ST. MARY'S UNIVERSITY

SCHOOL OF GRADUATE STUDIES

THE ROLE OF ETHIOPIAN COMMODITY EXCHANGE ON SALES PERFORMANCE OF COFFEE EXPORT COMPANIES IN ADDIS ABABA

BY

MAEDOT SHEGAW

FEBRUARY, 2024

ADDIS ABABA, ETHIOPIA

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ADVISOR: ALAZAR AMARE(PhD)

A RESEARCH THESIS SUBMITTED TO ST, MARY'S UNIVERSITY SCHOOL OF GRADUATE STUDIES IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTERS OF ART BUSINESS ADMINSTRATION

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DECLARATION

I, the undersigned, declare that this study entitled ***"The Role of Ethiopian Commodity Exchange on Sales Performance of Coffee Export Companies in Addis Ababa."*** submitted by me for the award of the Degree of Masters of Business Administration in St Mary's University at Addis Ababa, is my original work and has not been presented for a degree in any other university, and that all sources of materials used for the study have been duly acknowledged.

Researcher's Name	Date	Signature
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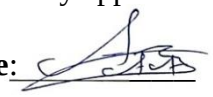
This thesis has been submitted for examination with my approval as university advisor.

Name: Alazar Amare (PhD) **Signature**:  **Date**: 07/02/2025

CERTIFICATION

This is to certify that this study, ***"The Role of Ethiopian Commodity Exchange on Sales Performance of Coffee Export Companies in Addis Ababa"***, undertaken by MAEDOT SHEGAW for the partial fulfillment of Masters of Business Administration (MBA) at St Mary's University, is an original work and not submitted earlier for any degree either at this University or any other University.

Research Advisor: Alazar Amare (PhD) **Signature**:  **Date**: 07/02/2025

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ACRONYMS AND ABBREVIATIONS

ECX - Ethiopian Commodity Exchange

EIA - Ethiopian Investment Agency

FAO - Food Aid Organization

GDP - Gross Domestic Product

SPSS - Statistical Package for the Social Sciences

STP - Straight Through Process

UNCTAD - United Nation Conference on Trad and Tourism

VIF - Variations Inflation Factor

ABSTRACT

Commodity exchanges have crucial roles in the economic development of a nation at large and in the financial and non-financial developments of their market actors. Exporters of commodities as market actors of commodity exchanges are expected to benefit from agricultural commodity exchanges. The purpose of this paper was to examine "The role of Ethiopian Commodity Exchange (ECX) on sales performance of coffee Export companies in Addis Ababa. A systematic questionnaire was developed to assess the role of ECX from the viewpoint of its members involved in exporting coffee. A quantitative research methodology and explanatory research design was employed, and hypotheses were evaluated using a sample of 344 coffee exporters associated with ECX. From the 344 questionnaires distributed, valid responses were obtained from 287 participants, resulting in a response rate of 84%. The data were analyzed using descriptive statistics, correlation & regression. The findings of descriptive statistics of the independent variables showed that warehousing scored the highest rating with a mean value of 3.52 while the remaining variables also scored mean value above 3.40 this shows that, functions of ECX were perceived to be satisfactory to the members .The correlation analysis indicates a positive relationship among central trading, warehousing delivery, clearing transaction services, arbitration tribunal, and marketing information, with respective correlation coefficients of 0.572, 0.573, 0.512, 0.681, and 0.598. Additionally, the multiple regression analysis shows that these factors account for 54.4% of the variation in the export sales performance of coffee exporters as evidenced by an R square value of 0.544 and an adjusted R square value of 0.536.

***KEY WORDS**: Centralized Trading, Warehousing, Clearing Transaction, Arbitrational Tribunal, Marketing Information, Export Sales Performance*

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

For emerging nations, achieving quick economic growth and development is the most significant and crucial goal. Increased participation in international trade enables them to achieve their objective of rapid growth. Modern trade agreements must be effective in supplying commodities to the global market as the market expects standardized goods abided by the contact agreements. One of the best platforms for reducing transactional risks is the commodity market. Commodity exchanges are markets where many buyers and sellers are simultaneously active, entering into spot transactions or derivatives transactions. Nonetheless, the performance of exports is severely hampered by the inefficiency and lack of reliability of commodity exchange platforms in developing nations results in adversely affect the economy of the host nation at large (Lakshmi, 2017).

Commodity exchanges are institutions that facilitate international trade by creating and enforcing property rights and governing contractual relationships between commodity buyers and sellers which makes the exchange very successful (Jerry, 2016). Rashid (2015) also defines commodity exchange as a centralized location where buyers and sellers carry out transactions, with or without physical commodities, under a set of clearly defined rules and regulations. A commodity exchange is an institutional response, at a basic level, to the fundamental problem of achieving self-coordinating international market order in the trade of agricultural products, which by their nature, are risky.

Cross-border trade specialization yields significant economic benefits, and exports are frequently considered as a driving force behind the economic expansion. The function of exports in fostering such economic growth and development of a nation mostly depends on organized trade in the globalized commodity exchange (Ramos, 2020). Lakshmi (2017) explains export growth is frequently regarded as a key factor in the expansion of an economy's output. Basically, the exchange platforms are designed to provide quality service and add value to all market players through addressing risks of contract performance and default on physical delivery/ payments (Ramos, 2018).

Several recent empirical studies (Anderton, 2019, Funke, 2021; Hummels, 2020,) support the positive effect of commodity exchange platforms on export performance with regards facilitating the supply of improved product quality. Specifically, Anderton (2017) using investment and technology as proxy for effective commodity exchange services, found a significant influence on export trade. Funke and (2021) showed that an increase in the quality of exchange services of Eastern Asian countries contributed to a considerable rise in their exports. In the case of developing countries like South Africa, Peterson (2017) suggested that there is a significant positive relationship between commodity exchange service differentiation and export performance, since the variable used as a proxy for price competitiveness of the exporters is also a direct index of service quality.

The commodity exchange assures all commodity market players the security they need in the market through providing a secure and reliable end-to-end system to facilitate commodity's handling, grading, and storing products. Matching contract offers and bids, facilitating a risk-free payment and providing efficient delivery system to settle transactions are some of their core missions to serving all parties fairly and efficiently (Ahmed, 2017). The welfare effects from trade, as identified by the "New Trade Theory" can be attributed lower structural costs due to liberalization and expansion of international trade results in lowering transactional costs due to enhanced quality exchange service (Gilbert, 2019; Lakshmi, 2019; Sudhakar, 2020).

Nonetheless, unfortunately agricultural commodity exchange traders in developing countries have become known for insufficient or delayed market information, unstable price, poor quality, and lack of trust among trading partners despite high demand of their products in the international market (Anderton, 2019; Ahmed, 2017). Despite different set of problems, notably faster transmission of international price volatility to domestic markets, and restriction in providing subsidy supports, the delivery of quality service by agricultural commodity traders considerably influences the performance of exporters (Lakshmi & Sudhakar, 2017). In some countries like Ethiopia, agricultural commodities in particular should undergo through Ethiopian Commodity Exchange (ECX) or else no other ways to transact. Thus, failure in delivering quality service in such decisive platforms could have huge adverse impact on the exporters' performance. The purpose of this study is, thus, to investigate the role of commodity exchange service and their effects on exporter's sales performance.

1.1.1 Company Background

Ethiopia Commodity Exchange (ECX) is among the majors agricultural marketing in Ethiopia that has been undergone several transformations over the decades. ECX the first of its kind in Africa, was formed in 2008 to address the problems of market access and market infrastructure primarily for grain farmers (Eleni, 2009). It is a new initiative for Ethiopia and the only marketplace for exchanging agricultural commodities and subsequently became solely responsible for grain products such as coffee, sesame, Red Kidney Bean, Soyabeans, Chicken peas, and other oil-seed products.

The ECX platform is basically meant for assuring security of all commodity market players through providing a secure and reliable End-to-End system for handling, grading, storing, matching offers and bids for commodity transactions. It also provides a risk-free payment and goods delivery system to settle transactions, while serving all fairly and efficiently. Facilitating organized and centralized trading for buyers and sellers with a predefined legitimate-contacts enhances the performances of local exporters. It aims to provide trading ground for sesame haricot beans, maize, wheat and coffee. In this regard, the ECX is supposed to mainly guarantee market integrity, guaranteeing the product grade and quality and operating a system of daily clearing and settling of contracts; efficient coordination of buyers-sellers and standardized contracts; market transparency; disseminating market information in right time to all markets players; and managed risks.

1.2 Statement of the Problem

Now a day, the exchange is characterized by lack of transparency of the overall service delivery, failure in guaranteeing product grade, poor quality inspection, on-time delivery and operating system of daily clearing and settling of contacts (Melsew,2015). Consequently, they are subjected to unnecessary market risks, the risk of adverse unforeseen price movements or changes in supply and demand within a fraction of seconds. As a result of many constraints commodity exchanges have not lived up to expectation of the exporters in terms of technology modesty, grading system, warehousing facility, staff's competency, service charges and timeliness results in critically hurts the exporters' performances in terms of achieving their targeted sales volumes, sales growth and profitability at large (Etsehiwot, 2019).

A Commodity Exchange is fundamentally designed to provide service and add value to all market players. It adds value to the market by addressing risks of contract performance and default on physical delivery/ payments. However, according to Ethiopian Chamber of

Commerce report (2019), local exporters often bitterly complain against the bureaucratic hassles, lack of transparency of the overall service delivery, failure in guaranteeing product grade, poor quality inspection, on-time delivery and operating system of daily clearing and settling of contacts. Thus, exporters particularly in developing countries, are subjected to unnecessary market risks, the risk of adverse unforeseen price movements or changes in supply-demand within a fraction of seconds (Isaac, 2011). As a result of many constraints, commodity exchanges haven't lived up to expectation of the exporters in terms respecting the contracts of their agreements.

Previous studies revealed that commodity exchange plays significant role on the enhancement of export performance both in developed and developing economies. For instance, a study by Sahadevan (2016) on the impact of commodity exchange on the export performance of oil-seed exporters in Malaysia. He identified that warehousing and grade certification had the highest effect on organizational profitability of the exporters. Similarly, Paul (2019) investigated the role of commodity exchange platforms on the financial performance of mineral producing companies in East Europe. The study concluded that the exchange market provides value-added services to all market players by mitigating contract performance and physical delivery/payment risks. According to Eleni (2001), who studied the importance of agricultural commodity exchange market platform in Ethiopia, concludes establishing market institutions such as grain exchanges reduces transaction costs (costs related to market search time, search labor and cost of holding working capital during market search).

Commodity derivatives have a crucial role to play in managing price risk especially in agriculture dominated economies (Sahadevan, 2002). Properly functioning commodity exchanges can promote more efficient production, storage, marketing and Agro-processing operations, and improved overall agriculture sector performance. Despite its establishments and subsequent system improvement, there is no adequate studies that examine the relationship between commodity exchange and exporter performance in developing economies' context.

The aim of this study is therefore to investigate the role of commodity exchange service and their effect on exporters' performance taking selected coffee exporters in Addis Ababa as a case. Perception of coffee exporters will be considered regarding grade certification, warehousing, communication, technology adoption, corporate governance and service charges. Data on these factors help examine the effect of these factors on non-financial sales performance of the exporters. The output of this research is believed to fill this gap identified by validating the relationship between ECX functions and sales performance of coffee exporter.

But the main question how the quality of the agricultural commodity exchange service dimensions does affect the sales performance of exporters? This can be achieved by answering the research questions.

1.3 Objectives of the Study

1.3.1 General Objective

The main objective of this study is to investigate the role of ECX service and their effects on sales performance of selected coffee exporters in Addis Ababa.

1.3.1 Specific Objectives

To attain the general objective, the following objectives need to be addressed specifically to:

1. Examine the effect of central trading service on coffee exporters' sales performance.
2. Evaluate the influence warehousing on coffee exporters' sales performance.
3. Analyze the effect of clearing transaction on coffee exporters' sales performance.
4. Examine the effect of arbitration tribunal service on coffee exporters' sales performance.
5. Analyze the effect of marketing information on coffee exporters' sales performance.

1.4 Research Questions

1- How does central trading service affect the sales performance of coffee exporters?
2- What is the effect of warehousing delivery service on the exporter's sales performance?
3- To what extent does the clearing transactions affect the sales performance of coffee exporters?
4- How does arbitration tribunal service influence the sales performance of coffee exporters?
5- What is the effect of marketing information delivery on the exporter's sales performance?

1.5 Research Hypothesis

H1 – Central trading service has a positive and significant effect on sales performance.

H2 – Warehousing delivery has a positive and significant effect on sales performance.

H3 – Clearing transaction service has a positive and significant effect on sales performance.

H4 – Arbitration tribunal service has a positive and significant effect on sales performance.

H5 – Marketing information has a positive and significant effect on sales performance.

1.6 Significance of the Study

Centralized commodity exchange is a platform known for providing market transparency and can help to reduce transaction costs which is associated with physically inspecting product quality, identifying market outlets, and finding buyers or sellers. Based on this notion, the output of this study is believed to have significant importance for the managements of ECX managements to figure out the service areas which require systematic reform so as to enhance exporter's satisfaction. It may help them to make informed decision on how and which service requires major improvement in the future.

Meanwhile, the exporters will also be beneficiary for the fact that it enhances exporters' competency or reputation in the face of international market arena by supplying quality products with competitive market prices. The study also contributes to exporting firms a number of benefits in terms of providing them accurate and current information along with assuring sufficient supply with real-time price information. Besides, improved ECX services might improve the performance of the producers to promote their production through escalating exporter's demand. The country may gain more growth in GDP via earning revenues from quality product exports

Finally, by fulfilling the aims, this study will be helpful for future study focusing on understanding the concept of the aforementioned variables which results in high or better export performance.

1.7 Scope of the Study

This study will have a conceptual, geographical and methodological content delimitation. Geographically, the study will only cover coffee exporting firms in Addis Ababa for the fact that most (not all) exporters have head-office in the capital city and could be taken as a representative for the exporter population.

Conceptually, it is limited to factor affecting service delivery and their effect on user's performance in terms of central trading, warehousing, transaction clearing, arbitration and marketing information, The research adopts the conceptual framework from literature and it will be limited with this adopted content scope based on the aforementioned key factors that might affect customer's performance.

Methodologically, the scope is delimited to agricultural products, coffee grain in particular. The coffee exporters are chosen as both local exporters and host country importers complaint

is escalating from time to time. The targeted exporters' managers, marketers and agents will be units of measure.

Definition of Key Terms

Export performance: -refers to success of coffee export companies in Addis Ababa in achieving their international trade objectives.

Commodity Exchange (Exchange) - a structured marketplace where standardized agricultural and other commodity contracts are traded under regulated conditions.

Agricultural Commodities - refer to raw or minimally processed agricultural products that are traded in local and international markets.

1.8 Organization of the Study

This study is classified into five main chapters. The first chapter refers introduction of the study which included the background, the problem statement, the research objectives, significance and scope of the study. The second chapter focused on literature review. It contains relevant theories, conceptual and empirical discussions leading to identification of research gaps and the conceptual framework. The third chapter presented the research design, target population, sampling methods, sample size, data collection instruments applied well as method of data analysis and presentation. The fourth chapter presented demographic characteristics, descriptive and inferential statistics analysis, findings and their interpretations. The last chapter consisted summary of major findings, conclusions and recommendations of the research study.

CHAPTER TWO

REVIEW OF THE RELATED LITERATURE

This chapter, review of the related literature, has three major parts: theoretical literature review, the empirical review and conceptual framework of the study. The theoretical review has an introduction followed by the discussion of definition of commodity exchanges, why commodity exchanges and global and domestic coffee market review. The second part of the chapter is the empirical literature review which discusses the benefits of commodity exchanges and review the previous studies conducted on ECX. The conceptual framework and hypotheses are also discussed in the third part of the review of literature.

2.1 Theoretical Review

2.1.1 Commodity Exchanges

Commodity exchange has been defined by different authors and scholars. Eleni (2006) defines commodity exchange as a way of organizing trade between buyers and sellers on the basis of formalized rules and procedures known and agreed upon by all market participants and self-enforced by the members of the exchange themselves who defend the integrity of the market. Another definition by Ngmenipuo and Issah (2015) states that a commodity exchange is an organized marketplace where buyers and sellers come together to trade commodity related contracts following rules set by the exchange. In its wider sense, a commodity exchange is an organized market place where trade, with or without the physical commodities, is funneled through a single mechanism, allowing for maximum effective competition among buyers and among sellers.

Commodity exchanges are private institutions that facilitate trade by creating and enforcing property rights and governing contractual relationships between commodity buyers and sellers which makes the exchange very successful (Jerry, 1991). From the above definitions of scholars about exchange indicated that, it (commodity exchange) can be a means to transform the traditional marketing system to the modern one for facilitating trading. It is "...an organized marketplace where physical commodities are being traded and exchanged" (FAO, 2011). According to Federal Negarit Gazeta (2007), commodity exchange is a place where standardized commodity-linked contracts are traded. A commodity exchange is an institution or system where people who want to sale and make an offer of product that they want to sell. Simultaneously, peoples who wanted to buy also are making bids. The exchange is institution which matches the buyer/producer with the seller, these processes results in the market price

that becomes known to all (Eleni, 2006, cited in Mesay, 2007). Furthermore, According to Alexander and Jerry (2011), exchange is the way of organizing products at market price which is the engine to producers can motivate to supply more of their products to the market and get better returns from it and improve their life expectancy.

In addition to the above, the system helps the members to transfer price risks by having accurate information about the current price of the products, and encouraged to build trust between the producers and buyers and also helps facilitate order and brings integrity in the market (Eleni, 2006). Commodity exchanges can serve a variety of functions related to financing, risk management and marketing. These functions include: managing price risk, reducing counterparty risk, enhancing price transparency, reducing risks related to collateral value, certifying quality of commodities, and providing direct access to capital markets through repos (FAO, 2011). The importance of commodity exchange has an institutional benefit in reducing the transaction costs through the process of buying and selling in the market (UNCTAD, 2009). Reducing the transaction costs for the participants is the main concern for the system of commodity exchange Eleni (2009). Commodity exchanges provide transaction cost falling services, such as property rights definition and contractual enforcement, commodity measurement, and information provision (Jerry, 1991).

2.1.2 Electronic Trading

Technology plays three main roles in futures trading: providing general information such as price, volume, and news; routing orders; and matching orders. The extent of the automation generally falls between two extremes: the first would be where pit traders obtain only electronic news but trade in open outcry, while in the other, the physical trading pit is completely eliminated, and orders are entered and matched via a computer network (Tsang 1999). According to Gorham and Singh (2009) the term “electronic trading” encompasses a wide variety of systems, ranging from simple order transmission services to fully fledged trade execution facilities.

An electronic trading system is a facility that provides some or all of the following services: electronic order routing (the delivery of orders from users to the execution system), automated trade execution (the transformation of orders into trades) and electronic dissemination of pre-trade (bid/offer quotes and depth) and post-trade information (transaction price and volume data). These systems have found wide acceptance in fixed income and foreign exchange markets in recent years and can affect the market’s structure and its dynamics.

In contrast to the broad definition, a narrow definition of electronic trading systems is limited to facilities that automate all aspects of the trading process, including trade execution. The architecture of fully automated systems is often complex and differences between the various systems can be quite subtle.

Electronic trading is both location-neutral and allows continuous multilateral interaction. For trading purposes, the common physical location of users is unnecessary as long as they can connect to the system. Consequently, electronic trading systems facilitate cross-border trading and cross-border alliances and mergers between trading systems largely than traditional markets. Electronic trading is scalable by increasing the capacity of the computer network. With traditional markets, the size of the floor has to be physically expanded, or the number and/or capacity of intermediaries active in a phone-based market increased a much more costly process (Gorham and Singh 2009). Thus, successful electronic trading systems can potentially exploit economies of scale and reduce operational costs largely than can traditional-markets.

Scalability also tends to widen the reach of dealers, who have access to a far wider customer base than formerly. Electronic trading integrated. Electronic trading potentially allows straight-through processing (STP), which is the seamless integration of the different parts of the trading process, starting from displaying pre-trade information and ending with risk management (Gorham 2009).

2.1.3 Export performance

Export performance can broadly be defined as the outcome of a firm's activities in export markets (Muhamme and Saleem, 2008). Cadogan (2003) define it as the firm’s degree of economic achievement in its export markets. Whereas there is a growing body of literature regarding export performance, its conceptualization and subsequent operationalisation has remained a thorny issue in exporting literature (Diamantopoulos, 1999; Muhammad and Saleem, 2008; Vusi and Kamilla, 2002).

Consequently, several conceptual contributions have appeared seeking to come up with dimensions and measures of export performance. Leonidou (2012) have identified that export intensity, export sales growth, export profit level, export sales volume, market share, and export profit contribution are mostly used measures of export performance. Ayse and akehurst (2013) observe that export performance of a firm can be measured by using subjective and objective measures since research shows that both yield consistent results (Hart and Banbury, 1994; Olipia, 2006).

They noted that objective measures are concerned with absolute performance indicators whereas subjective are concerned with performance of a business in relation to its major competitors or relative to a company's expectations. From these submissions, it can be deduced that export performance is a multi-dimensional concept comprising of a firm's international sales, market share, profitability, growth and export intensity in relation to its competitors.

2.1.4 Benefits of Commodity Exchange

The usefulness of a commodity exchange lies in its institutional capacity to remove or reduce the high transaction costs often faced by entities along commodity supply chains in developing countries (Crentsil, 2013). A commodity exchange reduces transaction costs by offering services at lower cost than that which participants in the commodity sectors would incur if they were acting outside an institutional framework. These can include – but are not limited to – the costs associated with finding a suitable buyer or seller, negotiating the terms and conditions of a contract, securing finance to fund the transaction, managing credit, cash and product transfers, and arbitrating disputes between contractual counterparties. Therefore, by reducing the costs incurred by the parties to a potential transaction, a commodity exchange can stimulate trade. For exchanges that offer spot trade or supporting activities, the institutional function is to facilitate trade, bringing buyers and sellers together, and imposing a framework of rules that provides the confidence to transact (Worku, 2014).

According to Paul (2011), Commodity Exchange is fundamentally designed to provide service and add value to all market players. It adds value to the market by addressing two types of risk namely contract performance risk and the risk of contract default on physical delivery or payment. Market risk is the risk of adverse unforeseen price movements or changes in supply and demand in the future. Eleni (2001) suggested that establishing market institutions such as grain exchanges reduces transaction costs (costs related to market search time, search labor and cost of holding working capital during market search). Commodity derivatives have a crucial role to play in managing price risk especially in agriculture dominated economies (Sahadevan, 2002). Properly functioning commodity exchanges can promote more efficient production, storage, marketing and Agro-processing operations, and improved overall agriculture sector performance. It is precisely because of these benefits that transition and developing economies with large agricultural sectors have embraced commodity exchanges in recent years (Worku, 2014).

2.1.5 Commodity Exchange in Ethiopian Context

Ethiopian Commodity Exchange (ECX), established in 2008, is a new initiative for Ethiopia and the first of its kind in Africa. It is a trading platform where buyers and sellers come together to trade, assure quality delivery and payment. ECX is a state owned public –private partnership enterprise established as a demutualized corporate entity with clear separation of ownership, membership and management and governed by a Board of Directors constituted by relevant public institutions and ECX private members operating through the sale of membership seats, which are privately owned by wholesalers, cooperatives, exporters, processors and food agencies. It is Ethiopia's latest attempt to enhance the performance of agricultural markets. Conceived as a meeting point for buyers and sellers of grains (sesame, haricot beans, maize, and wheat) and coffee, ECX seeks to organise efficient and transparent market operations and thus contribute in solving the country's longstanding problems.

Before ECX was established, agricultural markets in Ethiopia had been characterized by high costs and high risks of transaction forcing much of Ethiopia in to global isolation. With only one third of output reaching the market, only buyers and sellers tended to trade only with those having close information, to avoid the risk of being cheated. This is done on the basis of visual inspection because there was no assurance of product quality or quantity, this droves up market costs leading to high customer prices. Small-scale farmers who produce around 95% of Ethiopia's output came to the market with little information and are at the mercy of merchants in the nearest and only to the market they know; unable to negotiate better prices or reduce their market risk (Worku, 2014, Eleni, 2008). ECX is developing a new method of exchange/marketing system that coordinates better, links faster, and protects of both side of the trade.

The exchange is unique partnership of market actors, members of the exchange, and its main promoter, the government of Ethiopia, where buyers and sellers come together to trade, assured of quality, delivery and payment. ECX represents the future of Ethiopia by bringing integrity, security, and efficiency to the market there by creating opportunities for unparalleled growth in the commodity sector and linked industries such as transport and logistics, banking and financial services, and others (Zelalem, 2016). Its mission is to provide a modern efficient, transparent and reliable market platform to serve the national development goals through adaptation of technology excellence in innovation and integrity (Eleni, 2008). Important values in ECX are to create market integrity between product, actor, and transaction, build balance between all actors, create modernization, and market transformation.

The vision of ECX is to become a leading and dynamic exchange in Africa and to revolutionize Ethiopia's tradition bound agriculture.

According to Goggin (2008), coming to the case of Ethiopia, the decision taken several years ago to start a national commodity exchange had absolutely nothing to do with the current price inflation. Rather, the overriding objective then and now is to ensure a fair, orderly, and efficient marketing system, to encourage smallholder farmers to produce more for the market, to benefit domestic Agro-industry through a more efficient and reliable supply chain, and to enhance Ethiopia's export competitiveness through getting the domestic market in order. Ahmed (2017) identified three categories of problems facing the commodity market. The first category is the absence of integrated commodity marketing policy that addresses all the processes that involve transport, grading, storage and information facilities for the producer as well as for consumer (Ahmed, 2017). The second category is the absence of well-equipped institutional establishment which can provide all marketing services to all market actors. The third category is the absence of private and public partnership in the commodity market (Ahmed, 2017).

Commodity exchanges are established mainly as a response to the above problems. Thus, commodity exchanges are established among other reasons, mainly to respond to the above and related challenges. The primary objectives of any futures exchange are authentic price discovery and an efficient price risk management. The beneficiaries include those who trade in the commodities being offered in the exchange as well as those who have nothing to do with futures trading. It is because of price discovery and risk management through the existence of futures exchanges that a lot of businesses and services are able to function smoothly (Mukesh, 2014). Worku (2014) also indicated that the purpose of a commodity exchange is to provide an organized marketplace in which members can freely buy and sell various commodities in which they have an interest/sake.

The exchange itself does not operate for profit. It is just providing the facilities and ground rules for its members to trade in commodity futures and spots and for non-members also to trade by dealing through a member broker and paying a brokerage commission. The purposes served by a commodities exchange depend in part on the nature of the specific contracts that are traded (UNCTAD, 2009; Worku, 2014). Just by centralizing trade in a commodity an exchange can facilitate title transfer, price discovery and market transparency.

Transaction costs are decreased because coordination through a centralized exchange can decrease costs associated with identifying the market outlets, physically inspecting of the

product quality, and finding purchaser or sellers. By decreasing transactions costs and enhancing information flows an exchange can improve returns to market agents while reducing short term price variability and spatial price dispersion. Such contracts command little capacity to address inter-annual price uncertainty. More sophisticated contracts allowing exchange in futures can enable further risk management, but such contracts require a well-developed exchange and cannot address maintain spot prices in bounds that might be desired (Worku, 2014).

Developing commodity exchanges will help to address the core institutions that the free market could not address (Ngabirano, 2014). These include among others a market information system; a system of product grading and certification; a regulatory framework and appropriate legislation; an arbitration mechanism; and, producer and trade associations. In addition, a warehouse receipts system is a very important related institution in this endeavor. A commodity exchange's success depends on the functioning of allied sectors like banking, insurance, transport, information technology services, and even inspection services. Thus, while these sectors are not strictly part of an integrated institutional development plan, they must be nonetheless engaged and involved and brought along as the exchange development proceeds.

2.1.5.1The Development Intervention of ECX

Agricultural marketing in Ethiopia has undergone several transformations over the decades. Recent initiatives to increase values and benefits to the agricultural sector include fair trade certification by cooperatives, organic and specialty crop promotion and the trade marking and licensing initiatives that have successfully established international branding. It aims to provide trading ground for sesame haricot beans, maize, wheat and coffee. The ECX is supposed to mainly guarantee: market integrity: guaranteeing the product grade and quality and operating a system of daily clearing and settling of contracts; efficient coordination of buyers-sellers and standardized contracts; market transparency: disseminating market information in right time to all markets players; and managed risks.

2.1.5.2 Main Activities of the Organization

Trade exchange model is structured into the following major categories: Warehousing goods receiving, the Trading order matching and reconciliation, Clearing and Settlement, Market data processing, central depository of warehouse receipts, market surveillance, data center, membership management (Eleni, 2008). Trading on the exchange is done exclusively by members or their authorized representatives.

The members purchase a permanent and freely transferable trading right known as a membership seat. Members or Floor Representatives trade openly and verbally on a trading floor by "crying-out" their price. They indicate the commodity type, grade, quantity, and the price they were seeking by shouting but now trading floor is totally replacing by electronics trade. If the buyer wants to sell what he/ she buys, he/she must wait until the next trading day. i.e., it is not possible to buy and then sell the same commodity at a single trading day (Eleni, 2008). Clearing and settlement is conduct by the trader itself. Members are required to open member pay-in/client pay-in and member payout/ client payout accounts at one of the banks from eleven negotiated banks now the bank are increased from eleven to thirteen. Thus, the exchange can withdraw money from member pay-in/client pay-in account balance and transfer it to the member payout/ client payout account. Members/ clients cannot withdraw money from pay –in account without the authorization of the exchange or trader.

Ethiopian commodity exchange (ECX) is a modern trading system based on standard crop contracts, establishes standard parameters for commodity grades, transaction, size, payment and delivery, and trading order matching, while at the same time, preserving the origins and types of crops as distinct unlike the previous. The existing auction trading system in the document is to mean the marketing system before the establishment of the ECX. By now the existing trading system is the one which currently works in ECX. Quality control is undertaken in liqupulseoring and inspection units located in the major crop producing areas and the crop is then weighted and inventoried in ECX operated warehouses. Trade is thus on the basis of warehouse receipts issued to the depositor rather than on sample basis. ECX manages a central depository of electronic warehouse receipts, removing the risks of paper loss or fraud.

ECX quality certification is based on a modification of the existing quality grading system, with a new crop classification based on classes, types and grades of the commodity. Currently ECX has over 20 warehouse branches at different regions; namely Hawassa, Dilla, Wolyita Sodo, Gimbi, Asossa, Nekemte, Adama, Gonder, Dansha, Metema, Hummera, Abirhajira, Shiraro, Dire Dawa, Kombolcha, Bedelle, Bonga, Jimma, Bure, and Pawi. The major roles of these warehouses are arrival, sampling, coding and decoding, grading, weighing, deposit, reconciliation, and reporting. For the transaction to be applied at the exchange, primary depositors should bring their commodity to their nearby branch so that the load shall be sampled, graded and weighted. Trade/price is determined based on the information given on the grade, the weight and the location of inventory.

Summary of services offered by ECX are:

Central Trading - refers that an improvement in technology which increases the level of its trading service delivery results in customer satisfaction. Adopting new technology and making some improvements on the service delivery affects the client's satisfaction in regards to improved and up to the standard service delivery. The ECX is a spot exchange, which means the participants settle prices and delivery "on the spot," or immediately. Traders and their representatives trade more than 200 spot contracts on the ECX. Traders on the ECX use hand signals to convey their intentions. A trader first announces the commodity and then the quantity. If the trader wishes to buy the commodity, the trader turns the palm of his/her hand toward his/her face. If the trader wishes to sell the commodity, the trader turns his/her palm away from the face.

Warehousing – refersthat having a good warehouse and creating a suitable warehouse management system is very important to ensure the level of customer satisfaction. It implies that warehouse issues are directly and indirectly affecting the exporter's performance. Having a good warehouse and ensuring a suitable warehouse management system could increase customer satisfaction through provision of quality ECX service.Grading/certification represents that if there is a standard grading and certificating measurements for oil seed products that will increase quality of service delivery. Having standardize measurement for grading, certificating and working based on the qualifications is contributing valuable benefits for customers in terms of improving their export performance. Based on this notion, having a standard measurement and implementation of those standards for grading and certifying oil seed products will increase the target group's performance

Clearing Transaction- The ECX Clearing and Settlement Department acts as central counterparty to all trades that take place on the exchange. The department determines the net obligations of each member, informs the members their daily net obligations, and transfers cash funds and commodity ownership among members. ECX works with 16 banks that have dedicated ECX settlement teams. These banks include the Commercial Bank of Ethiopia (CBE), Dashen Bank, Awash International Bank, and United Bank.

Marketing Information - represents timely transaction report, timely issuing and delivering of the electronic and hard copy of goods received notes as well as timely issuance of delivery notice document highly affect the exporter's performance. Timely transaction report, timely issuing and delivering of the electronic and hard copy of goods received notes, timely issuance

of document and any timeliness issue will affect their international trade. Therefore, providing timely report will increase the customers' satisfaction.

Arbitration Tribunal – The group responsible for facilitating the resolution of disputes between members or members and the exchange. The Arbitration Unite ("ABU") is responsible for facilitating the resolution of disputes between Members or Members and the Exchange during the course of trading at the Exchange. The Exchange has two types of alternative dispute resolution mechanisms: (1) Expert Determination: a grade dispute resolution mechanism for Quality disputes between the Exchange and its members, and (2) Trade disputes between members inter se, and between members and their clients.

2.1.5.3 Agribusiness and Value Chain Activities in ECX

The ECX was started to benefit and modernize the way Ethiopia was trading its most valuable asset, its commodities. Agricultural marketing in Ethiopia had undergone several transformations over the decades. Smallholder farmers sell agricultural commodities to local merchants who intern sell to distributors and collectors; and collectors sell to suppliers who export through the ECX. Cooperative unions sell directly through ECX and capture margin that would otherwise be captured by merchants and collectors. Prior to listing on the exchange, producers must submit crops to the inspection centre for grading and consolidation through warehouses. The Ethiopia commodity Exchange (ECX) has contributed to the functioning of the value chain, with an indication that farmers are in general more satisfied at the services provided by the ECX, such as in moisture and quantity testing, transaction and assessment. Besides, farmers are also benefited from accessing market information displayed on the price ticker board in their locality. Within the international context of coffee trade, for example, quality comes high in the requirements.

The importance of an integrated supply chain that builds close links between client and the exporting company, in turn are closely in touch with the producers. Ethiopian farmers are now required to sell their coffee at designated primary markets where only certified buyers are allowed to make purchases. Similarly, coffee processors must receive approval to use designated warehouses, where their product is graded for either export or sale on the domestic market.

2.1.5.4 Commodity Exchange and Export Performance

One of the world's largest and oldest commodity exchanges, the Chicago Board of Trade, was established in 1848 by 82 grain traders in what was then a small Midwestern town, in conditions

not too different from that of Ethiopian agriculture today, in response to a bumper harvest when farmers who went to Chicago and could not find buyers had to dump their unsold cereal in Lake Michigan. This strikes a hauntingly familiar chord for those who recall that Ethiopian farmers left grain to rot in the fields in 2002 as prices collapsed.

The challenges that US markets faced 150 years ago were not much different from what they face today, or what Ethiopian markets face today: to coordinate the exchange of grains and livestock produced across dispersed locations and dispersed producers to major markets hundreds of miles away (Tafara, 2005 cited in Eleni and Goggin, 2005). According to Ngmenipuo and Issah (2015) the world's largest commodity exchanges are futures markets, trading futures and option contracts that are meant as risk management tools rather than tools to buy or sell the underlying commodities. In emerging markets, however, commodity exchanges can play a useful role for physical trade, including in the financing of commodity inventories. By providing a transparent, disciplined marketplace they can reduce the discovery costs of physical trade and the counterparty risks in commodity transactions.

Commodity exchange can play a major role for agricultural development as an instrument to bring efficient agricultural market by providing lower transaction cost, efficient and transparent means for price discovery, managing risks related with prices volatility and provide a forum for exchanging information about supply and demand condition. Future market provides the function of hedging and price discovery for promoting efficient production, storage for the products, marketing and Agro-processing operations for the purpose of improving the overall agricultural marketing performance (UNCTAD, 2008). In addition to the above commodity exchange helps to empower the farmers, the traders, and buyers to be actors in the exchange for their respective benefit which enables to have efficient agricultural marketing system (Issac, 2011).

As stated by UNICTAD (2009), the exchange is benefiting by bringing marketing efficiencies in commodity supply-chains by providing a platform for transparent sales. They also promote institutional developments; encourage adherence to standards, and support the development of innovative financing models, such as warehouse receipt systems. Reliable product grades and negotiable receipts help producers access finance, thereby fostering increased productivity and increased rural incomes. According to Eleni (2007), commodity exchange would build institutions from the point of grading, certifying quality, trading, issuing warehouse receipts, providing accurate market information to all actors, ensuring payment and delivery and also enforcing contracts.

The aim of commodity exchange not eliminates traditional market around the country rather to build the informal market by adding technology and system to recognize transparency, efficiency reliability in the trading system. Therefore, ECX established with the vision of "to transform the Ethiopian economy by becoming a global market of choice" along with the mission statement "to connect all buyers and sellers in reliable, an efficient, and translucent market by connecting innovation with technology, and based on continuous fairness, commitment and learning to quality" (ECX, 2008).

The fact of having a single market mechanism to bring together the myriad buyers and sellers at any point in time effectively results in the greatest concentration of trading for a given good. This market mechanism, such as a price bidding system or an auction system, results in what is known as price discovery, that is, the emergence of the true market-clearing price for a good at a particular point in time due to the highest possible concentration and competition among buyers and among sellers (Ngabirano, 2014).

According to Jerry (2016) commodity exchanges are private institutions that facilitate trade by creating and enforcing property rights and governing contractual relationships between commodity buyers and sellers which makes the exchange very successful. Rashid (2015) also defines commodity exchange as a centralized location where buyers and sellers carry out transactions, with or without physical commodities, under a set of clearly defined rules and regulations. A commodity exchange is an institutional response, at a basic level, to the fundamental problem of achieving self-coordinating market order in the trade of agricultural products, which by their nature, are risky.

Vibrant agricultural commodity exchanges will greatly enhance the performance of Africa's agricultural sectors and contribute to overall economic development (Jayne, 2014). Commodity exchanges can reduce the costs and risks of transacting. They can provide valuable public information such as prices and volumes of trade. In many indirect ways, they can encourage the financial sector to invest in agricultural value chain development, improve farmers' access to markets, reduce marketing margins, and encourage agricultural productivity growth (Jayne, 2014). There is consensus that the most important marketing-related constraints facing Africa's farmers revolve around the following five points: (1) high production and marketing costs, leading to low profitability and a disincentive to produce for the market; (2) constrained access to credit, especially for small-scale farmers; (3) limited availability of profitable new farm technologies to adopt and use sustainably; (4) price volatility; and (5) poor market access and competitiveness conditions (Jayne, 2014).

The core objective of a commodity exchange is to create a fair, orderly and efficient system for matching supply and demand in order to enable what is called - price discovery or the true market price based on the alignment of supply and demand. To achieve this alignment, a commodity exchange can and must regulate market conduct through certain risk management instruments designed to ensure that market conduct follows the principles of a fair, orderly, and efficient marketing system. These instruments involve setting limits on trading positions, adjusting margin and other deposit requirements, and setting price circuit filters to limit price movements, among others (Eleni and Goggin, 2005).

2.2 Empirical Review

Gashaw and Kibret (2018) indicated that before the establishment of ECX, agricultural markets in Ethiopia had been characterized by high costs and high risks of transaction forcing much of Ethiopia in to global isolation. With only one third of output reaching the market, only buyers and sellers tended to trade only with those they knew, to avoid the risk of being cheated. They mentioned that ECX developed a new method of exchange; a marketing system that coordinates better, links faster, and protects of both side of the trade. In a data collected mainly through interview and personal observations to assess the impact of ECX in the coffee and sesame value chains, the study found out that ECX have positive impact on the existing marketing system and for the development of agricultural value chains in Ethiopia, through creating a more reliable way to connect buyers and sellers in an efficient way to discover market prices, a way to level the playing platform by providing market information to all. However, the study found out that there are still problems which are faced by all actors in value chain as infrastructural problems, legality problem, and exploitation of farmers at the farm gate, marketing imperfections, systematic rigidity and traceability issue.

Rashid (2015), based on case studies and reviewing literatures, examined the validity of the popular claims about ECX that improving price discovery, linking smallholders to markets, reducing transactions costs, and increasing agricultural export earnings are some of the benefits of ECX. The study finds out that while ECX has contributed to improving some aspects of the markets (e.g., t+1 payment, development of grades and standard for selected commodities, and warehouse receipt systems) for exportable commodities, it found no evidence to support the popular claims about linking smallholders to markets, increasing export earnings, and other developmental impacts. However, Ahmed (2017) in his study on the ECX to identify and analyze the challenges and growth prospects associated with ECX and its contribution for the economic development of the country found out that ECX failed to provide accurate and

reliable market/marketing information at the right time and place to the traders. Lack of experienced expertise in the area is one of the main problems of traders to trade their commodities by having the deep analysis with respect to changes on the market structure, foreign exchange rates, demand, supply, competition, and so on.

The study revealed that higher transaction cost, price fluctuation, difficulty of network access, lack of adequate warehouses, poor recording and management system of the warehouses, expensive membership seat fee and, non-transparent quality grading and sampling system, bias, and corruption were amongst the forefront bottlenecks/constraints to the development and success of ECX. The data were collected using survey questionnaires and interview from members of the commodity exchange.

A similar study conducted by Worku (2016) on the contribution of ECX to exporters of agricultural commodities indicated that the grading and sampling system of the company has a problem of bias, lack of knowledge and equipment; there is distrust between the seller, buyer and the exchange; there is high penalty cost imposed by ECX for delaying of withdrawing the commodities on time; problem of intolerable fee for membership seat and also there is a problem of dispute resolution mechanism. The study has also indicated other infrastructural challenges including transportation, warehouses, electricity and telecommunications.

The study also found out that warehouse quality problem occurs as a result of inefficient infrastructure and inadequate physical infrastructure caused higher transaction costs which directly affect the profitability of exporters. The research also related lack of having well-constructed infrastructure to delivery risk. Tamirat (2013) in his quantitative and qualitative study found out that to make the coffee market works for all, the ECX and policy makers work on the practicality of introducing future commodity market as the existing spot trading without the possibility to enable market risk management by offering futures contracts has limited chances of sustainability impacts.

Mulugeta (2008) have studied the challenge and prospects of liquidity on ECX, and he find that the situation of sharply rise of domestic and global market price, the high dependence of Ethiopian Agriculture on the rainfall condition which might create shortages of supply in case of drought, the frequent rejection of commodities due to failure to meet the quality standards and the tendency to use outdated closing price as reference price to determine price limits are the main challenges.

Betelehem (2009) tried to assess the challenge of ECX for the year of 2008 and 2009 using qualitative technique data obtained from ECX officers. Her finding indicates the lack of liquidity and current risk management of ECX did not cover adequately the scope and importance of the commodity price risk problem. Besides the risk management techniques (specially the mainly used market surveillance) fails to provide ways for assessing, monitoring, and managing the price risks faced by individual producers, producer groups, banks, trading companies, and other firms operating in commodity markets. Information dissemination, quality standards and assurances are the proposed way of escaping the problem.

Dessalaw (2011) examined the existing prospects to commodity exchange and to explore the challenges faced by the Ethiopian commodity exchange using the qualitative research approach. His finding indicate that small size of domestic commodity market, weak physical and communication infrastructure, a lack of legal and regulatory environments, and the likelihood of policy interventions are the major challenge of ECX. Investment in transport should be given priority to achieve the goals of risk management and reduced transaction costs.

The study by Gebrekiros (2011), studied about trading in Commodity Exchange and Challenges of Participants: The Case of Ethiopian Commodity Exchange using sample of 80 participant in ECX, He employed descriptive statistics and logistic regression technique and found that time of participation, limited membership seat and membership seat fee were found to be highly significant variables and were found to be the most determines factors the hinder ECX participants to participate in to the full membership category.

The study by Wendemagegn (2014) has tried to analyze coffee market chain in the case of Dale district of Southern Ethiopia. The analysis of market structure indicates that the volume of coffee traded in the area was concentrated in the hand of few traders who controlled the bigger share of the market. This clearly implies that the coffee market in the area is non-competitive. He also depicted the major entry barriers into the coffee market such that shortage of capital, licensing only for specific business activities and presence of informal traders are obstacles for most traders. He tried to disclose that the coffee marketing channel in the study area is relatively short, the existence of informal traders in both rural and urban areas discouraged the legal/licensed traders. Their also have poor access for timely and reliable market price information.

Study by Mohammed (2015) on ECX market prospect and challenge in focus by employing descriptive research method and simple linear regression using 128 sample members of ECX.

His study indicates that the challenges associated with commodity marketing include the potential for market abuse, increased cost of trading, liquidity issues, quality problem and unfair competition among traders. The study by Andersson (2015) indicated that the effect of warehouse access on price dispersion may not be linear, and that the downward pressure on dispersion may grow over time. They also presented an increase in the availability of adequate and timely market information should reduce search costs, while an improvement in the legal framework and reduced risk of defaults should reduce costs associated with transaction. The reduced transfer costs are likely to reduce price dispersion between exported coffees from different regions, as well as price dispersion between the export price and local retail price within regions.

Muluken (2016) studied the contribution of Ethiopian commodity exchange for promoting export of agricultural product using descriptive research approach for 148 sample respondents. Their results indicate that ECX provide market price information, grading the quality of goods, provide infrastructure for exporter like warehouse, electricity and telecommunication. Even though ECX provide benefit for exporter ECX has a problem in trained manpower and technology which needs improvement for a complete operation.

The study by Meskerem (2018) studied Factors Affecting the Market Efficiency of Ethiopian Commodity Exchange using sample of 185 market actor. Pearson correlation and linear regression was applied to identify the relationship among market efficiency and its determinants. The result indicates that price discovery, clearing and settlement and market data dissemination have positive impact on market efficiency.

Bizualem (2018) studied the role of ECX in crop value chain development in Ethiopia and indicate that ECX provide a service of warehouse service, laboratory test, grading, trading platform/auction service, provision of communication links; and market related training services for agents. Even though ECX create a more reliable way to connect buyers and sellers in an efficient way to discover market prices, a way to level the playing platform by providing market information to all, there are still problems which are faced by all actors in value chain, Such as infrastructural problems.

Similarly, Mekdes (2019), studied Determinants of market efficiency of Ethiopian Commodity Exchange (ECX) for the case of Sesame trade. She employed explanatory type of research for data obtained from trader and employee in ECX. Marketing risk, marketing cost, product

quality, information transmission media, transaction risk, payment method and market efficiency are the main determinants and direct relation with market efficiency.

The study by Sisay (2019) also studied factor affecting the market efficiency of ECX using data obtained from 170 member of ECX. He used linear regression technique for analysis and find that market information, regulation, clearing and settlement, warehouse and also trading system of the company are positively and significantly affect the market efficiency of ECX.

Fetene (2019) studied the role of ECX in stimulating agricultural commodity exports with the case of export coffee using 118 coffee exporters. He applied descriptive statistics and linear regression model to identify role of ECX. His findings of descriptive statistics of the independent variables showed that facilitation of physical trade dimension scored the highest rating with a mean value of 3.83 while the storage and grading dimension scored the least mean value of 2.86. The regression result regression analysis was also conducted, and his result indicated that storage and grading, market information provision and market development dimensions of ECX's roles had a significant positive influence on export performance of coffee exporters.

2.3 Conceptual Framework

Referring the related literature reviewed, the five core functions of commodity exchange market influences the sales performance of coffee exporters. These main functions are central trading, warehousing, transaction clearing, arbitration and providing marketing information. Centralizing exchange trading through improved service with adopting innovative technology facilitates the sales performance. Provision of warehousing service also creates a suitable environment by providing centralized location, timely delivery, safe place to store products within the required standards results in affecting exporters sales. Similarly, clearing transaction also affects sales performance by facilitating anonymous trade transactions between buyer and seller. It also plays an arbitration role in the event of failure of a trading member to meet the settlement obligation rest with the exchange. It also provides timely marketing information for exporters to determine their price and other related marketing strategies on time. This implies that the effective service delivery of ECX affects the sales performance of the exporters.

The theoretical framework of this study is based on market efficiency theory, as the empirical evidence suggests that market inefficiencies persist, particularly in developing economies, due to information asymmetry, price volatility, and transaction barriers. UNCTAD (2009) critiques the assumption that free markets inherently lead to efficient outcomes, stating that "the

experience with this crisis proves that free financial markets do not lead to optimal social and macroeconomic outcomes, and suggests that the relationship between the State and market forces needs to be fundamentally reviewed" (UNCTAD, 2009).

Based on this explanation, the conceptual framework of the study considers centralized trading, warehousing, clearing, arbitration and marketing information as independent variables. While sales performance as dependent variable. Figure 1 below illustrates the direct relationship between centralized trading, warehousing, clearing, arbitration and marketing information and sales performance. Thus, this study seeks to investigate individual effect of the aforementioned independent variables on the exporter's sales performance of selected coffee exporters.

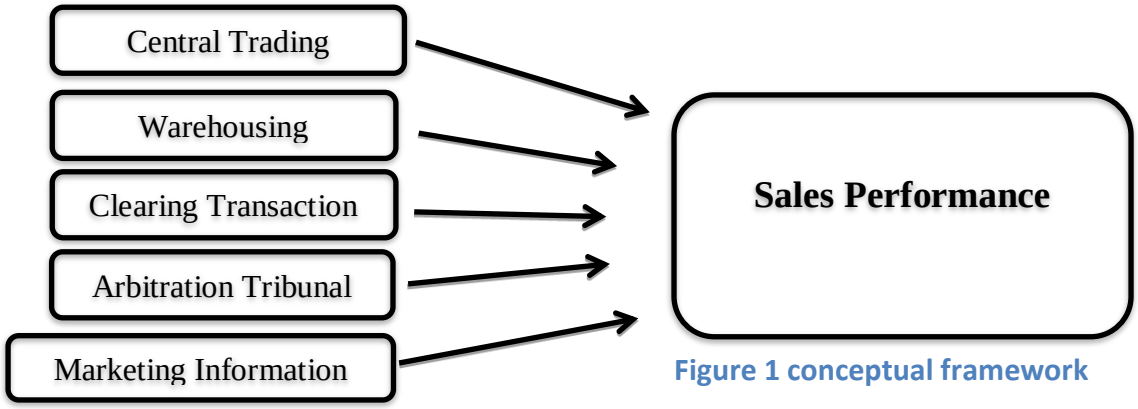

Figure 1 conceptual framework

(Source: UNCTAD, 2009; Tamirat, 2013)

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 INTRODUCTION

This chapter concentrates on the scope of methodological procedures employed in this study. It includes research design, sample design procedures, data collection instruments, data collection procedures, data analysis techniques, reliability and validity test of date collection instrument and ethical considerations.

3.1 Research Approach

There is a tendency to divide research into qualitative and quantitative based on type of data utilized as the criterion for classification. Quantitative is applied in this study to get insight to the nuances of the process for best selection of methodology tools that fitted best to the respective stages undertaken along the research process. It is a systematic and scientific investigation of quantitative properties and their relationships. Its objective is to develop and employ mathematical models, theories and hypotheses pertaining to natural phenomena. The process of measurement is central to quantitative research because it provides the fundamental connection between empirical observation and mathematical expression of an attribute (Abbey, 2009).

In light of the explanatory research undertaken descriptive and inferential analysis will be employed. The former is used to describe respondents' demographic characteristics and their perceptions towards the factors affecting ECX service namely central trading, warehousing, clearing transaction, arbitrary tribute and marketing information; and their effect on sales performance of coffee exporters. while the latter is about to analyze the relationship of independent and dependent variables.

3.2 Research Design

In order to address the research gap identified and meet the specific objectives, explanatory research design is employed. Explanatory design seeks to establish cause-and-effect relationships. Its primary purpose is to determine how events occur and which ones may influence particular outcomes (Kothari, 2004). They are characterized by research hypotheses that specify the nature and direction of the relationships between or among variables being studied.

Thus, explanatory research is an appropriate research design for the reason that this study tries to investigate the factors affecting Ethiopian Commodity Exchange (ECX) service and their effect on sales performance of coffee exporters i.e., to study the relationship between the dependent and independent variables of the study.

3.3 Source of Data

Depending on the objective and the research questions, mainly primary data source is used for this study. Primary data consists of all data obtained during the study that may be specifically relevant to the purpose of the study. The primary data is derived from the responses of targeted respondents gave in the self-administered questionnaire prepared. Since there are no secondary sources (directly or indirectly related to the purpose), secondary data is not be used for analysis.

3.4Data Collection Instruments

This research is primarily carried out using quantitative data. Assessing and gathering data is not an easy task, as the researcher tried to gather data from various respondents residing in different sub-urban areas of Addis Ababa as well as diasporas abroad. In addition to the local language (Amharic), an English-language questionnaire is also provided as a choice with questions that are important and helpful in extracting the opinions of the respondents regarding their perception of factors affecting the service delivery and their effects on their organizational performance.

Quantitative data on factors affecting ECX service delivery attributes and their effect on performance of the exporters is collected through a close-ended questionnaire adapted from Muluken and Abebe's (2016) study. A self-administered structured questionnaire containing closed-ended questions is prepared along with a range of literature reviews relevant to the objectives of the research. There are three sections of the questionnaire. The first part comprises questions about the demographic characteristics of the respondents; the second part involves questions about the factors affecting ECX service delivery; and the third part refers to questions about their overall view of organizational/ exporters/ performance. Many studies use a single scale to calculate ordinal or interval data using scales 1-to-5 or 1-to-7, where 1-very dissatisfied and 5-or 7-very satisfied. However, this analysis follows a five-scale method to quantify the study variables referred to above.

3.5 Population and Sampling

3.5.1 Population

Target or study population is the whole community of people or organizations that the researcher or surveyor is interested in drawing conclusions. Population can also be defined as all people or items that one wishes to understand while sampling is the process of selecting segment of the population for investigation (Kothari, 2003). According to ECX customer database (2021), the total population of Ethiopian coffee exporters who have currently enrolled in the Exchange is about 2,450 exporter companies. As the entire population will be relatively large to cover within a limited period of time, representing the total population in reasonable number of respondents makes the research reliable. Thus, this study considered a total of 2,450 coffee exporter companies whose office are located in Addis Ababa entitled to participate and to collect the necessary data.

3.5.2 Sample Size

Determination of a representative sample size is a critical and important issue as larger sample size may waste time and other vital resources unnecessarily. While samples that are too small may lead to inaccurate results. According to Saunders (2007) researchers normally work to a 95% level of certainty. Sampling is the process of selecting a number of study units from a defined study population (Zikmand, 2010). It is economical to take representative sample for the intended investigation when conducting census is unrealistic. Since the number of the population is known, simplified formula for proportion sample size is determined employing the following formula as it stated by Yamane (1967). The study considers a total of 2,450 coffee exporters residing in the capital city. Therefore, the formula to determine the sample size is:

$$n = \frac{N}{1+N(e^2)} = \frac{2{,}450}{1+(2{,}450*0.05^2)} = 344$$

Where:

N -Designates total number of house owners

e - designates maximum variability or margin of error 5% (0.05) and

n- designates computed sample size

Therefore, the targeted sample size is a total of 344 coffee exporters (either owners, representatives, agents or managers) will be contacted accordingly.

3.5.3 Sampling Technique

There are two sampling strategies in use to select the targeted respondents from the sample frame. There are likelihood or non-probability methods of sampling (Creswell, 2009). The former applies to random (equal chance) selection, while the latter is subjective and relies on the researcher 's decision or reasoning. Probability sampling strategy is preferable to selecting respondents from the target sample population in order to make it easier to generalize for the fact that the list of all the exporters is readily available on hand. Thus, due to their homogeneity of the companies, simple random sampling approach will therefore be used and found to be more efficient in contacting each respondent before the measured sample size is reached.

3.6 Data Analysis Techniques and Presentations

Both descriptive and inferential statistics are used to analyze the quantitative data that is gathered through structured questionnaire. All the variables are coded and entered into the SPSS to analyze data obtained through questionnaires. Descriptive statistics is used to describe the usefulness of the data set and examine relationships between variables. In order to describe the data, preliminary descriptive statistics such as frequency, percentages, mean scores and standard deviation is computed. To view the internal consistency of the scale items, Cronbach coefficients (alpha) is computed.

Multiple regression analysis is performed using the five factors that affect the service delivery of ECX as independent variables and organizational/ exporter's performance as dependent variable. The basic aim is to see the extent to which their performance is affected by overall service delivery of ECX (R^2 value), the regression coefficient (Beta coefficient) and the P-values for the significance of each relationship. Correlation coefficients are also used to quantitatively describe the strength of the association between the stated variables. According to Hair (2016) the Pearson correlation coefficient measures the degree of linear association between two variables. It varies between -1.00 to +1.00, with 0 representing absolutely no associate between the two variables.

Empirical Model - The thesis uses multiple linear regression research model to evaluate hypotheses derived from empirical reviews. Regression analysis is a statistical method for evaluating the mathematical model representing the relation between variables that can be used for the purposes of predicting the value of the outcome variable, given the measures of the independent variable (Kothari, 2004). Multiple linear regression calculates the coefficients or relative importance of the individual predictors in the multiple linear equation, with one or more independent variables that better predict the value of the dependent variable.

Multiple linear regressions is made to define the relationship and to evaluate the most dominant factors that affect service delivery and their effects on exporter's performance. In order to assess the relation between the variables, a mathematical formula for representing the multi-regression analysis is shown as:

$$Sales = \beta_0 + \beta_1 CTRD + \beta_2 WARE + \beta_3 CLRT + \beta_4 ARBT + \beta_5 MKTG + e$$

Where:

Sales = Exporter Sales Performance

CTRD = Central Trading

WARE = Warehousing

CLRT = Clearing Transaction

ARBT = Arbitration Tribute

MKTG = Marketing Information

e = error term, β_0 = constant

term $\beta_{1, 2, 3, 4, 5}$ = coefficients.

3.7 Validity Test and Reliability

3.7.1 Validity

Validity test is the degree to which the data collection process will correctly calculate what it is supposed to quantify (Saunders, 2009). For the purpose of assuring the validity of the research instrument, all the variables will be adopted from previous research works; the student researcher conducted a pilot test of the questionnaire among the coffee exporters and distribute 30 questionnaires to gather feedback towards enhancing the validity of the instruments in line with content validity. Then, the student researcher acquired and incorporated the opinions of the coffee exporters and experts/ advisors in order to enhance the research instrument validity. Finally, after having made all the requisite corrections, it was reasonable to distribute them to the targeted respondents accordingly.

3.7.2 Reliability Test

Reliability is the ability of a research instrument to yield reliable findings after repeated studies (Mugenda, 2003). It deals with the level to which the measuring instrument includes variable errors that differ from observation to observation at any one measurement attempt or at the same measurement instrument. The use of Cronbach Coefficient to calculate the reliability of the instrument allowed the strength of the items used in the questionnaire to be calculated in such a way that the scale between 0.7 and 1.0 will imply a good accuracy of the item included

in the scale. The closer the reliability coefficient gets to 1.0, the better, and those values over 0.80 will be considered as good. Those values in the 0.70 will be considered as acceptable but the value less than 0.70 will be considered being poor.

Table 1 Reliability analysis of variance

Variables	Cronbach's Alpha	N of Items
Central Trading	0.776	6
Warehousing	0.820	6
Clearing Transaction	0.814	6
Arbitration Tribunal	0.777	4
Marketing Information	0.807	6
Export Performance	0.800	5

3.8 Ethical Consideration

When undertaking business research, it will be crucial to adhere to ethical principles. Four types of ethical issues will be considered: harm to participants, lack of informed consent, invasion of privacy, and deception (Bryman, 2011). In this study, questions about the respondent's age and gender are included, but these details do not suffice to identify the individual. The second ethical principle, lack of informed consent, is also considered. The third principle, invasion of privacy, is addressed by giving respondents the option to skip any question they deem sensitive. Moreover, the non-sensitive nature of this study likely increased respondents' willingness to participate. The fourth principle, deception, occurs when respondents are misled about the research's true purpose. Because these ethical principles are considered and met, the study can be deemed ethical.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

4. 0 Introduction

This chapter presents both descriptive statistics and inferential statistics analysis. It has three sections. The first section is the descriptive statistics which summarizes the main features of the study variable such as mean, frequency and percentage. The second section is the correlation analysis which shows the degree of association between the study variables. The last sections of the chapter report regression output of the models used.

4.1. Descriptive Statistics

Descriptive analysis refers to statistically describing, aggregating, and presenting the constructs of interest or associations between these constructs.

4.1.1. Response Rate

To conduct the research 344 questionnaires were distributed to the respondents and the response rate indicated in the table2 below.

Table 2 Response rate of respondents

Items	No.	Percent %
Sample size	344	100
Collected	287	84
Remain uncollected	56	16

Source; Survey data (2024)

As the result in table 2 indicate that, out of 344 distributed questionnaires 287(84%) were collected while 56(16%) of the questionnaire remained uncollected.

4.1.2 Demographic Characteristics of Respondents

This section gives an overview of the demographic profiles of the respondents. From the survey information gathered about sex, age, educational level, for how long the respondents have been a customer of ECX, Originality of the coffee and to where to they export were analyzed .A sample size of 344 respondents was selected for this study out of which 56respondents have refused to respond to the questionnaire. The remaining 287 respondents yielded a response rate of 84%. It means they have properly answered and returned the questionnaire to the researcher. The sample consisted of 144male and 143female participants in the study. This indicates that

the majority of the respondents were males. The frequency of education levels among respondents was 36(12.5%) were Masters and above, 165 (57.5%) were first degree Holders,86(30%) high school graduates. This indicates that approximately more than Fifty seven percent of the respondents were bachelor degree holders. The frequency of how long the respondents have been a customer of ECX is (52.6%), (41.1%), (6.3%) in which151 respondents have been customer of ECX for 1-5 years, 118 of the respondents of have been customer ECX for 6-10 years, and 18 of the respondents have been customer ECX for above 10 years respectively.

4.1.2.1 Gender of Respondents

144 (50.2%) of the respondents were males and 143 (49.8%) were female respondents. It vividly shows among respondent's male employees exceed in number.

Table 3 Gender of respondents

Gender					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	male	144	50.2	50.2	50.2
	female	143	49.8	49.8	100.0
	Total	287	100.0	100.0	

Source: Survey data (2024)

4.1.2.2 Profile as per Age of Respondents

As can be seen from the table above age is divided in to three categories resulted with 144(50.2%), 110(38.3%) and33(11.5%) frequencies respectively for between <30,30-45 and 45-60 years old age categories. Majority of employees are relatively younger followed by adults.

Table 4 Age of respondents

Age					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	<30	144	50.2	50.2	50.2
	30-45	110	38.3	38.3	88.5
	45-60	33	11.5	11.5	100.0
	Total	287	100.0	100.0	

Source; Survey data (2024)

4.1.2.3 Levels of Education of Respondents

The level of education of respondents in the above **i**ndicated that from 287 respondents 86 (30%) of the respondents were high school graduates, 165 (57.5 %) were first degree Holders and36(12.5%) were Masters and above. The result indicates that most of the respondents were first degree Holders.

Table 5 Education level of respondents

Educational level					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	High school	86	30.0	30.0	30.0
	First degree	165	57.5	57.5	87.5
	Masters and above	36	12.5	12.5	100.0
	Total	287	100.0	100.0	

Source; Survey data (2024)

4.1.2.4 For how long you have been a customer of ECX

Table 5 above shows that, 151 (52.6%) respondents have been customer of ECX for 1-5 years,118(41.1%) of the respondents of have been customer ECX for 6-10 years, and 18(6.3%) of the respondents have been customer ECX for above 10 years. The result indicates that majority of the respondents have been customer of ECX for below five years.

Table 6 For how long have you been customer of ECX

For how long you have been a customer of ECX					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-5 years	151	52.6	52.6	52.6
	6-10 years	118	41.1	41.1	93.7
	above 10 years	18	6.3	6.3	100.0
	Total	287	100.0	100.0	

Source: Survey data (2024)

113 (35.3%) respondents claimed the originality of their export of coffee as Yirgacheffe,132(41.2%) of the respondents claimed the originality of their export of coffee as Jimma, 1(0.3%) of the respondents claimed the originality of their export of coffee as Harar and 74(23.1%) of the respondents claimed the originality of their export of coffee as Sidama. The result indicates that majority of the respondents claimed the originality of their export of coffee as Yirgacheffe.

4.1.2.5 Exported to

Table 5 above shows that, 25 (8.7%) respondents claimed they export to America,113(39.4%) of the respondents claimed they export to Europe, 111(38.7%) of the respondents claimed they export to Asia and 38(13.2%) of the respondents claimed they export to Africa. The result indicates that majority of the respondents claimed to export to Asia.

Table 7 Exported to

Exported country					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	America	25	8.7	8.7	8.7
	Europe	113	39.4	39.4	48.1
	Asia	111	38.7	38.7	86.8
	Africa	38	13.2	13.2	100.0
	Total	287	100.0	100.0	

Source; Survey data (2024)

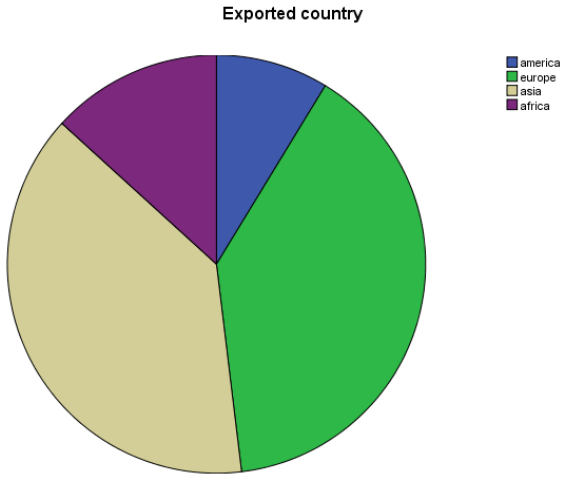

Figure 2 Exported to

Source: Survey data (2024)

4.1.3 Descriptive Statistics of dependent and independent variables

Descriptive statistics was employed to examine the mean and standard deviation of the responses

of respondents with regards to the roles of ECX measured by (central trading, warehousing delivery services, clearing transactional service, arbitration tribunal and marketing information) on coffee exporters sales performance. The respondents were asked to rate their perception on a five-point Likert type scale ranging from 1 being strongly disagree to 5 strongly agree.

For simplicity ofanalysis rates of "strongly disagree is 1" & "disagree is 2" were categorized as "disagree"and ratings of "strongly agree is 5" & "agree is 4" were categorized as "agree". The meanscores have been computed for all the variables by equally weighting the mean scores of allthe items under each dimension. The mean value provides the idea about the central tendency of the values of a variable. Standard deviation is to give the idea about thedispersion of the values of a variable from its mean value. Based on the Table below the first variable to be perceived by respondents is warehousing delivery services which has a mean score of 3.52. The second is clearing transaction services with a mean score of 3.49. This result also indicates that most of the respondents perceived warehousing delivery to play a significant role in coffee exporters sales performance. The results of the descriptive analysis are shown in the table below.

Table 8 Descriptive statistics

Descriptive Statistics			
	N	Mean	Std. Deviation
CT	287	3.48	.683
CRT	287	3.49	.726
WH	287	3.52	.724
AT	287	3.45	.803
MI	287	3.45	.730
EP	287	3.41	.804
Valid N (listwise)	287		

Source: Survey data (2024)

Similarly central trading, Arbitration tribunal and Marketing information has a mean score of 3.48,3.45 and 3.45 respectively which indicates that respondents perceive these variables as significant in coffee exporters sales performance.

Overall, the descriptive statistics suggest that warehousing delivery is the most prevalent perception among the respondents, followed by clearing transaction services central trading, Arbitration tribunal and Marketing information.

4.4 Descriptive statistics of Central Trading

Dimensions	Mean score (%)	Std. Deviation (%)	Strongly disagree (%)	Disagreed (%)	Neutral (%)	Agree (%)	Strongly agree (%)	Total
The electronic trading system of ECX consolidates sources supply to meet customer demand	3.65	0.914	2.8	6.3	29.6	45.6	15.7	100.0
ECX is well positioned to match supplies from multiple extraction points with the needs of customers in multiple markets.	3.59	0.864	3.1	5.6	31.0	50.2	10.1	100.0
The ECX centralized trading mixes/ matches supplies from multiple sources that allows for greater supply chain stability	3.68	0.905	1.7	8.0	27.2	46.3	16.7	100.0
The ECX centralized trading sets up multiple trading companies in various time zones across the globe with non-stop trading (24 hours a day)	3.10	1.119	11.1	16.7	30.7	33.8	7.7	100.0
using modern electronic trading service from ECX the report which is distributed through electronic methods is easily accessible	3.44	1.019	5.6	10.5	30.7	41.1	12.2	100.0

Overall, the centralized trading system of ECX facilitates simplified transaction	3.41	1.112	7.0	13.2	26.5	38.0	15.3	100.0

Source: Survey data (2024)

This dimension was measured by using six question items. From among the six items used to measure this dimension, The ECX centralized trading mixes/ matches supplies from multiple sources that allows for greater supply chain stability has got the highest ranking with the respondents with 63% of agreement. Only 9.7% of the respondents did not agree on this dimension. Similarly, 61.3% of the respondents agreed that the electronic trading system of ECX consolidates sources supply to meet customer demand while 9.1% disagrees, 60.3% of the respondents agreed that ECX is well positioned to match supplies from multiple extraction points with the needs of customers in multiple markets and 8.7% of them disagreed on this dimension, 53.3% of the respondents agreed on the following both dimensions using modern electronic trading service from ECX the report which is distributed through electronic methods is easily accessible and Overall, the centralized trading system of ECX facilitates simplified transaction. However, 16.1% and 20.2% of the respondents disagree on the dimensions respectively. And the last dimension with 41.5% of the respondents agreed that the ECX centralized trading sets up multiple trading companies in various time zones across the globe with non-stop trading (24 hours a day) with 27.8% of disagreement.

Table 4.5 Descriptive statistics of Warehouse

Dimensions	Mean score	Std. Deviation	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Total
Commodities are deposited in warehouses operated by ECX in major surplus regions of the country.	3.57	1.051	4.9	10.1	25.8	41.1	18.1	100.0
ECX offers an integrated warehouse system from the receipt of commodities on the basis of industry accepted grades and standards.	3.51	0.996	4.5	9.8	29.3	42.9	13.6	100.0
At the ECX warehouse, commodities are sampled, weighed, graded using state-of-the-art technology equipment.	3.60	0.940	2.4	9.8	28.2	44.6	15.0	100.0
ECX warehouses issue an Electronic Goods Received Note and provide the depositor or his/her representative with a signed print copy.	3.66	0.905	2.4	7.0	27.9	47.4	15.3	100.0
The Deposited commodities are stored using global standards of inventory management.	3.42	0.982	4.5	11.8	31.4	41.8	10.5	100.0
ECX warehouses are insured at maximum coverage to protect against loss and damage of deposits	3.33	1.105	6.6	16.0	29.3	34.1	13.9	100.0

Source: Survey data (2024)

This dimension was measured by using six question items. From among the six items used to measure this dimension, ECX warehouses issue an Electronic Goods Received Note and provide the depositor or his/her representative with a signed print copy has got the highest ranking with the respondents with 62.7% of agreement, while 9.4% of the respondents did not agree. 59.6% of the respondents agreed that At the ECX warehouse; commodities are sampled, weighed, graded using state-of-the-art technology equipment, while 12.2% disagrees. 59.2% of the respondents agreed that Commodities are deposited in warehouses operated by ECX in major surplus regions of the country and 15% of them disagreed on this dimension. 56.5% of the respondents agreed on ECX offers an integrated warehouse system from the receipt of commodities on the basis of industry accepted grades and standards, while 14.3& disagrees. 52.3% of the respondents agreed on the deposited commodities are stored using global standards of inventory management, while 16.3% disagrees. And the last dimension with 48% of the respondents agreed that ECX warehouses are insured at maximum coverage to protect against loss and damage of deposits with 22.6% of disagreement.

Table 4.6 Descriptive statistics of Clearing Transaction

Dimensions	Mean score	Std. Deviation	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Total
ECX has a Zero-default clearing settlement system	3.36	1.034	5.9	13.6	29.6	40.4	10.5	100.0
ECX determines the net obligations of each member.	3.61	0.990	3.1	9.8	27.9	41.5	17.8	100.0
ECX is transparently informs the members their daily net obligations	3.56	0.944	2.8	10.1	29.3	44.3	13.6	100.0
The managers in ECX properly transfer cash funds/commodity ownership among members	3.60	0.977	2.8	10.8	26.8	43.2	16.4	100.0
ECX coordinates with commercial banks to facilitate transaction among members	3.61	1.024	4.5	8.7	25.8	42.9	18.1	100.0
ECX officials review membership applications for compliance with the applicable laws of the organization.	3.20	1.073	8.4	16.4	30.7	36.6	8.0	100.0

Source: Survey data (2024)

From among the six items used to measure this dimension, ECX coordinates with commercial banks to facilitate transaction among members has got the highest ranking with the respondents with 61% of agreement. 13.2% of the respondents did not agree on this dimension. 59.6% of the respondents agreed that the managers in ECX properly transfer cash funds/commodity ownership among members while 13.6% disagrees, 59.3% of the respondents agreed that ECX determines the net obligations of each member and 12.9% of them disagreed on this dimension, 57.9% of the respondents agreed on ECX is transparently informs the members their daily net obligations However, 12.9% of the respondents disagree on this dimension. 50.9% % of the respondents agreed that ECX has a Zero-default clearing settlement system, while 19.5% disagrees. And the last dimension with 44.6% of the respondents agreed ECX officials review membership applications for compliance with the applicable laws of the organization with 24.8% of disagreement.

Table 4.7 Descriptive statistics of Arbitration Tribunal

Dimensions	Mean score	Std. Deviation	strongly disagree	disagree	Neutral	agree	strongly agree	Total
ECX has well-organized dispute resolution system	3.51	1.090	5.2	13.2	24.7	39.0	17.8	100.0
The organization provides speedy quality-related dispute resolution	3.47	1.067	5.9	11.8	26.5	41.1	14.6	100.0
The organization facilitates transactional-related dispute with professional staff.	3.42	1.027	5.2	13.2	27.5	42.5	11.5	100.0

ECX maintains a system of market surveillance where experts monitor the behavior of market actors to protect the market from manipulation	3.41	0.960	3.5	12.9	32.8	40.4	10.5	100.0

Source: Survey data (2024)

From among the four items used to measure this dimension, ECX has well-organized dispute resolution system has got the highest ranking with the respondents with 56.8% of agreement. 18.4% of the respondents did not agree on this dimension. 55.7% of the respondents agreed that the organization provides speedy quality-related dispute resolution while 17.7% disagrees, 54% of the respondents agreed that the organization facilitates transactional-related dispute with professional staff and 18.4% of them disagreed on this dimension. The last dimension with 50.9% of the respondents agreed that ECX maintains a system of market surveillance where experts monitor the behavior of market actors to protect the market from manipulation with 16.4% of disagreement.

Table 4.8 Descriptive statistics of Marketing Information

Dimensions	Mean score	Std. Deviation	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Total
ECX provides timely information exchange between the head office and the outlying warehousing officers.	3.43	1.018	4.5	12.9	30.7	39.0	12.9	100.0
The trading operation department provides members	3.42	1.024	5.9	10.8	30.3	41.5	11.5	100.0

with a timely transaction report.								
The trading department starts trading on time.	3.36	1.055	6.3	13.6	29.6	39.0	11.5	100.0
Electronic goods received note is issued or delivered on time.	3.45	1.124	7.3	11.8	26.1	38.0	16.7	100.0
ECX is known for issuance of the required documents on time.	3.58	0.931	2.8	8.7	30.0	44.6	13.9	100.0
ECX facilitates on time delivery of the global coffee market information.	3.45	0.980	4.9	10.5	30.3	43.9	10.5	100.0

Source: Survey data (2024)

From among the six items used to measure this dimension, ECX is known for issuance of the required documents on time has got the highest ranking with the respondents with 58.5% of agreement. 11.5% of the respondents did not agree on this dimension. 54.7% of the respondents agreed that electronic goods received note is issued or delivered on time while 19.1% disagrees, 54.4% of the respondents agreed that ECX facilitates on time delivery of the global coffee market information and 15.4% of them disagreed on this dimension. 53.0% of the respondents agreed that the trading operation department provides members with a timely transaction report, while 16.7% of the respondents disagree. 51.9% of the respondents agreed that ECX provides timely information exchange between the head office and the outlying warehousing

officers, while 17.4% disagrees. The last dimension with 50.5% of the respondents agreed that the trading department starts trading on time with 19.9% of disagreement.

Table 4.9 Descriptive statistics of Export Sales Performance

Dimensions	Mean score	Std. Deviation	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Total
ECX helps me increase export sale by facilitating physical trade.	3.54	0.985	3.5	10.1	30.3	40.8	15.3	100.0
The storage and grading service of ECX has improved my export performance.	3.21	1.142	9.8	16.0	29.6	33.1	11.5	100.0
ECX helps me increase export sale through its market development roles.	3.45	1.029	5.2	11.5	29.3	40.8	13.2	100.0
The competitive coffee market created by ECX increased my export performance.	3.35	1.157	9.1	13.6	25.4	37.3	14.6	100.0
ECX helps me increase export by providing reliable market information	3.49	1.074	5.6	11.1	28.6	37.6	17.1	100.0

Source: Survey data (2024)

From among the five items used to measure this dimension, ECX helps me increase export sale by facilitating physical trade has got the highest ranking with the respondents with 56.1% of agreement. 13.6% of the respondents did not agree on this dimension. 54.7% of the respondents agreed that ECX helps me increase export by providing reliable market information while 16.7% disagrees, 54% of the respondents agreed ECX helps me increase export sale through

its market development roles and 16.7% of them disagreed on this dimension. 51.9% of the respondents agreed the competitive coffee market created by ECX increased my export performance, while 22.7% of the respondents disagree. The last dimension with 44.6% of the respondents agreed that the storage and grading service of ECX has improved my export performance with 25.8% of disagreement.

4.2 Relational Analysis

The researcher used Pearson correlation analysis to find out whether the dependent variable, that is, coffee exporters sales performance, is correlated with each independent variable, which is central trading, warehousing delivery, clearing transaction service, arbitration tribunal and marketing information. Correlation (r) is a parametric technique that gives a measure of the strength of association between any two variables. Cohen (1988) has suggested the following guidelines: r = 0.10 to 0.29 is a weak relationship; r = 0.30 to 0.49 is a medium correlation; and r = 0.50 to 1.0 is a strong relationship among variables. If there is too much correlation with a value greater than 0.9, it means the absolute correlation with a significant value less than 0.05 and above 0.05 is insignificant. “Pearson’s correlation is the ratio of the variance shared by two variables” (Cramer, 1998). Thus, the correlation analysis conducted to determine the relationship among the variables is shown in Table 5 below and discussed in the paragraphs following.

Table 9 Correlation

Correlations

		CT	WH	CRT	AT	MI	EP
CT	Pearson Correlation	1	.675**	.602**	.581**	.595**	.572**
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	N	287	287	287	287	287	287
WH	Pearson Correlation	.675**	1	.652**	.599**	.563**	.573**
	Sig. (2-tailed)	.000		.000	.000	.000	.000
	N	287	287	287	287	287	287
CRT	Pearson Correlation	.602**	.652**	1	.616**	.678**	.512**
	Sig. (2-tailed)	.000	.000		.000	.000	.000
	N	287	287	287	287	287	287
AT	Pearson Correlation	.581**	.599**	.616**	1	.628**	.681**
	Sig. (2-tailed)	.000	.000	.000		.000	.000
	N	287	287	287	287	287	287
MI	Pearson Correlation	.595**	.563**	.678**	.628**	1	.598**
	Sig. (2-tailed)	.000	.000	.000	.000		.000
	N	287	287	287	287	287	287
EP	Pearson Correlation	.572**	.573**	.512**	.681**	.598**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	287	287	287	287	287	287

**. Correlation is significant at the 0.01 level (2-tailed).

Source: Survey data (2024)

The correlation analysis conducted in this study elucidates the connection between the variables. The findings reveal a significant relationship between central trading and coffee exporters sales performance , as indicated by the data ($r = .572^{**}$, $p<0.01$).This suggests a strong relationship, where central trading and coffee exporters sales performance. As observed in Table 5, there is a significant relationship between warehousing delivery and coffee exporters sales performance ($r = .573^{**}$, $p<0.01$). This suggests that warehousing delivery is significantly correlated with coffee exporters sales performance. Since r is positive, it suggests that higher levels of " warehousing delivery " are associated with higher levels of coffee exporters sales performance.

Similarly, Table 5 indicates a significant relationship between clearing transactional service and coffee exporters sales performance ($r =.512^{**}$, $p<0.01$).

Similarly, Table 5 indicates a significant relationship between arbitration tribunal and coffee exporters sales performance ($r =.681^{**}$, $p<0.01$).

Similarly, Table 5 indicates a significant relationship between marketing information and coffee exporters sales performance ($r =598^{**}$, $p<0.01$).

To summarize, the independent variables (i.e.central trading, warehousing delivery,clearing transactional service, arbitration tribunal and marketing information) are found to be associated with coffee exporters sales performance with relatively strong relationships. These results indicate that coffee exporters sales performance is strongly influenced by the forementioned independent variables.

4.3 Regression Analysis

4.3.1 Assumption of Multiple Linear Regression

Multiple Linear Regression is a statistical technique designed to explore the connections between a single dependent variable and several independent variables. The accuracy and reliability of multiple linear regression analysis depend on several key assumptions. Ensuring these assumptions are met is essential for proper interpretation and prediction of the model. The main assumptions include a linear relationship, multivariate normality, no multicollinearity, and homoscedasticity. .

4.3.2Multi-Co linearity Test

According to hawking (1983), multi-colinearity refers to a situation where there is a perfect or exact linear relationship among some or all of the explanatory variables in a regression model. It is crucial to assess the co-linearity issue using tolerance and variance inflation factor (VIF) statistics before conducting regression analysis. *Smith, A. (2006)* indicated that a tolerance value below 0.1 typically signifies a significant co-linearity issue. Similarly, liu (2010) noted that a VIF exceeding 10 also indicates a serious co-linearity problem. In this research, the tolerance values for the independent variables are 0.457, 0.430, 0.412, 0.486, and 0.445 for central trading, warehousing delivery, clearing transaction service, and arbitration tribunal respectively. The corresponding VIF values are 2.188, 2.326, 2.429, 2.056, and 2.246 for these same factors. Based on these findings, there is no indication of co-linearity issues affecting of export sales performance of coffee exporters.

Table 10 Tolerance and VIF

Multi-colinearity test

Model		Collinearity Statistics	
		Tolerance	VIF
1	CT	.457	2.188
	WH	.430	2.326
	CRT	.412	2.429
	AT	.486	2.056
	MI	.445	2.246

a. Dependent Variable: EP

Source: Survey data (2024)

4.3.3 Normality Test

Another crucial assumption in regression analysis is that the dependent variable must be assessed for normal distribution. Normality refers to a symmetrical, bell shaped curve characterized by the highest frequency of scores occurring in the center ,with decreasing frequencies as one moves towards the extremes (Collis and Hussey,2009).

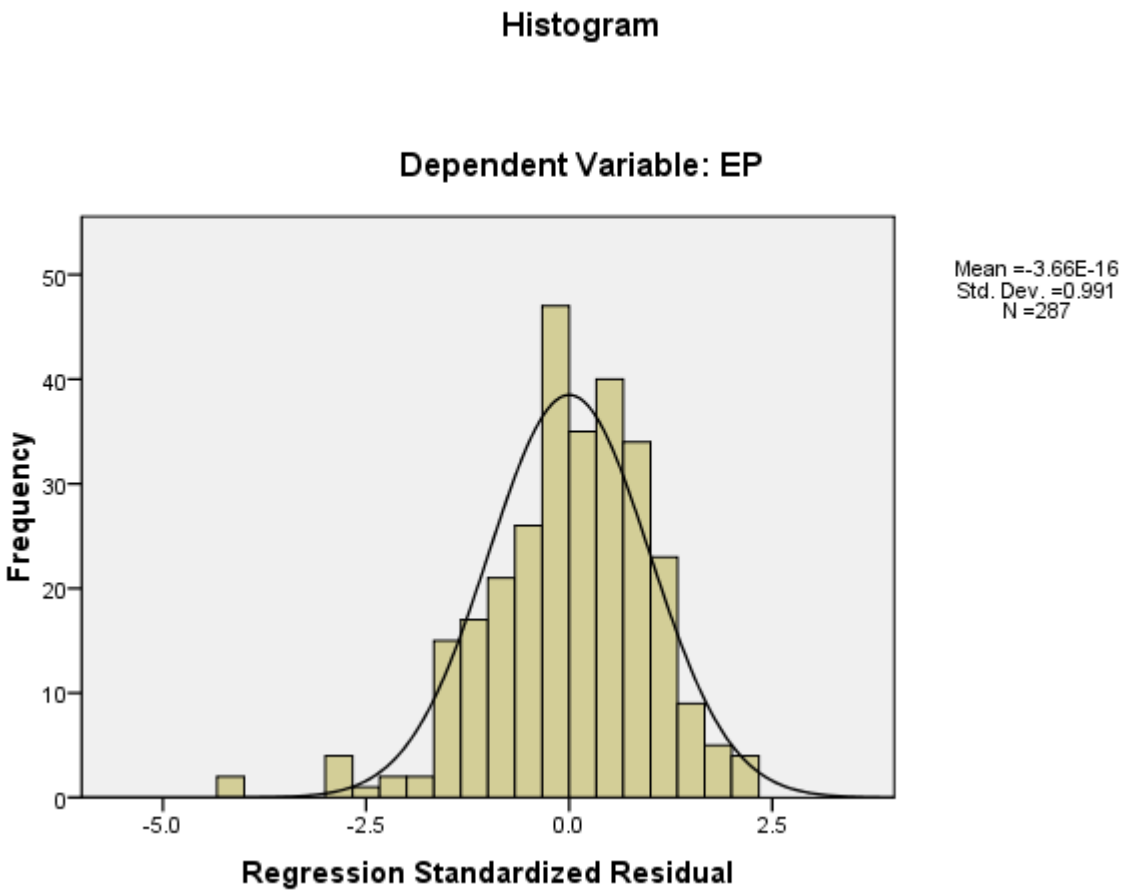

Figure 3 Histogram

Source: Survey data (2024)

If the dependent variable is not normally distributed, there is little point in performing regression analysis because a major assumption of the model is violated. Therefore, normality test computed for the dependent variable, in this case, depicted in the histogram figure above asserted for normal distribution. Figure 6 histogram shows a normal distribution is recorded.

The other checking mechanism to test the normal distribution of scores on the dependent variable i.e.coffee exporters sales performance, in our case, is the kurtosis and skewness value which is computed by using SPSS. The normal acceptable distribution of symmetric has a zero skewness value. However, the standard error greater than 2 indicates a normality problem. Kurtosis on the other hand is a measure of the extent to which observation cluster around a central point. For a normal distribution the value of the kurtosis is zero. The information in table below shows that the coefficient of skewness (0.144) and kurtosis (0.287) is not much far

from zero. Thus, for this research, the histogram and the ratio of skewness to kurtosis were checked and the result indicates that data used in the study is normally distributed.

Table 11 Descriptive statistics table

Descriptive Statistics									
	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Central Trading	287	1	5	3.48	.683	-.113	.144	-.099	.287
Clearing Transaction	287	2	5	3.49	.726	-.241	.144	-.468	.287
Warehousing	287	2	5	3.52	.724	-.182	.144	-.511	.287
Arbitration Tribunal	287	2	5	3.45	.803	-.163	.144	-.606	.287
Marketing Information	287	1	5	3.45	.730	-.182	.144	-.499	.287
Export Performance	287	1	5	3.41	.804	-.157	.144	-.200	.287
Valid N (list wise)	287								

Source: Survey data (2024)

4.3.4 Linearity test

Linearity assumption of multiple regressions was tested using scatter plot test and it was found that there is linear relationship between independent and dependent variables (Figure 7). The linearity result depicted the distribution of residuals near to the mean zero. The scatter plot of the dependent variable falls almost in a rectangular except few outliers.

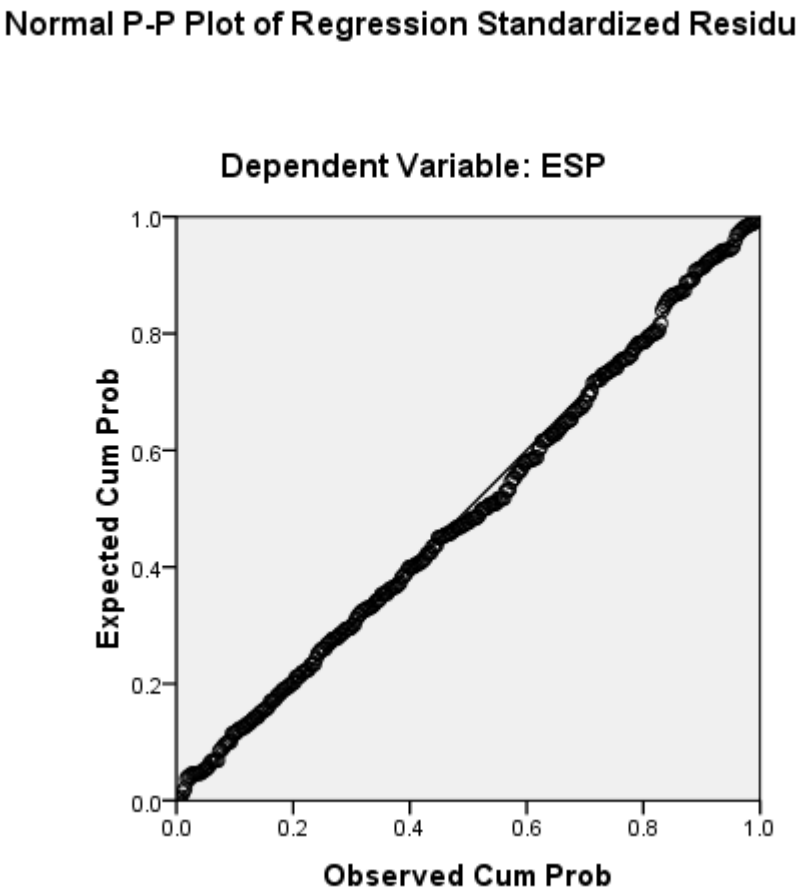

Figure 4 Normal P-P Plot of Regression Standardized Residual

4.3.5 Hetrospcadecity test

The variability of error terms should remain the same across all values of the independent variables. A scatterplot displaying residuals against predicted values must not reveal any noticeable patterns, such as a cone-like shape, which would suggest the presence of heteroscedasticity, one might consider transforming the data or incorporating a quadratic term into the model.

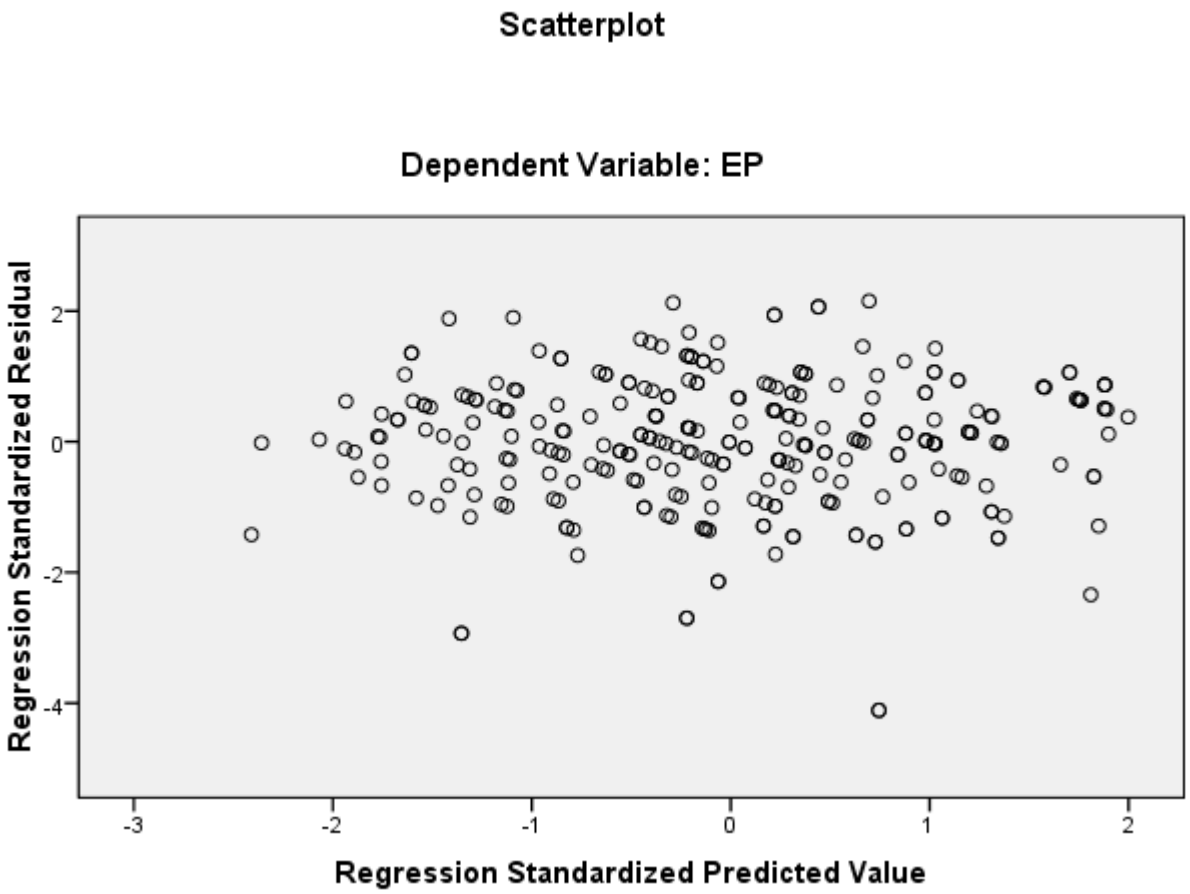

Figure 5 Scatter plot Regression Standardized Predicted Value

Source: Survey data (2024)

4.4 Multiple Linear Regression Analysis:

One goal of this study was to analyze how central trading, warehousing delivery, clearing transactional services, arbitration tribunals, and marketing information influence the export sales performance of coffee exporters**.** To assess the statistical impact of each independent variable (i.e., central trading, warehousing delivery, clearing transactional services, arbitration tribunals, and marketing information) on the dependent variable – export sales performance of coffee exporters -multiple regression analysis was employed. This analysis utilizes the adjusted R^2 value to quantify the extent of influence that each independent variable has on the dependent variable. Consequently, the model illustrates the proportion of variance in export performance that can be attributed to the chosen variables (central trading, warehousing delivery, clearing transactional services, arbitration tribunals, and marketing information).The equation of multiple regressions on this study is generally built on the set of variable, coffee exporters sales

performance as dependent variable and central trading, warehousing delivery, clearing transactional service, arbitration tribunal and marketing information's independent variables. A hierarchically regressed variable result for the model summery indicates an overall effect of independent variables on dependent variables to each model. In Model 1, 54% of the variation in coffee exporters sales performance is explained by the independent variables (central trading, warehousing delivery, clearing transactional service, arbitration tribunal and marketing information, *with an R* square of 0.544. This indicates that 54.4% of the variation in our dependent variable (coffee exporters sales performance, EP) is explained by the independent variables (central trading, warehousing delivery, clearing transactional service, arbitration tribunal and marketing information). This result is statistically significant, as indicated by a Sig. F Change of less than 0.001.

Table 12 Model summary

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.738[a]	.544	.536	.54774	.544	67.110	5	281	.000	1.833

a. Predictors: (Constant), MI, WH, AT, CT, CRT

b. Dependent Variable: EP

Source: Survey data (2024)

Table 13 ANOVA

ANOVA[b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	100.671	5	20.134	67.110	.000[a]
	Residual	84.305	281	.300		
	Total	184.976	286			

a. Predictors: (Constant), MI, WH, AT, CT, CRT

b. Dependent Variable: EP

Source: Survey data (2024)

The table above presented the overall significant relationship between export performance with independent variables under its respective model. From the statistics in the model, if the value of $F > 1$ and $p < 0.05$, the model is fit to predict the effect of independent variables on dependent variable. The result of the study shown that the prediction power of the model is fit at F- value of 67.110 for Model 1 while , ($p<0.01$, $F>1$). Therefore, the multiple linear regression the above model is appropriate to this research to predict the relationship of the independent variables on export performance under their respective models.

Table 14 Coefficients

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	95% Confidence Interval for B		Colinearity Statistics	
	B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1 (Constant)	.255	.189		1.348	.179	-.118	.628		
Central Trading	.169	.070	.143	2.408	.017	.031	.307	.457	2.188
Warehousing	.174	.068	.157	2.552	.011	.040	.308	.430	2.326
Clearing Transaction	-.090	.070	-.081	-1.297	.196	-.227	.047	.412	2.429
Arbitration Tribunal	.418	.058	.417	7.223	.000	.304	.532	.486	2.056
Marketing Information	.240	.067	.218	3.607	.000	.109	.371	.445	2.246

a. Dependent Variable:
Export Performance

Source; Survey data (2024)

This research sought to determine the impact of independent variables on the prediction of a dependent variable. Consequently, the influence of each predictor variable on the criterion variable can be analyzed through standardized Beta coefficients. The regression coefficient indicates the average change in the dependent variable resulting from a one-unit change in the independent variable. This analysis demonstrates the relative predictive strength of each variable when accounting for all other variables included in the model. To identify which factors influenced coffee exporters export sales performance the standardized regression coefficients, or beta weights (ß), were assessed as shown in Table 14 Arbitrational Tribunal is the most contributing factor in the prediction of export performance with beta value 0.417.

The results suggest that Arbitrationalalmost 41.7 % to coffee exporters' sales performance. The second beta value of ECX is "Marketing Information" with 0.218 which contribute 21.8 % to coffee exporters' sales performance. The third beta value of ECX is "Warehousing" with 0.157 which contribute 15.7 % to coffee exporters' sales performance.The fourth beta value of ECX is "Centralized Trading" with 0.143 which contribute 14.3 % to coffee exporters' sales performance. The last beta value of ECX isClearing Transaction with -0.081.Given the models' fitness with significance at level of less than 0.05 ($p<0.001$), we can predict coffee exporters' sales performance from the dimensions of significant model. Based on Table 10 using individual variables` the regression analysis Equation will be;

EP =0.255+0.417 AT+0.218 MI+0.157 WH+0143 CT -0.081 CRT Where:

EP = coffee exporters sales performance AT=Arbitrational Tribunal MI= Marketing Information WH=Warehousing CT=Central Trading CRT =Clearing transaction

4.5 Hypothesis Testing

Based on the un-standardized coefficient of beta and p-value, the hypotheses of the study were tested and the results are presented below:

H1: – Central trading service has a positive and significant effect on coffee exporters sales performance.

The results indicate a significant relationship between Central trading service and export performance ($\beta = 0.143$, $p>0.001$), with $p<0.05$. This confirms that Central trading service has a positive and significant effect on coffee exporters sales performance Therefore, H1 is accepted.

H2: Warehousing delivery has a positive and significant effect on coffee exporters sales performance.

The results show a significant relationship between "Warehousing delivery" and sales performance ($\beta = 0.157$, $p>0.001$), with $p<0.05$. This confirms that Warehousing delivery has a positive and significant effect on coffee exporters sales performance.Therefore, H2 is accepted.

H3 – Clearing transaction service has a positive and significant effect on coffee exporters' sales performance.

The results indicate no positive significant relationship between Clearing transaction service and coffee exporters sales performance ($\beta =-.081$, $p>0.001$) with $p>0.05$. This confirms that Clearing transaction service has a negative and insignificant effect on coffee exporters sales performance

Therefore, H3 is rejected.

H4 – Arbitration tribunal service has significant effect on coffee exporters' sales performance.

The results show significant relationship between Arbitration tribunal and coffee exporters' sales performance ($\beta = 0.417$, $p<0.001$), with $p<0.05$. This suggests that Arbitration tribunal service has apositive and significant effect on coffee exporters' sales performance, the relationship is very strong since it is $p=0.000$. Therefore, H4 is accepted.

H5 – Marketing information has a positive and significant effect on coffee exporters' sales performance.

The results show a significant relationship between "Warehousing delivery" and sales performance ($\beta = 0.218$, $p<0.001$), with $p<0.05$. This confirms that Marketing information has a positive and significant effect on coffee exporters sales performance.Therefore, H5 is accepted.

Table 15 summary of hypothesis

H.No	Hypothesis	Beta value	P-value	Result
H1	Central trading service has significant effect on coffee exporters' sales performance	.143	>0.001	Supported
H2	Warehousing delivery has significant effect on coffee exporters' sales performance	.157	>0.001	Supported
H3	Clearing transaction service has significant effect on coffee exporters' sales performance.	-.081	>0.001	unsupported
H4	Arbitration tribunal service has significant effect on coffee exporters' sales performance.	.417	<0.001	Supported
H5	Marketing information has significant effect on coffee exporters' sales performance.	.218	<0.001	Supported

4.6 Discussions on Major Findings

The objective of this study was to examine the role of ECX on coffee exporters sales performance central trading, warehousing delivery, clearing transaction services, arbitration tribunal and marketing information. From among the total 287 respondents 52.6% of the respondents have been customer of ECX for 1-5 years. From the results of the descriptive analysis, it was indicated that the mean score of the independent variables was above the mid-point (3.00) for all variables. The research finding showed that coffee exporters sales performance has scored a mean score of 3.41 which show that there was a positive and significant relationship between the five independent variables (central trading, warehousing delivery, clearing transaction services, arbitration tribunal and marketing information) and coffee exporters' sales performance. From correlation analysis result indicated that there is a positive relationship between central trading, warehousing delivery, clearing transaction services, arbitration tribunal and marketing information with a correlation result of 0.572,0.573,0.512,0.681 and 0.598.

Findings from the multiple regression analysis shows,54.4% variation in coffee exporters sales performance (where by R square is .544 and adjusted R square is .536). Furthermore, the significance value of F change statistics shows a value .000, which is less than $p<0.05$, implies the model is significant. This finding is consistent with Alemayehu & Hailu (2021).From the regression analysis result, it was indicated that there was significant and positive relationship between central trading, warehousing delivery, arbitration tribunal and marketing information and coffee exporters' sales performance. These findings were consistent with the findings of Alemayehu & Hailu (2021), Anderson (2015), Bizualem et al (2018) and Fetene (2019), Martha Endalew (2024).However, the regression analysis result of this research showed negative and insignificant relationship between clearing transaction process and coffee exporters sales performance with a correlation coefficient of 0.572 and the p value 0.196. This result is inconsistent with Alemayehu & Hailu (2021) which provide evidence that effective clearing transactions play a significant role in enhancing export performance within the coffee sectorwith a correlation coefficient of 0.8.

The regression analysis results also indicated that there was a significant and positive relationship between Market Information with coffee exporters sales performance with a correlation coefficient of 0.598 and the p value 0.000. This finding was found in line with the expectation and also supported by Anderson (2015), Bizualem et al (2018) and Fetene (2019), Martha Endalew (2024).

CHAPTER FIVE

SUMMARY, RECOMMENDATION AND CONCLUSION

5.0 Introduction

This chapter outlines the primary goals of the research and summarizes the findings related to those goals. It draws conclusions based on the results obtained and offers suggestions for future research as well as recommendations for the organization.

5.1 Summary of main findings

The primary aim of this research was to investigate the role of the Ethiopian Commodity Exchange (ECX) on coffee exporters sales performance. The study utilized descriptive statistics, correlation, and regression analysis through the IBM SPSS (version 20) software package. To facilitate this research, several fundamental questions were formulated.

1- How does central trading service affect the sales performance of coffee exporters?
2- What is the effect of warehousing delivery service on the exporter's sales performance?
3- To what extent does the clearing transactions affect the sales performance of coffee exporters?
4- How does arbitration tribunal service influence the sales performance of coffee exporters?
5- What is the effect of marketing information delivery on the exporter's sales performance?

To address the primary and specific research inquiries, data were gathered from the coffee exporters utilizing a simple random sampling method. From a total of 2,450 coffee export companies, a sample size of 344 was chosen, and questionnaires were sent out. Out of these, 287 responses were received and considered valid, while 57 were not retrieved. Following various investigations into the relevant variables, the following key findings emerged:
"Warehousing" has the highest mean score of 3.52, which is the highest among all ECX core functions. The second ECX core function which is perceived by the respondents is Clearing Transactions which has the mean score of 3.49. The third ECX core function which is perceived by the respondents is Central Trading with a mean score of 3.48. The fourth and fifth ECX core functions which is perceived by the respondents is Arbitration Tribunal and Marketing Information respectively which has the mean score of 3.45 and export performance has a mean score of 3.41. The correlation result of the study showed Central trading service has significant and positive effect oncoffee exporters sales performance by ($r = 0.143$, $p > 0.001$),

Warehousing delivery has significant and positive effect on coffee exporters sales performance by (r= 0.157 , p>0.001), Clearing transaction service has significant and positive effect on coffee exporters sales performance by (r= -0.081 , p>0.001), Arbitration tribunal service has significant effect on coffee exporters sales performance by (r= 0.417,p>0.001), Marketing information has a positive and significant effect on coffee exporters sales performance by (r= 0.417,p>0.001). The regression analysis of the study using model 1 with five of the independent variables can explain 54.4 % of the variations in export performance in the organization and the remaining 45.6 % of variance remain are explained by other factors.

5.3 Conclusion

The primary aim of this research was to investigate the role of the Ethiopian Commodity Exchange (ECX) on coffee exporters sales performance. This was achieved by assessing the influence of ECX's key functions—central trading, warehousing, transaction clearing, arbitration tribunal, and marketing information—on the export performance from the perspective of exporters dealing with this coffee. To accomplish this overarching goal, a survey was conducted. A questionnaire addressing various aspects of ECX's roles was created and distributed among coffee exporters.

The research objectives have been successfully achieved. The general objective of this thesis was to the main objective of this study is to investigate the role of ECX service and their effects on sales performance of selected coffee exporters in Addis Ababa. A regression analysis was performed to determine whether the independent variables affect sales performance. The results indicated that central trading, warehousing, arbitration tribunals, and marketing information significantly and positively influenced export performance; however, clearing transactions did not support our hypothesis. In summary, it can be concluded that ECX has a crucial and beneficial effect on enhancing the export performance of coffee exporters sales performance.

5.5 Recommendations

According to the research results and conclusions, the researcher offers several important recommendations aimed at supporting coffee export sectors in alignment with the primary functions of ECX. The recommendations are outlined as follows:

1. Central Trading

Central trading involves creating a centralized platform or system to coordinate trade activities. This approach can improve efficiency by simplifying processes like order management and enhancing communication between buyers and sellers. It is recommended to invest in a strong central trading system that connects with other operational functions. Such integration will support better decision-making and faster reactions to market fluctuations, ultimately leading to enhanced export performance. A well-integrated and centralized platform should be developed to streamline trade activities, improve order management, and enhance communication between buyers and sellers. This system should be connected to other operational functions such as logistics, quality control, and financial transactions, ensuring real-time data access and efficient decision-making. By adopting a more robust central trading infrastructure, exporters can respond faster to market fluctuations, optimize pricing strategies, and improve overall trade efficiency, leading to increased competitiveness in the global coffee market.

2. Warehousing

Warehousing plays a vital role in controlling inventory quantities and ensuring prompt delivery of products. Implementing effective warehousing strategies can lower expenses related to storage and handling while enhancing service quality. It is recommended to utilize cutting-edge warehousing technologies, such as automated inventory management systems, which offer real-time insights into stock levels. This approach will assist exporters in maintaining ideal inventory amounts, thereby minimizing delays in order fulfillment. Investing in advanced warehousing technologies, such as automated inventory management systems, will provide real-time visibility into stock levels, reducing storage and handling costs while improving order accuracy. Additionally, integrating warehousing operations with other supply chain functions—such as logistics and quality control—will help maintain optimal inventory levels, prevent stock shortages or surpluses, and minimize delays in fulfilling export orders. This approach will enhance. operational efficiency and strengthen Ethiopia’s position in the global coffee market.

3. Clearing Transactions

Clearing transactions refer to the process of settling payments and handling the necessary documentation for international trade. Improving this process can have a substantial effect on cash flow and can shorten transaction durations. The adoption of electronic clearing systems can improve both transparency and efficiency in financial dealings associated with exports. Consequently, it is recommended to utilize technological solutions that automate clearing processes, which helps reduce errors and speeds up payment cycles. Implementing automated systems will improve the efficiency and transparency of financial transactions, reducing the risk of errors and minimizing delays in the payment cycle. By automating clearing processes, exporters can accelerate cash flow, shorten transaction durations, and increase overall operational efficiency. This will not only enhance the financial management of export transactions but also contribute to more reliable and competitive coffee exports from Ethiopia.

4. Arbitration Tribunal

Arbitration tribunal has a crucial effect in addressing conflicts that may occur within international trade agreements. A dependable dispute resolution mechanism can enhance trust among trading partners, which is essential for sustaining long-term business relationships. Exporters are recommended to become acquainted with the arbitration processes applicable to their markets and to think about incorporating arbitration clauses into their contracts to protect their interests. By familiarizing themselves with the arbitration processes applicable to their international markets, exporters can ensure a reliable dispute resolution mechanism is in place. This will enhance trust and confidence among trading partners, reducing the risks associated with potential conflicts. Incorporating arbitration clauses will provide a structured, efficient, and legally binding method for resolving disputes, allowing exporters to protect their interests and maintain smooth trade operations, ultimately strengthening Ethiopia’s position in global coffee exports.

5. Marketing Information

Having reliable marketing data enables exporters to make well-informed choices about their strategies for entering markets, setting prices, and analyzing competition. The use of data analytics tools can assist in recognizing patterns and consumer preferences within target markets, which can result in more effective marketing approaches.

Therefore, it is recommended that exporters to invest in thorough market research efforts to collect actionable insights that enhance export performance. It is crucial for exporters to invest in comprehensive market research and leverage data analytics tools to gather reliable marketing data. These tools can help identify key market trends, consumer preferences, and competitive dynamics within target export markets. By utilizing data-driven insights, exporters can make informed decisions regarding market entry strategies, pricing, and promotional efforts. This approach will lead to more effective marketing campaigns, enabling exporters to better align their offerings with market demands, improve their competitiveness, and ultimately increase their export success in the global coffee market.

In summary, a cohesive strategy that integrates improvements in central trading systems, effective warehousing methods, efficient clearing processes, strong arbitration frameworks, and thorough marketing intelligence will greatly boost export performance. By addressing these independent factors as a unified whole rather than separately, exporters can establish a more adaptable operational structure that can respond to evolving market dynamics.

5.4 Contribution of the Study

The study titled “The Role of Ethiopian Commodity Exchange (ECX) On sales performance of coffee exporters)” plays a crucial role in understanding the ECX’s effect on the export processes of coffee in Ethiopia. It investigates factors such as centralized trading, storage facilities, transaction clearing, arbitration mechanisms, and marketing information. The study emphasizes how centralized trading systems aid in price determination and lower costs for exporters. The warehousing system guarantees effective quality control and storage capabilities, which are essential for preserving product quality during export activities. The process of clearing transactions simplifies the payment interactions between buyers and sellers, building trust and minimizing trade-related risks. An arbitration tribunal plays a crucial role in providing a method for resolving disputes quickly, which contributes to a more stable trading atmosphere. Furthermore, access to extensive marketing data equips exporters with analytical insights that can boost their competitiveness in global markets. Together, these elements highlight the significant contribution of the ECX in enhancing the sales performance of important agricultural products such as coffee.

5.5 Limitation and direction for Future Research

The research focused on coffee export sales performance among members of the Ethiopian Commodity Exchange (ECX) who are involved in exports. The scope was somewhat limited to coffee due to the variety of products that are being exported. Future studies could explore a more comprehensive analysis involving other commodities exported by ECX members.This investigation highlighted the export performance titled “The role of Ethiopian commodity exchange on sales performance of coffee export companies in Addis Ababa**,** Considering factors such as Central Trading, Warehousing, Clearing Transactions, Arbitrational Tribunal, and Marketing Information. Consequently, additional variables like Exchange Rate Volatility, Government Policies and Trade Regulations, Infrastructure and Logistics, Political Stability and Security that might influence the export performance of ECX members present opportunities for further research

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APPENDIX-A

Survey Questionnaire

To be filled by staff of coffee export companies

Dear Respondent,

I hope this letter finds you well. My name is Maedot shegaw, a postgraduate student at St. Mary's University. Currently, I am working on my thesis titled "The Role of Ethiopian Commodity Exchange on Sales Performance of Coffee Export Companies in Addis Ababa." The objective of this survey questionnaire is to collect valuable data that will aid in evaluating the impact of Ethiopian Commodity Exchange (ECX) services on the sales performance of coffee exporters within the region. I assure you that the information provided will solely be utilized for the research necessary to complete my Master's in Marketing Management at St. Mary's University, School of Graduate Studies.

Your participation in this questionnaire is greatly appreciated as your insights and opinions are crucial to the success of this research endeavor. I assure you that all responses will be handled with the utmost confidentiality and will not be shared or utilized for any other purpose than academic research. Your cooperation in completing the survey in a timely manner is deeply valued. Should you have any queries, suggestions, or feedback, please do not hesitate to contact me via the following contact details:

- - Phone: +251986035626

- Email: maedotshegaw3@gmail.com

Your contribution to this study will significantly enhance our understanding of the subject matter and aid in the development of valuable insights for the benefit of the coffee export industry in Addis Ababa and beyond. I extend my sincere gratitude for your anticipated cooperation and prompt response.

Thank you for your kind support.

Warm regards,

Maedot shegaw, St. Mary's University

General Information

Your Participation is Voluntary

Do not write your name on the Questionnaire

I. Demographic Profile of Respondents

Direction: The following statements are about your personal information. Please write the necessary information on the blank space provided and, in the optional items, indicate your answer by putting a tick mark (x) in the box.

1 Sex ☐ Male ☐ Female

2 Age (Years) ☐< 30 ☐ 30 - 45 ☐ 45 - 60 ☐> 60

3 Educational level ☐High School ☐ 1st Degree ☐Masters & above

4 For how long you have been a customer of ECX

☐ 1 – 5 years ☐ 6 – 10 years ☐ Above 10 years

5 Originality ☐Yirgacheffe ☐ Jima ☐ Harar ☐ Sidamo

6 Exported to ☐ America ☐ Europe ☐ Asia ☐ Africa

Part Two: Dimensions of ECX Service Delivery

Please, put your answers by marking a tick mark "√" for the following questions on the five point.

Based on the questions, rank from 5(strongly agreed) to 1(strongly disagreed).

No	Description	Likert Scale				
	Centralized Trading	**1**	**2**	**3**	**4**	**5**
	The electronic trading system of ECX consolidates sources supply to meet customer demand.					
	ECX is well positioned to match supplies from multiple extraction points with the needs of customers in multiple markets.					
	The ECX centralized trading mixes/ matches supplies from multiple sources that allows for greater supply chain stability.					
	The ECX centralized trading sets up multiple trading companies in various time zones across the globe with non-stop trading (24 hours a day)					

	using modern electronic trading service from ECX the report which is distributed through electronic methods is easily accessible					
	Overall, the centralized trading system of ECX facilitates simplified transaction					
Warehousing						
	Commodities are deposited in warehouses operated by ECX in major surplus regions of the country.					
	ECX offers an integrated warehouse system from the receipt of commodities on the basis of industry accepted grades and standards.					
	At the ECX warehouse, commodities are sampled, weighed, graded using state-of-the-art technology equipment.					
	ECX warehouses issue an Electronic Goods Received Note and provide the depositor or his/her representative with a signed print copy.					
	The Deposited commodities are stored using global standards of inventory management.					
	ECX warehouses are insured at maximum coverage to protect against loss and damage of deposits					
Clearing Transaction						
	ECX has a Zero-default clearing settlement system					
	ECX determines the net obligations of each member.					
	ECX is transparently informs the members their daily net obligations					
	The managers in ECX properly transfer cash funds/commodity ownership among members					
	ECX coordinates with commercial banks to facilitate transaction among members					
	ECX officials review membership applications for compliance with the applicable laws of the organization.					
Arbitrational Tribunal						

	ECX has well-organized dispute resolution system					
	The organization provides speedy quality-related dispute resolution					
	The organization facilitates transactional-related dispute with professional staff.					
	ECX maintains a system of market surveillance where experts monitor the behavior of market actors to protect the market from manipulation					
	Marketing Information					
	ECX provides timely information exchange between the head office and the outlying warehousing officers.					
	The trading operation department provide members with a timely transaction report.					
	The trading department start trading on time.					
	Electronic goods received note is issued/delivered on time.					
	ECX is known for issuance of the required documents on time.					
	ECX facilitates on time delivery of the global coffee market information.					
	Export Sales Performance					
	ECX helps me increase export sale by facilitating physical trade.					
	The storage and grading service of ECX has improved my export performance.					
	ECX helps me increase export sale through its market development roles.					
	The competitive coffee market created by ECX increased my export sales.					
	ECX helps me increase export by providing reliable market information					

Thank You Very Much!!!

APPENDIX-B

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- - [illegible]: +251986035626

- [illegible] maedotshegaw3@gmail.com

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