known. A variety of independent variables are evaluated and examined using multiple regression analysis, with the dependent variable having a linear function that reflects the relationship between the statistical approaches. Regression models show that independent variables forecast dependent variables. Due to the range of values for the independent variable "x," regression analysis calculates the value of the dependent variable "y." Moore, & Anderson, (2006).

$$\text{LnTotaltoptenExportvalue}_t = f(\text{LnREER}_t, \text{LnMKTSIZE}_t, \text{LnInfrast}_t, \text{LnFDI}_t, \text{EXDIVERSit}_t, \text{LnIXGDP}_t)$$

$$\text{LnTotaltoptenExportvalue}_t = \alpha + \beta_1 \text{LnREER}_t + \beta_2 \text{LnMKTSIZE}_t + \beta_3 \text{LnInfrast}_t + \beta_4 \text{LnFDI}_t + \beta_5 \text{EXDIVERSit}_t + \beta_6 \text{LnIXGDP}_t \dots\dots\dots (1)$$

$\text{LnTotaltoptenExportvalue}_t$,

α = Coefficient of Intercept

LnREER_t = Real Effect Exchange Rate

LnMKTSIZE_t ,= Markt Size

LnInfrast_t , = Infrastructure

LnFDI_t , = Foreign Direct investment

LnEXDIVERSit_t , = Export Diversification

LnIXGDP_t) = Economic Openness

The model is designed for the use of predicting the impact that the independent variables have on the dependent variable or export performance. This model is analyzed through using regression model

3.8 Source of data

The study used secondary, the secondary data collected from National bank of Ethiopia, Ethiopian customs commission, Ethiopian investment commission, Ethiopian chamber of commerce, world bank development inductor, websites, newspapers, mass media magazines and various books, Because of the nature of the title, secondary source of data, the backbone of the thesis to analyze export performance, Documents from responsible bodies collected for the study

3.9 Explanation of Variables

A description of these factors and an explanation of what can be anticipated from them are provided below. Based on variable: The export performance measured by the export to GDP ratio serves as a dependent variable in the model and reflects the relative success or failure of the country's attempts to export domestically produced goods and services.

Independent Variables

Openness of the Economy: The openness of the economy reveals the extent of trade liberalization. As a result, the import plus export GDP ratio is used as a proxy variable for economic openness, and it is also expected to have an inverse association with the dependent variable.

$$\text{IXGDP} = (\text{ratio of Export} + \text{Import}/\text{GDP})$$

- **Foreign Direct Investment:** foreign direct investment, as a share of, we mean a company's investment in another nation. Foreign direct investment (FDI) undoubtedly has a positive effect on Ethiopia's export performance despite the dispute surrounding its benefits and cost because the bulk of foreign investors manufacture exportable goods and are represented by FDI as a proportion of GDP.

$$\text{FDI} = \text{Foreign Direct Investment as percentage of GDP}\%$$

- **Real Effective Exchange Rate:** a corporation's investment made in one country is made in another with export performance. Despite the controversy surrounding its benefits and drawbacks, foreign direct investment (FDI) is likely to have a positive impact on Ethiopia's export performance because the majority of foreign investors produce exportable items and are represented by it as a percentage of GDP.

$$\text{REER} = \text{Real Effective Exchange Rate } t,$$

- **Export Diversification Index (EXDIVERSit)**

EXDIVRS_{jt}= Diversification Index of a country at time t,

➤ **Infrastructure**

DOTRIN_{Fi} represents the proportion of paved roads out of all roads in Ethiopia at time t,

➤ **Market size** $\text{Market size} = \frac{\text{GDP per capital}}{1+\text{GDP defaluter}}$

3.10 Data collection method

Study based on secondary data to gather relevant information on the export performance, methods of collection include physically visiting the relevant institutions, sending an email request for a data, and getting access to online data on the website. Secondary data is information that has already been gathered for another reason by someone else. They are published and are based on second hand sources. Saunders, Lewis, & Thornhill, (2009). Secondary data were available in Journals, books, magazines, newspapers, reports among others Kothari, C. R. (2004).

3.10.1 Data analysis method

Data analysis is the application of reasoning to understand and interpret the data that has been collected. It involves editing, coding, classifying and tabulating the collected data. In the study the researcher used quantitative data analysis technique. The use of method enabled effective interpretation of data in numbers, figures as well as narrative and in depth information were provided. Therefore, data interpretation considered data based on quantitative

Analysis of quantitative data Technique With the help of the robust statistical program Stata, users may organize, visualize, and manage data graphically. It is largely used to study data trends by researchers in the domains of economics, health, and political science. The software is easier to use because it offers both a command line and graphical user interface. By simply changing command arguments or creating a do-file, this command-based statistical program allows a great deal of versatility for data analysis. The software language maintains a straightforward structure that makes it simple to learn, allowing users to concentrate on statistical modeling

All users need to have confidence in the accuracy of the package, this review examines accuracy of the principal time series algorithms. It also briefly describes associated graphics, diagnostics, documentation, help facilities, output, customization, and support. Altogether, these features

characterize a very well-designed and well-crafted and powerful time series analysis and forecasting package. Baum, C. F. (2004).

Chapter Four

4 Data analysis and Interpretation

4.1 Introduction

To determine the variables influencing the export performance of Ethiopia's top export commodities, it is necessary to evaluate the export performance drivers. The study assessed export trends in terms of total quantity, share of goods, data analysis, and interpretation. It used the statistical program STATA (Version 15) to analyze the data. The study further evaluated export patterns in terms of total volume and percentage of commodities.

The deliberate application of statistical and logical techniques to describe and present, compile, and evaluate data is known as data analysis. The act of interpreting involves giving meaning to numerical data that has been obtained, investigated, and presented.

The National Bank of Ethiopia provided the statistics, which showed that the value of the top 10 export commodities increased over time with a substantially favorable growth-skewed trend. The trajectory of the top 10 export commodities overall is growing, as shown by the following graph.

Figure 4, 1: the trend of total top ten export commodities value



Source: Own computation and data from NBE (2023)

The graph shows the total value of Ethiopia’s top export commodities over the first 20 years of the study period. While there has been an improvement in the export performance of the top ten export commodities over time, this enhancement has not been consistent. The performance of the top ten export commodities has fluctuated over time. Ethiopia’s export culture is based on primary agricultural commodities and those export commodities have not increased in number over time. Additionally, there has been no progress on the nature of the products. Ethiopia continues to export products that are similar to those exported ten years ago without changing their nature or adding any value. This is the main reason for the fluctuation of Ethiopia’s export performance. While there has been progress on the export performance of top export commodities, this progress does not match the import demand of the country. The export potential is not satisfying the demand of the economy expected from exports.

Figure 4, 2 the trend of total top ten export commodities value

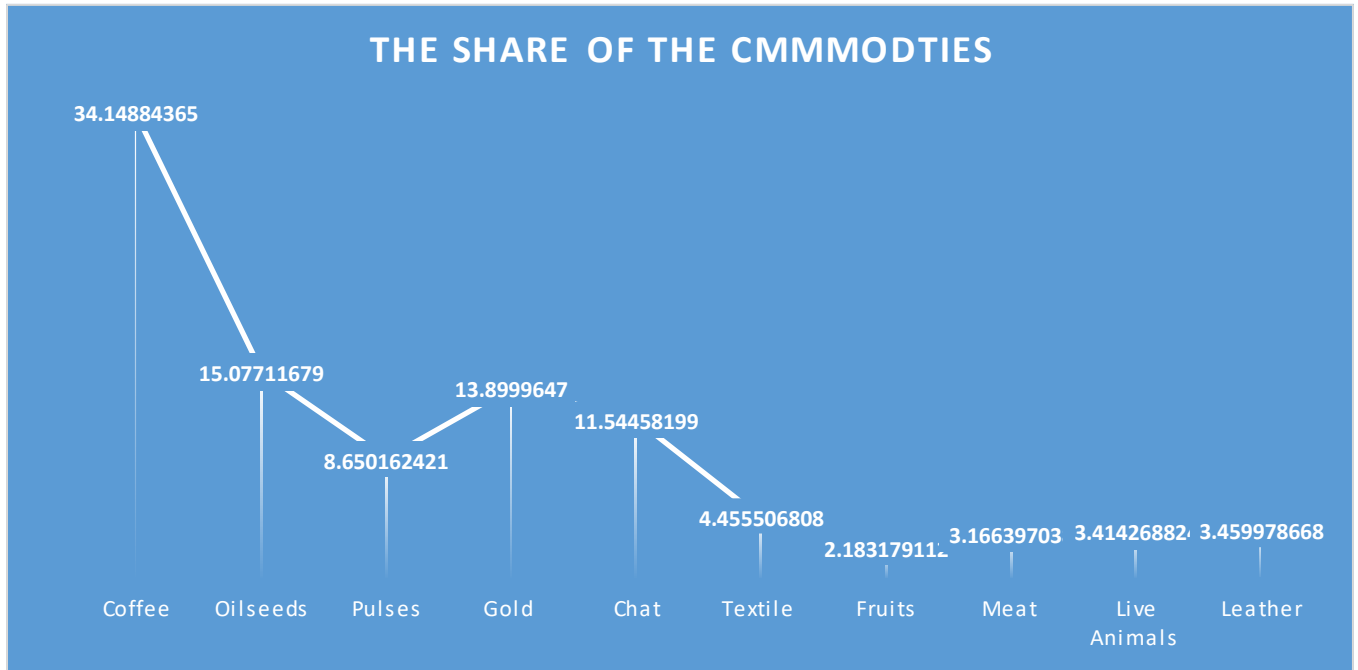


Source: Own computation and data from NBE (2023)

It is astonishing that over the course of the past 15 years, total exports have increased despite numerous hurdles, but at a rate that has kept up with the high level of foreign currency shortage. This is because of the economic system's weaknesses, high levels of political unrest and ongoing civil war, a lackluster export policy framework, subpar infrastructure, a fragile financial system, and corona. Additionally, the value of total exports is based on a small number of major export commodities, making it difficult to increase export performance to the projected level. As a result of the aforementioned problems, the economy is completely unstable, with inflation rising daily.

the export performance Ethiopia not match with the import demand in the domestic market, the economy mostly based on import form cross border countries, because of that the export is not even comparable with, import, there is high level import to the domestic market for satisfying that domestic demand there is should be better export performance and experience in the market unless it's impossible to stabilize the economy of the country

Figure 4, 3 : Contribution of each commodity to the total export value (1988-2022)



Source: Authors own calculation (2023)

The main agricultural products make up the majority of Ethiopia's exports. Although the nation heavily depends on these goods and they account for a sizeable amount of its economic production, exporting fundamental agricultural products entails a higher level of risks and uncertainties. Agriculture is a major contributor to Ethiopia's top 10 exports. These include unprocessed agricultural goods such coffee (34%), oilseeds (15%), gold (14%), chat (12%), pulses (9%), cloth (4%), meat (3%), live animals (3.5%), lathers (3.5%), and fruit (2%). This shows that Ethiopia's main export sector was traditional agriculture, which doesn't produce any goods with value added. Basic materials without any value addition are frequently affordable. Additionally, the agriculture sector is categorized as a labor-intensive sector that

Due to its popularity as a beverage around the world, coffee is the product that is exported the most. Ethiopia is one of the biggest producers, while it is grown in many other nations as well. The nation's coffee business is a significant source of revenue and jobs. Oilseeds are the second most exported product because they are used to make a variety of products, including vegetable oil, biodiesel, and animal feed. Ethiopia is a major producer of oilseeds, and the country's oilseed industry is growing rapidly.

Pulses are the third most exported product because they are a good source of protein and other nutrients. They are also relatively inexpensive, which makes them a popular food choice for many people. Ethiopia is a major producer of pulses, and the country's pulse industry is also growing rapidly. Gold is the fourth most exported product because it is a valuable metal that is used in a variety of products, including jewelry, electronics, and dentistry. Ethiopia is a major producer of gold, and the country's gold industry is a major source of income for the government. Chat is the fifth most exported product because it is a stimulant that is chewed by many people in Ethiopia. It is believed to have a number of health benefits, including improved alertness and concentration. Chat is also a popular social activity, and it is often chewed in groups. Textiles are the sixth most exported product because they are a major part of the Ethiopian economy. The country has a long history of textile production, and the industry is now a major source of employment for Ethiopians. Others are the most exported product because they include a variety of products, Meat, live animals, lathers, fruit, they are also most exported accordingly agricultural products.

4.2 Descriptive analysis

Before moving on to economic analysis, descriptive analysis is carried out to comprehend the statistical behavior of the data. To investigate the properties of the variables and determine their attributes during the research period, descriptive statistics techniques such as measures of central tendency, graphs, and charts are used. Understanding econometric results is aided by careful data observation. In the part that follows, the initial analysis of the data and associated factors is expanded upon. In the descriptive analysis, the means, standard deviations, maximums, and minimums of the dependent and independent variables were considered.

Table 4, 1: Descriptive analysis

Variables	Obs	Mean	Std Dev	Min	Max
lnTotaltop~e	35	15.91623	1.775862	12.53906	18.8928
lnREER	35	4.973336	0.3235782	4.540999	5.842147

lnMKTSIZE	34	2.147721	.4619965	1.552535	3.317999
lnInfrast	32	2.887211	.3359166	2.397895	3.470118
lnFDI	31	.4105902	1.724966	-6.42525	1.71851
lnEXDIVERSit	28	.240025	.0776696	.6050923	.1638728
lnIXGDP	35	3.421785	.4044635	2.382387	3.923539

natural logarithm of total export value of top export items, the variable has 35 observation the mean value of lnTotaltop~e is 15.91623, indicating that on average of the total export value of top export items is around 15.92, with a standard deviation of 1.775862. Standard deviation of lnTotal export value 1.775862 suggested that the value of lnTotal export value tend to be vary by 1.78 units around the mean, the minimum value is 12.53906 and the maximum value is 18.8928. This suggests that the distribution of lnTotaltop~e is fairly evenly distributed, with a slight positive skew.

LNREER natural logarism of, real effective exchange rate 35 observations make up the actual effect of exchange rate variable, which has a mean value of lnREER of 4.973336, A standard variation of 0.3235782, and an average real effective exchange rate of 4.97. According to the 0.3235782 standard deviation, it was discovered that the LNREER value tended to range by roughly 0.32 units around the mean, with a minimum value of 4.540999 and a maximum value of 5.842147. This demonstrates that the distribution of lnREER is positive skew and essentially uniform.

lnMKTSIZE the natural logarithm of market size the variable has 34 observation The mean value of lnMKTSIZE is 2.147721, , indicating that, on average the natural logarithm infrastructure is around 2.15 with a standard deviation of 0.4619965. The minimum value is 1.552535 and the maximum value is 3.317999. This suggests that the distribution of lnMKTSIZE is fairly evenly distributed, with a slight positive skew.

LnInfrast the natural logarithm of infrastructure the variable consist of 32 observation, the mean value of lnInfrast is 2.887211, indicating that, on average the natural logarithm infrastructure is around 2.89 with a standard deviation of 0.3359166. The minimum value is 2.397895 and the maximum value is 3.470118. This suggests that the distribution of lnInfrast is fairly evenly distributed, with a slight positive skew.

LnFDI the natural logarithm of foreign direct investment the variable has 31 observation the mean value of LnFDI is 0.4105902, with a standard deviation of 1.724966. Observation the standard deviation of 1.724966 suggests that the value of FDI tend to deviate by approximately 1.72 unit around the mean the minimum value is -6.42525 and the maximum value is 1.71851. This suggests that the distribution of LnFDI is fairly evenly distributed, with a slight positive skew.

LnEXDIVERSit the natural logarithm of export diversification the variable consist of 28 observation the mean value of LnEXDIVERSit is 0.240025, indicating that, on average the natural logarithm infrastructure is around 0.24, with a standard deviation of 0.0776696. The minimum value is 0.6050923 and the maximum value is 0.1638728. This suggests that the distribution of LnEXDIVERSit is fairly evenly distributed, a slight positive skew

LnIXGDP the natural logarithm of financial receptivity's natural logarithm is LnIXGDP. Observations for the variable total 35. The GDP index's natural logarithm has a mean value of 3.421785 and a standard deviation of 0.4044635, indicating that the index is typically around 3.42. Suggests that the value of LnIXGDP will normally deviate from the mean by 0.40 units; the values range from 2.382387 to 3.923539. This demonstrates that the distribution of LnIXGDP has a slight positive skew.

the study has used seven variables for the analysis purpose including six independent variables and one dependent variable the descriptive statistics for the determinates of export performance the Total export value of top exports items, Reel effect of exchange rate, Infrastructure, Economic openness Market size, Export diversification index, foreign direct investment,

The variables' descriptive statics results have been shown above. Descriptive statistics provide the mean, median, maximum, and lowest values of the variables used in this study together with their standard. STATA software was used to analyze all the variables on an annual basis for 35 years, from 1988 to 2022

The mean values for all of the variables are positive. This suggests that the variables are all on average increasing. The standard deviations for all of the variables are also positive. This suggests that there is some variation in the values of the variables. The minimum values for all of the variables are positive. This suggests that there are no negative values for any of the variables.

The maximum values for all of the variables are also positive. This suggests that there is some variation in the values of the variables the graph shows that the variables are all on average increasing, with some variation in the values of the variables.

4.3 Test of Stationary

Time series data is stationary when at various lags; its mean, variance and auto-covariance remain constant despite at which point we measure them. Time variance should not affect the mean, variance and auto-covariance, and this time series will tend to revert to its mean and fluctuate around its mean to have a constant variance. In the presence of non-stationarity or weak stationarity the mean and variance of the time series will be subject to the time variance and in this case the mean or the variance will not be constant and vary with time. The regression that is processed based on non-stationary time series describes the relationship that would be existed during the time horizon used in this study. Further, while we regress one non stationary on other non-stationary time series, we may encounter the spurious regression or nonsense regression and in the presence of unit root is called random walk. Though there will not be a meaningful relationship between the variables, spurious regression may result in higher R^2 and revealing significant relationship which is misleading and nonsense. The presence of non-stationarity can be changed to stationarity through differencing variable. If the original time series is differenced once, we call it Integrated of order one or $I(1)$ and if it is differenced twice it become integrated of order two or $I(2)$ and so on Gujarati, D. N. (2004).

Therefore, it is very crucial to test and find out either the relationship between variables is stationary or that of spurious (non-stationary). Thus, to test for stationarity, this study used Augmented Dickey Fuller (ADF) test. According to Verma, S. (2021). Augmented dickey fuller test has the ability to remove the autocorrelation that exists among variables of the time series. Augmented dickey fuller test consist of p-value, test statistics value at 1%. 5% & 10% significance level, the number of lags and critical values.

H1: Non-Stationarity

Ha: Alternative hypothesis

We reject the hypothesis of non-stationarity and accept the alternative hypothesis of stationarity if the test statistics are fewer than the critical values. If the test statistics are higher than the

critical values, on the other hand, we are unable to rule out non-stationarity. We reject the non-stationarity hypothesis and accept the alternative hypothesis if P-value is less than the level of significance. If P-value is greater than the level of significance, we accept the non-stationarity hypothesis. M. Naushad (2020).

Unit root test (ADF) (MaxLag=1) Significance level at 1%, 5% & 10%

Table 4, 2: Test of Stationary

Variables	At level	In first difference	Decision	Decision
Totalexportvalue of top exports items	0.9528	0.0000	I (1) at 1%	Stationary
lnREER	0.3267	0.0000	I (1) at 1%	Stationary
lnMKTSIZE	0.0636	0.0177	I (1) at 5%	Stationary
lnInfrast	0.9991	0.0026	I (1) at 1%	Stationary
lnFDI	0.0000	0.0000	I (1) at 1%	Stationary
lnEXDIVERSit	0.0001	0.0001	I (1) at 1%	Stationary
lnIXGDP	0.5601	0.0000	I (1) at 1%	Stationary

According to the results above, every series is I (1) with the exception of the MKTSIZE, which is at I (5). The unit root test reveals that the independent variables Total export value of top exports products, REER, Infrast, FDI, and EXDIVERSit are all independent variables, as opposed to the independent variables being a combination of I(1) and I(0). Therefore, ARDL is a better option than other methodologies for investigating relationships between the provided dependent and independent variables.

LnTotal export value of top exports items: In the first difference, the p-value is 0.0000, which is less than all significance levels. Thus, we reject the Non-Stationarity hypothesis of a unit root, indicating the first difference of the series is stationary,

lnREER (natural logarithm of real effective exchange rate) in the first difference, the p-value is 0.0000, which is less than all significance levels. Therefore, we reject the Non-Stationarity hypothesis of a unit root, indicating the first difference of the series is stationary, lnMKTSIZE (natural logarithm of market size): In the first difference, the p-value is 0.0177, which is less than the 5% significance level. Hence, we reject the non- Stationary of a unit root, suggesting the first

difference of the series is stationary, lnInfrast (natural logarithm of infrastructure): In the first difference, the p-value is 0.0026, which is less than the 5% significance level. Thus, we reject the non-Stationary of a unit root, suggesting the first difference of the series is stationary, lnFDI (natural logarithm of foreign direct investment): In the first difference, the p-value is 0.0000, which is less than all significance levels. Therefore, we reject the Non-Stationarity hypothesis of a unit root, suggesting the first difference of the series is stationary, lnEXDIVERSit (natural logarithm of export diversification), in the first difference, the p-value is 0.0001, which is less than all significance levels. Therefore, we reject the non-Stationary of a unit root, suggesting the first difference of the series is stationary.

4.4 ARDL Bounds Test

In empirical investigations, long-run relationship econometric analysis has proven crucial for drawing reliable conclusions. In order to determine whether there is a long-term link between the dependent and independent variables, the ARDL technique or bound test to cointegration was applied. The bound test is examined against the No relationship hypothesis (H1) of there is no long run relationship between the dependent and independent variables and the alternative hypothesis (Ha) of there is a long run relationship among the variables, The decision rule is that the The estimated bound test F-statistics have been compared to Peasaran et al. (1999) critical values. The decision rule is that the no relationship hypothesis is rejected if the F-statistics are greater than the upper bound [I (1)] at a particular level of significance

Figure 4, 4 Ardl Bounds Test

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Pesaran/Shin/Smith (2001) ARDL Bounds Test
H0: no levels relationship          F = 5.886
                                   t = -4.130

Critical Values (0.1-0.01), F-statistic, Case 3

      | [I_0]  [I_1] | [I_0]  [I_1] | [I_0]  [I_1] | [I_0]  [I_1]
      |  L_1   L_1  |  L_05  L_05  |  L_025  L_025  |  L_01  L_01
-----|-----|-----|-----|-----
k_6   |  2.12  3.23  |  2.45  3.61  |  2.75  3.99  |  3.15  4.43
accept if F < critical value for I(0) regressors
reject if F > critical value for I(1) regressors

```

4.5 Research findings & Hypothesis Testing

The general objective of this study is to investigate the impact of capital structure on the business performance of Ethiopian Airlines. The quantitative research method and the multiple regression model were applied in order to analyze the impact that the explanatory variables have on the dependent variables,

4.5.1 ARDL Estimate of Long run Model lags

Table 4, 3: ARDL Estimate of Long run Model (1, 0, 1, 1, 1, 0, 0) ec

Dependent Variable : lnTotaltoptenExportvalue				
Repressors	Coefficient	Std. Err.	t-Statistic	Prob, P> t
lnREER	3.059449	.9610651	3.18	0.005
lnMKTSIZE	1.78963	.8513478	2.10	0.049
lnInfrast	2.464774	.6215962	3.97	0.001
lnFDI	.2879193	.1995337	-1.44	0.165
lnEXDIVERSit	1.515227	.7765189	1.95	0.066
lnIXGDP	2.98448	.5823415	5.12	0.000
R 2 = 0.7560 and Adj R2 = 0.6404 Prob > F = 0.0000 N= 29				

*, **, and*** indicates statistically significant at 1%, 5% and 10% respectively, Source: Author Computation, based on, EIC, NBE, ECC, and UNCTAD data 2022

Table 4.3 lists the explanatory variables' long-run coefficients, standard errors, t-statistics, and probabilities. On the basis of the Schwarz Bayesian Information Criterion (SBIC), the model's ideal latency was chosen.

The variables are simply tested for co-integration over the long term using the co-integration method. The findings in table 4.3 above demonstrate that the variables have a long-term relationship or that co-integration holds true. The table 4.3 above displays the results of the regression analysis performed on these variables. As shown in table 4.3 above, the real exchange rate effect coefficients, infrastructure, economic openness, market size, and export diversification were statistically significant in the long run Ardl model test. Foreign direct investment has a favorable, negligible impact over the long term during the long study period.

LnREER the top products that Ethiopia exports. (The real effective exchange rate), which gauges the relative cost of a nation's exports, has a beneficial impact on that nation's export performance. It was discovered to be the expected outcome according to the hypothesis, but statistically significant at the 5% level. According to the coefficients for this variable, 3.059449, an average long-term increase in the real effective exchange rate of 1% reduces exports.

The J-curve effect: According to this idea, the real exchange rate depreciation may at first cause a drop in exports because it takes time for the depreciation to be reflected in export prices. However, in the long run, the depreciation will enhance exports since consumers will want more exports as a result of the reduced prices. Rogers, and Engel, 1996.

LnREER The average real exchange rate was found to have statistically significant, beneficial effects on the performance of the exports of the nation's major export commodities over the long term. Contrary to what was previously anticipated, the average real impact of exchange rates on export performance is both positively and strongly correlated. This suggests that, in theory, real effective exchange rates are positively correlated with export when both export quantity and product quality are elastic. However, a devaluation in the currency rate may have a favorable impact on a country's export performance if the quality of the product and the flexibility of export supply are both increased.

LnInfrast The performance of Ethiopia's primary export commodities is positively impacted by infrastructure. The infrastructure of a nation has a favorable impact on its export performance. It

was discovered to be the expected outcome according to the hypothesis, but statistically significant at the 5% level. If infrastructure is improved, it will have a favorable and significant impact on the export performance of the nation, which will shorten delivery times and reduce associated costs

The infrastructure theory: This theory argues that infrastructure has a positive impact on export performance because it reduces the cost of doing business. This is because infrastructure, such as roads, railways, and ports, makes it easier for firms to transport their goods and services to market. Carrère, & Schiff, (2005).

The productivity theory: This theory argues that infrastructure has a positive impact on export performance because it increases productivity. This is because infrastructure, such as education and healthcare, makes it easier for firms to attract and retain skilled workers Dollar, D., & Kraay, A. (2004).

LnIXGDP Openness of the economy the country's export performance benefits from the economy's openness, as represented by LNIXGDP. The result is statistically significant at the 5% level of significance and confirms the proposed hypothesis. The coefficient of this variable, which is 2.98448, indicates that over the study period, an average long-term 1% rise in import plus export as a percentage of GDP improves the export to GDP ratio by 2.98448.

Study conducted by Ahmed (2000) revealed openness of the economy has a positive relationship with export performance of the country. In addition, Seyyed et.al (2011) have got the positive effect of LNIXGDP on export performance of the country

The theory of comparative advantage: This theory argues that countries should specialize in the production of goods and services that they can produce at a lower cost than other countries. This allows countries to produce more goods and services overall, which leads to higher levels of economic welfare. Carrère, & Schiff, (2005).

The theory of economies of scale: This theory argues that firms can produce goods and services at a lower cost when they produce a larger quantity. This is because firms can spread their fixed costs over a larger number of units produced Dollar, & Kraay, (2004).

In a similar vein, Ahmed, S. (2000) did his investigation. The country's export success is positively correlated with the economy's revealed openness. Additionally, LNIXGDP has a beneficial impact on the nation's export performance, according to Seyyed, & Abdolmaleki, (2011). But, as noted by Giovani, & Levchenko, (2007). Due to external shocks and ongoing uncertainty, LNIXGDP has a negative impact on the nation's export performance. Because of this, the study's findings indicated a link between the country's export performance and LNIXGDP.

LnMKTSIZE, top Ethiopian export items and their effects on export performance At the 5% level of significance, it is statistically significant that the market size, which measures the country's market capacity, has a positive impact on the export performance of a nation. In the long run, market size has a positive impact on the export performance of Ethiopia's top export commodities, according to the variable's coefficients of 1.78963.

According to the notion of multinational corporations, businesses become multinational because operating in several nations allows them to obtain economies of scale and scope. When the cost of manufacturing a thing or service drops as production volume rises, economies of scale are taking place. Economies of scope happen when the cost of producing a variety of goods or services drops as the quantity produced rises. Rugman, A. M. (1981).

Theory that deals with the relationship between market size and export performance is the theory of comparative advantage. This theory argues that countries should specialize in the production of goods and services that they can produce at a lower cost than other countries. This allows countries to export goods and services that they produce efficiently and import goods and services that they produce inefficiently. Ricardo, D. (1817).

The theories discussed above provide a number of insights into the relationship between market size and export performance. These theories suggest that market size has a positive impact on export performance in a number of ways. First, large markets offer more opportunities for specialization and economies of scale. Second, large markets offer more opportunities for firms to gain market share. Third, large markets offer more opportunities for firms to take advantage of lower wages, lower taxes, and other factors

LnEXDIVERSit The influence of LnEXDIVERSit on Ethiopia's export performance is good due to the country's top export commodities. The result is statistically significant at the 5% level of significance and supported the proposed hypothesis. This variable's coefficient of 2.929831 demonstrates that it generally has a long-term positive impact on the export performance of the top export commodities.

The resource-based view theory: This theory argues that export diversification can help firms to develop new resources and capabilities. This is because by exporting to a variety of markets, firms are exposed to new technologies, markets, and cultures. This exposure can help firms to develop new products, services, and processes. Grant, R. M. (1991).

The dynamic capabilities theory: This theory argues that export diversification can help firms to become more adaptable and responsive to change. This is because by exporting to a variety of markets, firms are exposed to new challenges and opportunities. This exposure can help firms to develop new capabilities that allow them to adapt to change and seize new opportunities Teece, D., Pisano, & Shuen, (1997).

The learning curve theory: This theory argues that export diversification can help firms to improve their efficiency. This is because by exporting to a variety of markets, firms can learn from their experience and improve their production and marketing processes Johanson, & Vahlne, (1977)

The market access theory: This theory argues that infrastructure has a positive impact on export performance because it improves market access. This is because infrastructure, such as telecommunications and electricity, makes it easier for firms to communicate with customers and suppliers in foreign markets. Carrère, & Schiff, (2005).

LnFDI s one technique to measure how much capital inflows have a positive effect on a country's export performance is how positively they affect Ethiopia's export performance. The result was statistically insignificant at, as expected by the theory, the coefficients of this variable, which are -.6065628 on average, demonstrate that over the study period, a rise of one percentage point in the ratio of foreign direct investment to GDP causes an increase of -.6065628 points in the ratio of exports to GDP. Both theoretical viewpoints and earlier empirical research are

supported by this outcome. As an illustration, see (Trevino, Grosse, and others.1996). They also found, through study, a positive relationship between export performance and LNFDIGDP. Similar results were discovered in the research of (Skosan, & Kabuya ,2014). The favorable is verified in Netherlands.

As a result, the real gross domestic product, lnMKTSIZE, and the long run estimate of the ARDL model reveal that these variables have a statistically significant beneficial impact on the nation's export performance. However, despite being statistically significant to have an impact on the country's export to GDP ratio, real effective exchange rate and foreign direct investment have a negative impact on export performance.

4.5.2 ARDL Estimate of short run Model lags

Table 4, 4: ARDL Estimate of short run Model (1, 0, 1,1,1,0, 0) ec

Dependent Variable : lnTotaltoptenExportvalue				
Repressors	Coefficient	Std. Err.	t-Statistic	Prob, P> t
lnInfrast	.5834526	.2730697	2.14	0.046
lnFDI	.1453228	.0533707	2.72	0.014

R² = 0.7560 and Adj R² = 0.6404 Prob > F = 0.0000

N=29

Statistically significant at 1%, 5%, and 10%, respectively, are indicated by *, **, and ***.

Source: Author's computation based on data from UNCTAD, EIC, NBE, and ECC as of 2022.

The table 4.4 above regression result demonstrates that a number of variables influence or steer the export performance of the top total export value goods over the short term. Infrastructure, the word "ECM," and foreign direct investment are statistically significant.

The effects on Ethiopia's main export commodities and export performance include lnInfrast. which assesses a country's infrastructure has a beneficial impact on the country's top export commodities' export performance. It was discovered to be the expected outcome according to the hypothesis, but statistically significant at the 5% level of significance. If infrastructure is

improved, this will significantly and positively affect the nation's export performance. It will also decrease the cost associated with that.

The market access theory: This theory argues that infrastructure has a positive impact on export performance because it improves market access. This is because infrastructure, such as telecommunications and electricity, makes it easier for firms to communicate with customers and suppliers in foreign markets. Carrère, & Schiff, (2005).

LnFDI Ethiopia's top export commodities are affected by FDI in a way that indicates how favorably capital inflows affect the nation's export performance. The outcome was consistent with the hypothesis and was statistically significant at the 5% level. The coefficients of this variable, which are .1453228, indicate that, on average, during the study period, a one percent increase in the ratio of foreign direct investment to GDP increases the ratio of exports to GDP by .1453228 percent. This result is consistent with both theoretical viewpoints and empirical studies that have been done in the past. For instance, in their study, Grosse and Trevino (1996) discovered a favorable link between LNFDIGDP and export performance. In a similar vein, a study carried out in the Netherlands by Skosan & Kabuya (2014) supports the

The spillover theory: This theory argues that FDI can positively affect export performance by transferring technology and knowledge to domestic firms. This can help domestic firms to improve their productivity and competitiveness, which can lead to an increase in exports. Balasubramanyam, & Balakrishnan, (1991)

The competition theory: This theory argues that FDI can positively affect export performance by increasing competition in the domestic market. This can force domestic firms to become more efficient and innovative, which can lead to an increase in exports Dunning, J. H. (1993).

A long-term relationship between the current account balance and the modelled explanatory variables is confirmed by the coefficient of error correction model (ECM (-1)), which was revealed negative and significant even at the 1% level of critical value based on the ADRL Model results shown in table 4.5 above. The current account is implied to moderately adjust to its long run path over the course of a year by the negative and considerable coefficient of the error correction model term.

4.5.3 The sign of the hypotheses

The sign of the hypotheses is as expected and the decision for alternative hypothesis is accepted.

Table 4, 5: sign of the hypotheses is as expected

Variables	Level	Expected sign	Actual sign	Alternative hypothesis decision
lnREER	Real effect of exchange rate	Positive +	Positive +	Accepted
lnInfrast	Infrastructure	Positive +	Positive +	Accepted
lnMKTSIZE	Market size	Positive +	Positive +	Accepted
lnIXGDP	Economic openness	Positive +	Positive +	Accepted
lnEXDIVERSit	Export diversification	Positive +	Positive +	Accepted
lnFDI	Foreign direct investment	Positive +	Positive +	Accepted

From table the sign of the hypotheses is as expected and the decision for Alternative hypothesis is accepted.

4.6 Post Estimation Diagnostic Test for the ARDL Model

It is crucial to carry out the post estimation test in order to rely on the accuracy of the ARDL model estimate of the long run and short run models. Accordingly Multi-co Linearity, Test Correlation, Heteroskedasticity test, Normality test, Autocorrelation Test, Ramsey RESET

4.6.1 Multi-co Linearity Test

Multi collinearity is a situation where a high correlation between the explanatory variables is observed in multiple regression models and it is the sign of lack of independence between the explanatory variables in the time series data. In the presence of highly and perfectly correlation among the explanatory variables we may encounter the problem of multi collinearity. If there are multi collinearity issues among the explanatory variables, the problem of having large standard errors for the regression coefficients, as well as large variances may arise Asterio, D., & Hall, S. G. (2007).

As the presence of high Multicollinearity involves the large standard errors, larger confidence interval for the relevant parameters and small t-values as well make R-square higher may arise, so that it may mislead the outcome of the regression Gujarati, D. N. (2004).

The variance inflation factor (VIF) displays a mean VIF of less than 2.01 for the entire set of variables. The more problematic or collinear the variables, the higher the value of VIF, and, generally speaking, a VIF more than 10 is inappropriate. Gujarati, D. N. (2009).

Therefore, from the above table we can conclude that the mean value of VIF for this study is 3.38 which is less than 10, revealing that there is no as such higher multicollinearity.

Table 4, 6: Multi-co Linearity Test

Variables	VIF	1/VIF
lnInfrast	6.56	0.152364
lnREER	5.99	0.166962
lnFDI	2.19	0.456941
lnMKTSIZE	2.07	0.482871
lnIXGDP	1.76	0.566775
lnEXDIVERSit	1.68	0.595110
Mean VIF	3.38	

4.6.2 Correlation

A correlation matrix among the independent variables used in the model is used to identify the presence of a strong multicollinearity problem, as it is presented in chapter three. The authors Asterio, D., and Hall, S. G. (2007). If the correlation coefficient between the explanatory variables is larger than 0.9, the model is likely to be very multicollinear.

Table 4, 7: Correlation

Corr	lnREER	lnMKTSIZE	lnInfrast	lnFDI	lnEXDIVERSit	lnIXGDP
lnREER	1.0000					
lnMKTSIZE	-0.3158	1.0000				
lnInfrast	0.8625	-0.5055	1.0000			
lnFDI	-0.0171	-0.4787	0.2488	1.0000		

lnEXDIVERSit	-0.0831	-0.3610	0.0039	0.5511	1.0000	
lnIXGDP	-0.4987	0.2375	-0.3460	0.2865	0.2599	1.0000

The correlation coefficient measures the strength and direction of the linear relationship between two variables. Here's an interpretation of the correlation matrix

LnREER, lnMKTSIZE lnInfrast lnFDI lnEXDIVERSit lnIXGDP has a correlation coefficient of 1.0000 with each variables relationship with own variables, which is expected as it represents the correlation of a variable with itself. lnMKTSIZE has a negative correlation (-0.3158) with lnREER. This suggests a weak negative linear relationship between market size and real effective exchange rate, lnInfrast positive correlation (0.8625) with lnREER. This indicates a positive linear relationship between infrastructure and real effective exchange rate, lnFDI has a weak negative correlation (-0.0171) with lnREER. The correlation suggests a weak negative linear relationship between foreign direct investment and real effective exchange rate, lnEXDIVERSit has a weak negative correlation (-0.0831) positive correlation (0.8625) with lnREER. This indicates a positive linear relationship between infrastructure and real effective exchange rate with lnREER. This indicates a weak negative linear relationship between export diversification and real effective exchange rate, lnIXGDP has a negative correlation (-0.4987) with lnREER. This suggests a moderate negative linear relationship between the index of GDP and real effective exchange rate

4.6.3 Heteroskedasticity test

Heteroskedasticity is one of the classical linear regression models which define the error term “ U_i ” to possess the homoscedasticity, which means having all the same variance (δ^2) and the variance of u_i is the same for all observations. However, whenever the variance is varying from observation to observation, we may encounter the problem of having non-constant or different variances in our model, thus we may have heteroscedasticity rather than having homoscedasticity. In the presence of heteroscedasticity, the ordinary least square estimators (OLS) of the population parameters may be unbiased and consistent at the same time, while the standard errors of parameters will be biased and inconsistent. Therefore, if we have the problem of heteroscedasticity in our model, our model will not be the best linear unbiased estimators. The consequence with having the issues of heteroscedasticity is that our hypothesis will not be valid, reliable and will result in misleading outcome and conclusion, because of the wrong standard error observed. Gujarati, D. N. (2004).

Test Breusch-Pagan/Cook-Weisberg test for heteroscedasticity was used for testing whether the error variances are constant or not. As shown in, it's null hypothesis (error variance are homoscedastic) was rejected because statistically significant (Prob> chi2 = 0.00) at 5% level of significance. The result shows that the error variances are heteroscedasticity (not constant). As a result the estimator was measured using cluster robust standard error for avoiding the heteroscedastic problem Shepherd, B. (2012).

The heteroscedasticity assumption is one of the CLRM assumption and it is assumed that if the variance of the error term is not constant it is said to be heteroscedasticity. Assuming the homoscedasticity disturbances, when the presence of heteroscedasticity will result in consistent estimates of the regression coefficient, but this estimates will not be efficient. The loss of efficiency will lead to biased standard error and hence the inference from the estimate becomes invalid. In this study the Breusch, T. S., & Pagan, A. R. (1980).

Ha: Alternative hypothesis

H1: Heteroskedasticity

Table 4, 8 : Heteroscedasticity Test

Breusch-pagon/ cook-weisberg test for heteroscedasticity	
Ho constant variance	
Variables: fitted values of Lntotal top ten export value	
Chi2(1)	0.020
Prob>chi2	0.8871

The result of Breusch-Pagan indicates that prob > chi2 =0.08871 and chi2(1) =0.020 Therefore, as the value of prob>Chi2 is greater than 5% of significance level which is 0.08871, we can conclude that Model does not exhibit the problem of heteroscedasticity and we fail to reject the Alternative hypothesis of Homoscedasticity

4.6.4 Normality test

Normality test is one of the assumptions considered in classical linear regression model and it assumes that the residual of the model is independently and normally distributed around zero mean and constant variance or $u \sim N(0, \delta^2 U)$ Wooldridge, J. M. (2018).

The assumption of normality is used to conduct statistical tests for the parameter estimates and to construct the confidence intervals. If we violate the assumption of normality, the problem

regarding the statistical tests may arise, and it makes difficult to determine whether the model coefficients from regression results are different from zero and hinder us to calculate the confidence intervals. Therefore, the statistical reliability of the parameter will not be assessed in the presence of violation of the assumption of normality Gujarati, D. N. (2004).

Table 4, 9: Normality test

Skewness /kurtosis tests for normality					
Variables	Obs	Pr(Skewness)	Pr(kurtosis)	Adj chi2(2)	Prob>chi2
E	27	0.4041	0.4566	1.35	0.5094

The above table as well included 35 observations into consideration and the probability of Skewness is normally distributed because p-value of Skewness is greater than the p value of 0.05, which is in our case 0.4041 (Probability of Skewness >0.05). The probability of Kurtosis also indicates that it is normally distributed with the 0.4566 p-value of kurtosis which is greater than 0.05 (p-value of kurtosis > 0.05). The chi (2) has also insignificant at 5% level with the value of 0.5094. Thus, as the p-value is more than the chi(2) value, In light of the Skewness test for normalcy, we may say that the alternative hypotheses for the existence of normality are accepted. As a result, the assumption of normal distribution of the disturbance term (error term) or residuals is not broken. Furthermore, both individual and combined skewness and kurtosis for models are acceptable.

4.6.5 Autocorrelation Test

The classical linear regression model assumes that the covariance among the error or disturbance terms over time is zero, and this assumption implies that the disturbances are not correlated with one another. Whenever the errors are correlated with one another, we call this error are serially correlated. The presence of serial correlation causes the ordinary least square to be no longer minimum variance estimator and lead the estimated variances in the regression coefficient biased. Once the estimated variance is biased, we will end up with unreliable hypothesis testing and wrong significance level from t-statistics, which means the t-statistics, will give us wrong information about the significance level. This is therefore why we need to test for the autocorrelation tests Brooks, C. (2019).

This study used Breusch-Godfrey serial correlation Lagrange multiplier (LM) test, to test for the relationship among residual and its immediately previous value or lagged value. The advantage

of using Breusch-Godfrey over Durbin Watson test is that Breusch-Godfrey is less sensitive to the normal distribution of residuals assumption, it has also a merit of testing for serial correlation by a number of lags which means the correlation among the residuals at time t and $t-k$, where k represents number of lags. If $\text{Prob} > \chi^2$ is less than 5% of significance level the Alternative hypothesis of no serial correlation can be rejected Sukati, & Masuku,(2017).

The Alternative hypothesis under Breusch-Godfrey test is no serial correlations between the residuals. If the P-value of the observation R^2 is less than 5%, the Alternative hypothesis of no serial correlation will be rejected Sukati, & Masuku,(2017).

H_a : No Serial Correlation; the residuals at time $t-1$ and t are independent of each other.

H_1 : Serial Correlation

If we reject the Alternative hypothesis this will be an evidence for existence of relationship among the successive residuals.

Table 4, 10: Autocorrelation Test

Bresusch-godfrey LM test for autocorrelation			
Lags (p)	Chi 2	Df	Prob >chi2
1	0.315	1	0.5743

Indicates the results of autocorrelation for Model, accordingly the value of $\text{prob} > \chi^2$ (0.1512) is greater than 5% of significance level. Therefore, we failed to reject the Alternative hypothesis, and believed that there is no serial correlation among the residuals for this study.

4.6.6 Ramsey Reset

The Ramsey RESET test was performed to find out the stability of the model. Ramsey RESET test was aimed at testing for specification errors or non-normality which violate the assumption that the disturbances are distributed $N(a, 1)$. It tests for the omitted variables (that is; the vector of the regressors does not include all relevant variables), incorrect functional form and the correlation between the dependent and independent variables. Under such specification errors, Ordinary Least Squares estimators would be biased and inconsistent, and conventional inference procedures would be invalidated (Ramsey, 1969). The alternative hypothesis that the model is stable (H_a : Model is stable) was tested against the non-stable hypothesis of no stability in the model (H_1 : No stability in the model). The alternative hypothesis is rejected in favour of the non-stable hypothesis if the probability F-statistic of the Ramsey RESET test statistic is significant at five percent.

Table 4, 11: Ramsey RESET

Reset test using powers of the fitted values of Intotaltoptenexportvalue	
Ho model has no omitted variables	
F (3,17)	2.23
Prob > F	0.1214

Chapter Five

Summery, conclusion and Recommendation

5.1 Introduction

The primary goal of the study is to evaluate The Determinants of Export Performance of Ethiopia's top ten export Commodities. As a result, the earlier chapter's analysis and interpretations were used to form the following summary, conclusion recommendations, and direction for future researchers.

5.2 Summary

The main goal of the study is to assess the factors that influence the performance of Ethiopia's top ten export commodities. To accomplish this, a quantitative research methodology was used to examine six explanatory variables and the actual effects of the exchange rate, infrastructure, economic openness, market size, export diversification, and foreign direct investment.

In order to investigate the variables influencing export success and give support for the top ten export commodities, the study analyzed secondary data collected from diverse sources over a 35-year period (1988 to 2022).

The study reviewed the data and identified the variables that influenced Ethiopia's top export commodities using a variety of tests, including checks for stationarity and normality. The data were analyzed using the ARDL model, heteroscedasticity, multicollinearity, autocorrelation, and multiple regression. Eventually,

The genuine impact of the exchange rate, infrastructure, economic openness, market size, and export diversification on Ethiopia's top commodities export performance is favorable and considerable. On the other hand, long-term performance of Ethiopia's key commodities exports

is positively but marginally impacted by foreign direct investment. According to ARDL model regression, infrastructure and foreign direct investment have a positive short-term impact on Ethiopia's top commodity export performance. The study discovered generally that

5.3 Conclusion

Exports are essential for maintaining a positive trade balance and driving economic growth. There are advantages to exporting that come from exporting trade. These advantages include boosting factor productivity, effectively allocating resources, and maximizing capacity utilization through economies of scale.

The majority of Ethiopia's exports are agricultural products. Despite the difficulties and uncertainties associated with exporting basic agricultural items, the country is heavily dependent on these goods. The nation's export performance has been seriously hurt by the restriction of exports to basic goods since more than three decades ago, the absence of value addition, and the unavailability of numerous commodities. Time series analysis was used in a study to look at the export performance of Ethiopia's top ten export goods. According to the study, the country's export performance was directly correlated with the real effect exchange rate (REER), export diversification, market size, foreign direct investment, economic openness (I XGDP), and infrastructural characteristics. These elements help the nation's export performance to improve. Considering inferential statistics,

5.4 Recommendation

Just as export is the cornerstone of a nation's economic viability, economic growth, and technological advancement, export is shaping our production system at the national level to make available across the boundary for economic growth, job creation, improving living standards, and controlling the market. .

Localized economic markets before developing indigenous industries deal with unfairly intense global competition. The difficulty of making our own decisions forces us to alter how we normally make decisions. As a result of Localized economic, neighboring nations can cooperate on a common basis in accordance with the agreements they have made, which will simplify matters for member nations and improve the business climate with the aim of boosting developing nations' export performance. In order to advance into the difficult path of international exports and compete with marketers who are well-versed in this field, emerging

nations must start from the bottom up or where they can battle for it. Countries that are more open to trade tend to have higher export performance. This is because they have access to a wider range of markets and can benefit from economies of scale. Countries can open up their economies by reducing tariffs and other barriers to trade. They can also sign free trade agreements with other countries.

According to the comparative advantage theory, nations should create and export commodities in industries in which they are competitively superior. In the export of primary goods, Ethiopia enjoys a significant comparative advantage. However, Ethiopian exports of raw materials and other basic items have little to no effect on their capacity to expand. For their economic development, some Sub-Saharan African nations rely on basic commodities. Beyond just exporting raw materials, the nation should take part in markets that help to share output in order to stabilize the economy.

The transportation infrastructure is one of the main impediments to trade, competitiveness, and sustainable development in most SSA countries, particularly the landlocked and very poor. Improving the infrastructure will improve transportation services, as well as exports, in SSA countries

The manufacturing sector in this nation is among the least developed in terms of product volume and quality, technological advancement, talent level, and export capacity. The country is also among the least industrialized. This is partly because manufacturing is the least developed sector and has the most fundamental flaws. The structure of the national economy is altered by industrialization. Industrialization takes time to take place. Industrialization therefore requires time. Industrialization is essential for improving export performance and lowering the unemployment rate, and manufacturing is a key component of that process. Industrial sectors also play a crucial role.

A nation must diversify its products if it wants to boost exports. Trade diversification and domestic production diversification are two connected aspects of diversification, according to this theory (exporting new or better products or to new markets). The majority of exports are made up of just a few products, therefore expanding the export mix might deepen and speed up economic growth. The country can generate new ideas by achieving economies of scale by effectively meeting the demands of the integrated market and cross-border markets. To remain

competitive in the market and attract clients, one must possess the ability to invent, innovate, and launch new products. There will be rivalry in the market if it is open to foreign trade. To increase the return.

Export diversification is the process of promoting a variety of goods and services in several countries. This can increase a country's export potential and reduce the risk of economic instability by decreasing the risk that a nation will be influenced by changes in supply or demand in a single market. According to export diversification refers to the move from "traditional" to "non-traditional" exports. Developing countries should diversify their exports since this can help them overcome export instability and intensify and accelerate economic growth.

Integrated economies between developing nations does not imply a change in the volume of commerce with developed nations, but rather a shift in the nature of that trade so that developing nations can engage in more open trade with wealthy nations. Countries can stop importing everything from foreign markets if their economic integration is strong. As a result, the integration will promote the shift in the production aim to include the sector that increases productivity rather than focusing on exporting primary goods. Target large markets are more likely to have higher export performance. This is because there is a larger pool of potential buyers in these markets. Countries can target large markets by participating in trade fairs and exhibitions in these markets. They can also set up offices in these markets to promote their products and services

5.4 Direction Future Research

The export experience and potential limited on primary commodities it needs deep work to improve the country export performance it is advisable to see in different perspective for getting clear picture about the export performance, when researchers deal more about this export issue it provide room for clear export awareness, so the area of the study needs further studies because it is constrictive to improve the export potential.

The quality of the country's goods and services, marketing, and trade policy, among other factors that may have an impact on export performance, were not included in this study. The next study should consider including these factors under control.

Impact of different levels of economic development on export performance. It would be interesting to see how the level of economic development affects export performance

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Appendixes

```
. tsset year
      time variable: year, 1988 to 2022
              delta: 1 unit
```

```
. sum year
```

Variable	Obs	Mean	Std. Dev.	Min	Max
year	35	2005	10.24695	1988	2022

```
. sum lnTotaltoptenExportvalue lnREER lnMKTSIZE lnInfrast lnFDI lnEXDIVERSit lnIXGDP
```

Variable	Obs	Mean	Std. Dev.	Min	Max
lnTotaltoptenExportvalue	35	15.91623	1.775862	12.53906	18.8928
lnREER	35	4.973336	.3235782	4.540999	5.842147
lnMKTSIZE	34	2.147721	.4619965	1.552535	3.317999
lnInfrast	32	2.887211	.3359166	2.397895	3.470118
lnFDI	31	.4105902	1.712054	-6.42525	1.71851
lnEXDIVERSit	28	-.240025	.0776696	-.6050923	-.1638728
lnIXGDP	35	3.421785	.4044635	2.382387	3.923539

. varsoc lnFDI

Selection-order criteria

Sample: 1996 - 2022

Number of obs = 27

lag	LL	LR	df	p	FPE	AIC	HQIC	SBIC
0	-28.0693				.50431	2.15328	2.16755	2.20127
1	-23.801	8.5365	1	0.003	.39597	1.91119	1.93973	2.00718
2	-23.6116	.37887	1	0.538	.420746	1.97123	2.01404	2.11521
3	-20.2924	6.6384*	1	0.010	.354785*	1.79944*	1.85652*	1.99141*
4	-20.2833	.01808	1	0.893	.38262	1.87284	1.9442	2.11281

Endogenous: lnFDI

Exogenous: _cons

. varsoc lnEXDIVERSit

Selection-order criteria

Sample: 1999 - 2022

Number of obs = 24

lag	LL	LR	df	p	FPE	AIC	HQIC	SBIC
0	49.2188				.001053*	-4.01823*	-4.00521*	-3.96915*
1	50.2128	1.988	1	0.159	.001054	-4.01773	-3.99169	-3.91956
2	50.7382	1.0509	1	0.305	.001097	-3.97818	-3.93912	-3.83093
3	50.8503	.22424	1	0.636	.001184	-3.90419	-3.85211	-3.70785
4	51.18	.6593	1	0.417	.001256	-3.84833	-3.78322	-3.6029

Endogenous: lnEXDIVERSit

Exogenous: _cons

. varsoc lnMKTSIZE

Selection-order criteria

Sample: 1992 - 2021

Number of obs = 30

lag	LL	LR	df	p	FPE	AIC	HQIC	SBIC
0	3.61533				.049183	-.174355	-.159414	-.127649
1	31.609	55.987	1	0.000	.008135	-1.97393	-1.94405	-1.88052
2	35.2179	7.2177*	1	0.007	.006839*	-2.14786*	-2.10303*	-2.00774*
3	35.8657	1.2956	1	0.255	.007008	-2.12438	-2.06461	-1.93755
4	36.1301	.52878	1	0.467	.007372	-2.07534	-2.00063	-1.84181

Endogenous: lnMKTSIZE

Exogenous: cons


```
. corr lnREER lnMKTSIZE lnInfrast lnFDI lnEXDIVERSit lnIXGDP
(obs=27)
```

	lnREER	lnMKTS~E	lnInfr~t	lnFDI	lnEXDI~t	lnIXGDP
lnREER	1.0000					
lnMKTSIZE	-0.3158	1.0000				
lnInfrast	0.8625	-0.5055	1.0000			
lnFDI	-0.0171	-0.4787	0.2488	1.0000		
lnEXDIVERSit	-0.0831	-0.3610	0.0039	0.5511	1.0000	
lnIXGDP	-0.4987	0.2375	-0.3460	0.2865	0.2599	1.0000

```
. estat hettest
```

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
 Ho: Constant variance
 Variables: fitted values of lnTotaltoptenExportvalue

chi2(1) = 0.02
 Prob > chi2 = 0.8871

```
. sktest e
```

Skewness/Kurtosis tests for Normality

Variable	Obs	Pr(Skewness)	Pr(Kurtosis)	joint	
				adj chi2(2)	Prob>chi2
e	27	0.4041	0.4566	1.35	0.5094

```
. estat bgodfrey,lag(1)
```

Breusch-Godfrey LM test for autocorrelation

lags (p)	chi2	df	Prob > chi2
1	0.315	1	0.5743

H0: no serial correlation

. . ardl lnTotaltoptenExportvalue lnREER lnMKTSIZE lnInfrast lnFDI EXDIVERSit lnIXGDP, maxlags(1,0,1,1,1,0,0) ec

ARDL(1,0,0,1,1,0,0) regression

Sample: 1993 - 2021 Number of obs = 29
R-squared = 0.7560
Adj R-squared = 0.6404
Log likelihood = 16.706473 Root MSE = 0.1680

D.		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
lnTotaltoptenExportvalue							
ADJ							
lnTotaltoptenExportvalue							
	L1.	.4193153	.1015198	4.13	0.001	.6317988	.2068318
LR							
	lnREER	3.059449	.9610651	3.18	0.005	1.047917	5.070982
	lnMKTSIZE	1.78963	.8513478	-2.10	0.049	-3.571522	-.0077387
	lnInfrast	2.464774	.6215962	3.97	0.001	1.163758	3.76579
	lnFDI	.2879193	.1995337	-1.44	0.165	-.7055481	.1297096
	EXDIVERSit	1.515227	.7765189	1.95	0.066	.1100455	3.1405
	lnIXGDP	2.98448	.5823415	5.12	0.000	1.765625	4.203335

SR		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
lnInfrast							
	D1.	-.5834526	.2730697	2.14	0.046	-1.154994	-.0119111
lnFDI							
	D1.	.1453228	.0533707	2.72	0.014	.0336167	.2570289
	_cons	5.702985	2.09497	2.72	0.014	-10.08781	-1.318162

