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OPERATIONAL PERFORMANCE OF ETHIOPIAN COMMODITY EXCHANGE(ECX) AND ITS EFFECT ON CUSTOMER SATISFACTION

BY

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ADDIS ABABA, ETHIOPIA

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A THESIS SUBMITTED TO ST. MARY'S UNIVESITY SCHOOL OF GRADUATE STUDIES DEPARTMENT OF MARKETING, IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF MARKETING MANAGMENT

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Statement of Declaration

This thesis is My Original Work on the Entitled 'OPERATIONAL PERFORMANCE OF ECX AND ITS EFFECT ON CUSTOMER SATISFACTION: The Case of ECX in Addis Abeba Submitted in Partial fulfillment of the Requirements for The Degree of Master of Art in Marketing Management in St. Mary's University. I have duly acknowledged and referenced all materials used in this work.

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Internal Examiner   **Signature**   **Date**

Acknowledgement

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Acronym

ABU= Arbitration unit

ACE= Area cooperative enterprises

ASCE= Abuja securities and commodity exchange

CMIU=Compliance monitoring and investigation unit

DEU= Discipline and enforcement unit

EAGC= Eastern African Grain Council

ECX= Ethiopian commodity exchange

ECEA=Ethiopian commodity exchange Authority

GSS=Gonder Sesame

HSS=Humera Sesame

HW=Hard Wheat

ICT=Information and communication technologies

IM= Intermediary member

IVR= Interactive voice response

KACE= Kenyan agricultural commodity exchange

KCPT= Kenyan coffee planters and traders

KYC= Know your client

MCA= Member client agreement

MM=Mixed maize

MW=Mixed Wheat

NCPB= National cereals produce board

NEAA= National exchange actors' association

PACDX= Pan-African commodities and derivatives exchange

PRKB= Processed red kidney beans

PWPB= Processed white kidney beans

RECOTIS= Regional commodity trade and information system

ROI= Return on investment

SRO=Self-regulatory organ

STP= straight through processing

SMS= Short message service

SW=Soft Wheat

UCE= Ugandan commodity exchange

URKB=Unprocessed red kidney beans

UWPB= Unprocessed white kidney beans

WM= White maize

WSS=Wollega Sessame

Abstract

The Ethiopia Commodity Exchange [ECX] is an organized market place that brings buyers and sellers to trade standardized contracts using its floor based trading system and electronic trading system. The fundamental factors to establish successful commodity exchange includes having an efficient and robust trading platform. The objective of this study was to assess operational performance of Ethiopian commodity exchange and its effect on customer satisfaction. The population of this study consisted of 347 members who are the members of ECX. The study used simple random sampling technique lottery method & descriptive and exploratory research design were used. Accordingly, from 347 members 205 members were selected and Likert questionnaire was administered. Before distributing the questioner to the selected respondents its reliability was tested using Cronbach's Alpha and its value was proved to be greater than 0.6, the data were analyzed using SPSS version 23. The results of the study revealed that Warehouse measurement, Regulatory body and Automated system have positive effect on customer satisfaction. The findings showed that regulatory body has the most powerful influence on customer satisfaction and the lowest effect shows on warehouse measurement.

Key words: - ECX, Customer Satisfaction, Operational Performance

CHAPTER ONE

1. INTRODUCTION

1.1. Background of the study

Agriculture in Ethiopia contributes about 85 percent to livelihood, 50 percent to GDP and 90 percent to the export market of the country(Ethiopia 2005). The Ethiopia Commodity Exchange is a marketplace, where buyers and sellers come together to trade, assured of quality, delivery and payment. The Ethiopia Commodity Exchange (ECX) launched its membership recruitment drive in January 2008 and commenced trading operations in April 2008. The ECX marketplace brings order, integrity, transparency, and efficiency to the market. ECX membership made up of an even mix of cooperative unions, industrial processing enterprises, commercial farmers, private exporters, and domestic trading and engaged in the agricultural commodity business. ECX enjoys wide national and global media attention with coverage by Wall Street Journal, Reuters, Bloomberg, Associated Press, Financial Times, VOA, Agency France Press, Business Week, Der Spiegel, East African Standard, BBC, among others, as well as many of the Ethiopian print, radio, and TV media, indicating the interest and support for this initiative.

The Ethiopia Commodity Exchange launched trading operations with contracts for white and mixed maize, hard and soft wheat, processed and unprocessed haricot beans and began trading coffee in December 2008.

The Ethiopian Commodity Exchange was started to benefit and modernize the way Ethiopia was trading its most valuable assets, its commodities(Gabre-Madhin 2006). Ethiopia needed a change from the traditional means of trading to better support the needs of all those involved in the trading and production. A primary function of an Exchange is coordinating buyers and sellers. Related to this, an Exchange creates market transparency by providing information on product grades, on prices, and on offers and bids for given products. This signals opportunities for profitable trade; it levels the playing field between farmers and others with better information; and it opens up new markets within and outside of the country. Another central function of an Exchange is to provide security to transactions, making it less risky to trade across long distances, across time, and with unknown counterparties(Gabre-Madhin 2006).

Three layers of regulation apply to the Exchange designed to maintain the integrity of the market. These are: (1) Supervision by the Ministry of Trade, (2) Regulation by the Ethiopia Commodity Exchange Authority, and (3) Regulation by the Exchange itself as a Self-Regulating Organ. ECX is a government owned entity. The Ministry of Trade ("the Ministry" hereinafter), in behalf of the government, supervises the Exchange to ensure its objectives are achieved(exchange 2012).The Ethiopia Commodity Exchange Authority ("Authority" hereinafter) regulates the day to day activates of the Exchange. It formulates directives to regulate the Exchange and ensure fair competition among market participants. Article 5 of the Ethiopia Commodity Exchange Authority Proclamation No. 551/2007 provide that. "The general objective of the Authority is to ensure the development of an efficient modern trading system, and to regulate and control the secure, transparent and stable functioning of a commodity Exchange and to protect the rights and benefits of sellers, buyers, intermediaries and the general public". Furthermore, Article 6 of the same Proclamation gives the Authority the power to recognize and regulate commodity exchanges, members of the Exchange, their associations, designated clearing institutions, designated warehouses, and other Exchange actors to promote and protect public interact. In addition, the Authority prescribes and amends rules of the Exchange, requirements regarding membership, clearing and settlement and contracts to be traded on the Exchange(exchange 2012).

The Authority also approves changes in the operations of the Exchange with respect to fees, the trading system, market information dissemination, dispute resolution and security. Regulation by the Exchange as a Self-Regulatory Organ (SRO) Exchanges use self-regulation as necessary components of overall sound business practice and as a means to mitigate legal and compliance risks. In addition to regulation/supervision by government bodies, ECX adopted and implemented strong internal regulatory mechanisms which make it a full-" edged SRO. The Exchange has a Compliance Division, which entrusted with the task of formulating and implementing internal rules and ensuring the Exchange's compliance to the Rules at all levels of its operations. The Division formulates internal compliance review standards and proactively reviews the business activities of the units of the Exchange and its members(exchange 2012). It also identifies potential regulatory and compliance risks and recommends ways to minimize such risks. It conducts internal inquires and investigations and take disciplinary actions for violations of the rules by members, representatives, clients and employees of the Exchange. It also provides

regulatory and compliance advices to the units of the Exchange on ongoing basis. In addition to Compliance, other controlling units of the Exchange, such as Internal Inspection and the Risk Department, review the operations of the business units of Exchange(exchange 2012).

In this study, we try to look the operational performance of ECX and its effect on customer satisfaction. ECX's model is the first of its kind in Africa with its end-to-end integrated system of central trading, warehousing, product grade certification, clearing, settlement, delivery, and market information dissemination(http://www.ecx.com.et). The ECX entrusted with broad objective of modernizing the Ethiopian agricultural market by providing a quality service and thereby attaining overall economic growth. It is also expected to provide a centralized marketing mechanism in which transactions are carried out publicly through a physical trading floor or electronic system or both and to create an efficient, transparent, and orderly marketing system which addresses the interest of all stakeholders including buyers, sellers and intermediaries and small scale producers.

Like many developing countries the Ethiopian markets are characterized by lack of competition, Poor market information/intelligence, quality standards not used, poor communication, electronic trade system failure, lack of transparency, lack of identifiable/available markets, lack of grading and quality certificate, incomplete competition and a high volatility in prices, no enforceable contracts/dispute resolution mechanism and use very conservative approach. However, the establishment of the Ethiopian commodity exchange expected to bring order, fairness and liquidity to the commodities market.

1.2. Statement of the problem

The commodity exchange market is very important because it brings together producers and consumers. While achieving the goal of the commodity exchange there are certain set of challenges faced? The challenges that exchanges face include strong reluctance to support transparent market, lack of understanding of the exchange concept, electronic trade system failure, moves to undermine the exchange and its operations, lack of support from donor agencies and government, immature and underdeveloped marketing environment. (Hernandez, Rashid et al. 2015)the most attention-seeking problem that most developing countries commodity exchanges are facing is lack of liquidity. This problem relates to the inefficiencies in

different operational areas of the exchanges including trading and contracts, settlements, spot price discovery, risk management and nature and structure of the exchange itself.

Different researchers have studied about ECX such as: - Assessment of the service quality and Customer satisfaction of ECX(Tefera31 2015), Overview of ECX (Alemu and Meijerink 2010), Critical assessment of ECX (Girma 2009). The Ethiopian commodity exchange and spatial price dispersion (Andersson, Bezabih et al. 2015).

This research paper has attempted to focus about operational performance of ECX and its effect on customer satisfaction. We will investigate about the issues of the ECX performance model and its operation. Specifically, the study attempted to answer the following questions:

1. What does the existing operational performance of the company look like?
2. Is there a relationship between the ECX performance and satisfaction of customer?
3. What is the effect of existing performance on customer satisfaction?

1.3. Objective of the study

1.3.1. General Objective

The general objective of this study is assessing operational performance of Ethiopian commodity exchange and its effect on customer satisfaction.

1.3.2. Specific Objectives'

➢ To examine the existing operational performance of the company
➢ To investigate the relationship between the operational performance of the company (measurement of warehouse, Regulatory body and Automated system) on customer satisfaction
➢ To assess the effect of operational performance of ECX on customer satisfaction

1.4. Significance of the study

About 85 percent of populations live in rural areas in Ethiopia. This indicates that there is a huge agricultural market in the country. This study believed that Ethiopia as an agrarian country can have enormous benefits from the operation of ECX to increase its production for marketing activities. However, it should be considered that the challenges of ECX.

The study is conducted operational performance of ECX and its effect on customer satisfaction. The main benefit of this research will be Ethiopia Commodity Exchange. The organization will obtain the necessary information about its customer's knowledge with regard to the operation performance of ECX, and identify the main bottlenecks of the company. It will be also significant for the Farmers to sell their products and become beneficiary of ECX warehouse. The research paper expected to provide an insight into ECX management's efforts of providing efficient service to all market actors and its plan is to satisfy its customers and to provide additional information for the experts. It Provide some insight about customers' perception about the operation of Ethiopian commodity exchange. It also Identify the gap between the perception of customers thinking and the actual operation of the company.

1.5. Scope of the study

The study focused on Operational performance of ECX and its effect on customer satisfaction. The study delimited to ECX's members who are actively transacting as intermediary and trading members here at Addis Ababa headquarters thus, due to budget and time constraints this study limits to the ECX operational performance and customer satisfaction. From research methodology point of view, the research used only descriptive and exploratory research methods, as they are the best to describe the operation performance of the company and customer satisfaction.

1.6. Operational definition

Organization performance is the performance of the company against prescribed standards, such as compliance with regulations, waste reduction, productivity, etc. Operational performance measurements are the key metrics, which used to measure the operational performance of a company. Different companies have different metrics to measure their own performance but few

of the metrics are common across the entire business environment. Few of these metrics include: Customer Satisfaction Index, Employee Satisfaction Index, Revenue Generation, Productivity, and Gross Profit(Kaydos 1998).

Keeping in mind the above few mentioned points and points specific to the industry to which the company belongs, a company generally evaluates itself and evaluated by other agencies in terms of operational performance. Generally, keeping a high index or score on all the above-mentioned points indicate that the company's operational performance is good. These metrics, which cumulatively determine the operational performance of the company, are very useful and important as these help the company to identify the particular area in which the company is lacking and it tries improving on these aspects. A company with a high operational performance is seen in good light by all customers, employees and investors so all companies are continuously trying to improve this(Kaydos 1998).

Customer satisfaction can be experienced in a variety of situations, and connect to both goods and services. It is a highly personal assessment that greatly affected by customer expectations. Satisfaction also based on the customer's experience of both contact with the organization (the "moment of truth" as it is called in business literature) and personal outcomes. Some researchers define satisfied customer within the private sector as "one who receives significant added value" to his/her bottom line a definition that may apply just as well to public services(Smith 2007).

Customer satisfaction measures how well a company's products or services meet or exceed customer expectations. These expectations often reflect many aspects of the company's business activities including the actual product, service, company, and how the company operates in the global environment. Customer satisfaction measures are an overall psychological evaluation that is based on the customer's lifetime of product and service experience(Smith 2007).

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, as cited in(Zegeye 2007). Furthermore, According to(Alexander, Lamon et al. 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, 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 (Zegeye 2007). 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).

1.7. Limitation of the Study

This study not conducted without its limitations. One the study limits in order to assess operational performance of Ethiopian commodity exchange and its effect on customer satisfaction EXC members. In this study, ECX members are the only target populations. Other limitation the study conducted in Addis Abeba city among ECX member it could not, be generalized to the entire ECX clients that are found in the country. Another study with a large sample size may be required in the future to arrive at reliable conclusion about ECX operation performance and its effect on customer satisfaction nationwide.

1.8. Organization of the study

The paper organized in to five chapters. Chapter one consists introduction part such as background of the study, statements of the problem, significance of the study, scope of the study, objectives of study and, limitation of a study. Chapter, two presents literature review with respect to the theoretical and empirical studies. Chapter, three discussed about the methodology part of the study including research approach, source of data, data type and collection method, target population and sampling, sample size determination, reliability and validity, and ethical consideration. Chapter, four presents data results and analysis. The last chapter consists of the finding of the study, conclusion, recommendation of the study.

CHAPTER TWO

2. REVIEW OF RELATED LITERATURE

2.1 INTRODUCTION

In this chapter theoretical empirical review and of the study discussed. This chapter presents theoretical review, empirical review and conceptual framework studies conducted related to operational performance of ECX and customer satisfaction. The theoretical framework will be through review of existing literature within the Commodity Exchange, serve as a platform for the forthcoming empirical study. Whereas, the purpose of the empirical literature review is to identify what previous scholar, has done so far, how it has been, done and the results and conclusions obtained. Conceptual frame work studies this will in turn paramount for identifying the gaps in knowledge.

2.2 Theoretical review

2.2.1 Contracts of Commodity Exchange

Commodity exchange is an exchange where various commodities and derivatives products traded. Most commodity markets across the world trade in agricultural products and other raw materials (such as wheat, barley, sugar, maize, cotton, cocoa, coffee, milk products, pork bellies, oil, metals) and contracts based on them. These contracts can include spots, forwards, futures and options on futures.

Commodity exchanges usually trade futures contracts on commodities, such as trading contracts to receive something and it protects the farmer (seller) from price drops and the buyer from price rises. Speculators also buy and sell the futures contracts to make a profit and provide liquidity to the system (Bose 2009).

Spot Contract

A spot contract is an agreement between a buyer and a seller at time zero, when the seller of the asset agrees to deliver it immediately for cash and the buyer agrees to pay in cash for that asset. Thus, the unique feature of a spot contract is the immediate and simultaneous exchange of cash for securities, or what called delivery versus payment.

Forward Contract

A forward contract is a legally binding agreement between two parties calling for the sale of an asset or product in the future at a price agreed upon today. The terms of the contract call for one party to deliver the goods to the other on a certain date in the future, called the settlement date. The other party pays the previously agreed-upon forward price and takes the goods. Forward contract can be buy and sold.

The buyer of a forward contract has the obligation to take delivery and pay for the goods; the seller has the obligation to make delivery and accept payment. The buyer of a forward contract benefits if prices increase because the buyer will have locked in a lower price. Similarly, the seller wins if prices fall because a higher selling price has been lock in. Note that one party to a forward contract can win only at the expense of the other, so a forward contract is a zero-sum game.

Future Trading Contract

Futures contracts are an improved variant of forward contracts. They are agreements to purchase or sell a given quantity of a commodity at a predetermined price, with settlement expected to take place at a future date. The futures contracts as against forwards are standardized in terms of quality and quantity, and place and date of delivery of the commodity.

Exchange largely used as risk management or hedging mechanism on either physical commodity itself or open positions in commodity stock. This purchase or sale of commodities must be, made through a broker or trading member who must be a member of the exchange and the trade should have done under the terms and conditions of the exchanges.

Due to the bulky nature of the underlying assets, physical settlement in commodity derivatives creates the need for warehousing, the quality of the asset underlying a contract can vary largely and this becomes an important issue to manage. Participants of a commodities exchange are not free from risk.

In futures contracts, inexperienced investors may face price risk as all futures prices respond to many factors. Such factors may include unexpected high inflation, general strikes, natural calamities, reports on economic forecasts, politics and even on rumors and many other internal and external matters. The factors that can influence commodities prices may occur any time (Bose 2009).

2.2.2 Performance and Customer Satisfaction

The ECX 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 (EleniZ.Gabre-Madhin May 16(2008)).

Trading on the ECX 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 (EleniZ.Gabre-Madhin May 16(2008)).

Clearing and settlement is conduct by the ECX 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 ECX 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 ECX.

2.2.3 Customer satisfaction definition

According to (Westbrook and Reilly 1983) define- Customer satisfaction is as emotional response to the experience provided by, (or associated with) particular products or services purchased, retail outlets, or even molar patterns of behavior, as well as the overall marketplace.

Another author (Hunt 1977) defines customer satisfaction as a process of evaluation rendered that the experience was at least as good as it was supposed to be.

According to (Tse and Wilton 1988) elaborated hunt definition where they said 'customer satisfaction is a process of consumer's response to the evaluation of the perceived discrepancy between prior expectations and the actual performance of the product as perceived after its consumption'.

Satisfaction is the customer's fulfillment response. It is a judgmental that a product or service feature, or the product or service itself, provides a pleasurable level of consumption-related fulfillment (Oliver 1980). 'This definition approaches two sides where the first approach defines satisfaction as a final situation or as end-state resulting from the consumption experience and the second approach emphasizes the perceptual, evaluative and psychological process that contributes to satisfaction' (Yannis 2005).

2.2.4   Importance of customer satisfaction

In modern business philosophy, business should be customer oriented and the implementation of the main principles of continuous improvement, justifies the importance of evaluating and analyzing customer satisfaction. In short, customer satisfaction is considered as baseline of standardize and excellence of performance for many businesses. It also helps to identify the potential market opportunities (Yannis 2010,).

Mentioning about importance of customer satisfaction in business perspective (Zairi 2000) said in one magazine 'Customers are the purpose of what we do and rather than them depending on us, we very much depend on them. The customer is not the source of a problem, we shouldn't perhaps make a wish that customers 'should go away' because our future and our security will be put in jeopardy.'

However, the concept of customer satisfaction is not a new one. It hit the business sectors in early 1980's where some researchers considered that customer satisfaction is the best window into loyalty. They also found that it has direct relationship with company profitability, ROI (return on investment), or share of market. Satisfied customer think twice or several times before switching to alternatives because they become attached emotionally and also afraid to believe on alternatives quality (Oliver 1980).

(Zairi 2000)Mention more about the importance as- 'numerous studies that have looked at the impact of customer satisfaction repeat purchase, loyalty and retention. They all bring the similar message. First, satisfied customers share their experience with average five or six people and dissatisfied customers normally tell ten people about their unfortunate experience. Secondly, many customers do not complain about dissatisfaction but it is needs to realize by the company and it differs from industry to industry. Finally, people do not think dealing customer satisfaction

is not as costly as to recruit a new customer. Actually it is only twenty five percent of the recruit a new customer (Zairi 2000).

Customer satisfaction is a marketing term that measures how products or services supplied by a company meet or surpass a customer's expectation. Customer satisfaction is important because it provides marketers and business owners with a metric that they can use to manage and improve their businesses (Beard 2015).

Here are the top six reasons why customer satisfaction is so important:

- It's a leading indicator of consumer repurchase intentions and loyalty
- It's a point of differentiation
- It reduces customer churn
- It increases customer lifetime value
- It reduces negative word of mouth
- It's cheaper to retain customers than acquire new ones

2.2.5 Measuring customer satisfaction

Now a day is measuring customer satisfaction become an important issue to most of business organization. In this regard, there is a rumored by Lord Kelvin (19th century) 'If you cannot measure something, you cannot understand it'. In recent decades' importance of customer satisfaction has increased thus many organizations considered measuring customer satisfaction should be set as a parameter. 'It also considered as reliable feedback and it provides as effective, direct, meaningful and objective way the customers' preferences and expectations' (Gerson 1993).

According to wild 1980 and Hill 1996 as cited by (Mihelis, Grigoroudis et al. 2001)Said, customer satisfaction measurement provides a sense of achievement and accomplishment for all employees involved in any stage of the customer service process and it motivates people to perform as well as achieve higher levels of productivity.

(Yannis 2010,)Mentioned in their book about main advantages of measuring customer satisfaction, one- measuring customer satisfaction helps to evaluate business current position against its competition and accordingly design its plans. Second- Satisfaction measurement is

able to identify potential market opportunities. Third- it helps to understand customer behavior and particularly to identify and analyze customer expectations, needs and desire. Fourth- It improve the communication the total clientele. Fifth- By this measurement it is also possible to examine whether new actions, efforts and programs have any impact on the organizations' clientele. Sixth- Organizations weakness and strength against competition are determined, based on customers' perceptions and judgment. Seventh- Personnel is motivated to increase its productivity.

2.2.6 Determinates of customer satisfaction

Customer satisfaction is one of the most important issues concerning business organizations of all types. Business organizations try to give best service to the customer and also look for the reason that can increase the satisfaction level. According to Hokinson 1995 as cited by (Wadud) these factors include friendly employees, knowledgeable employees, Helpful employees, accuracy of billing, billing timeliness, competitive pricing, service quality, good value, billing clarity and quick service. The determinants are shown in figure 1 below
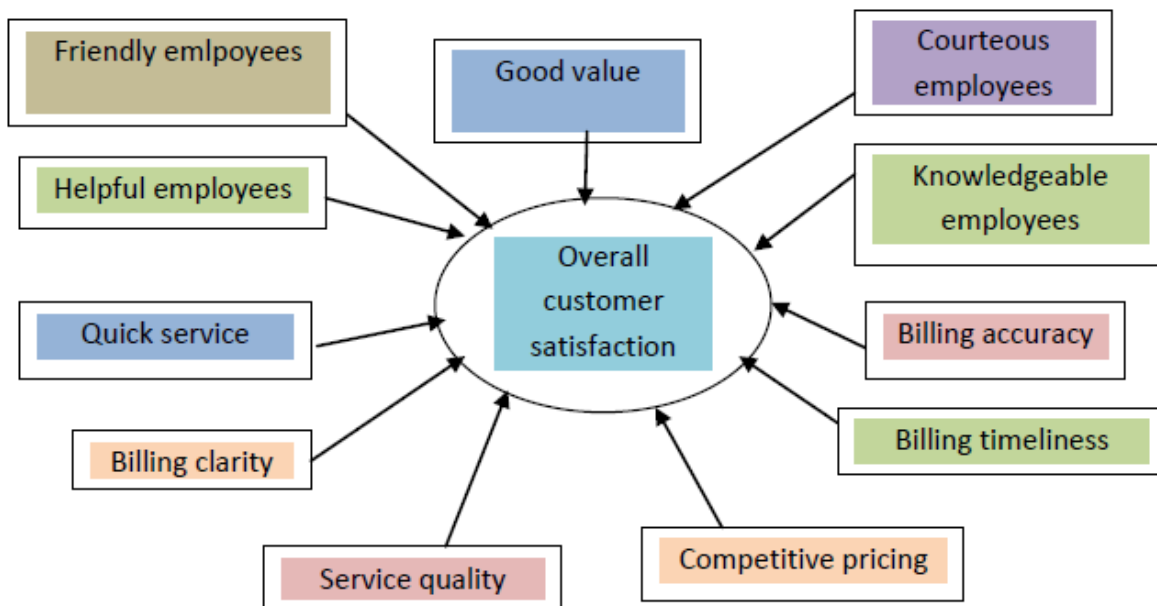
Figure 1- Factors affecting customer satisfaction (Hokinson 1995)

2.2.7 Electronic Trading

Technology plays three main roles in futures trading: (i) providing general information such as price, volume, and news; (ii) routing orders; and (iii) 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 and Singh 2009).

2.2.7.1 Advantages of Automated Trading Systems

There is a long list of advantages to having a computer monitor the markets for trading opportunities and execute the trades, including. (<http://www.investopedia.com/article/trading/11/automated>):

Minimize Emotions- Automated trading systems minimize emotions throughout the trading process. By keeping emotions in check, traders typically have an easier time sticking to the plan. Since trade orders executed automatically once the trade rules has been met traders will not be able to hesitate or question the trade. In addition to helping traders who are afraid to "pull the trigger", automated trading can curb those who are apt to overtrade – buying and selling at every perceived opportunity.

Ability to back test- Back testing applies trading rules to historical market data to determine the viability of the idea. When designing a system for automated trading, all rules need to be absolute, with no room for interpretation (the computer cannot make guesses – it has to be told exactly what to do). Traders can take these precise sets of rules and test them on historical data before risking money in live trading. Careful back testing allows traders to evaluate and fine-tune a trading idea, and to determine the system's expectancy – the average amount that a trader can expect to win (or loss) per unit of risk.

Preserve Discipline- Because the trade rules are established and trade execution performed automatically, discipline preserved even in volatile markets. Discipline is often lost due to emotional factors such as fear of taking a loss, or the desire to eke out a little more profit from a trade. Automated trading helps ensure that discipline maintained because the trading plan that will be, followed exactly. In addition, pilot-error minimized, and an order to buy 100 shares incorrectly entered as an order to sell 1,000 shares.

Achieve Consistency- One of the biggest challenges in trading is to plan the trade and trade the plan. Even if a trading plan has the potential to be profitable, traders who ignore the rules are altering any expectancy the system would have had. There is no such thing as a trading plan that wins 100% of the time – losses are a part of the game. However, losses can be psychologically traumatizing, so a trader who has two or three losing trades in a row might decide to skip the next trade. If this next trade would have been a winner, the trader has already destroyed any

expectancy the system had. Automated trading systems allow traders to achieve consistency by trading the plan.

Improved Order Entry Speed- Since computers respond immediately to changing market conditions, automated systems are able to generate orders as soon as trade criteria met. Getting in or out of a trade, a few seconds earlier can make a big difference in the trade's outcome. As soon as a position is, entered, all other orders automatically generated, including protective stop losses and profit targets. Markets can move quickly, and it is demoralizing to have a trade reach the profit target or blow past a stop loss level – before the orders can be, entered. An automated trading system prevents this from happening.

Diversify Trading- Automated trading systems permit the user to trade multiple accounts or various strategies at one time. This has the potential to spread risk over various instruments while creating a hedge against losing positions. What would, be incredibly challenging a human to accomplish is efficiently executed by a computer in a matter of milliseconds. The computer is able to scan for trading opportunities across a range of markets, generate orders and monitor trades.

2.2.7.2   Disadvantages and Realities of Automated Trading Systems

Automated trading systems boast many advantages, but there are some downfalls of and realties to which traders should be aware (<http://www.investopedia.com/article/trading/11/automated>).

Mechanical failures- The theory behind automated trading makes it seem simple: set up the software, program the rules and watch it trade. In reality, however, automated trading is a sophisticated method of trading, yet infallible. Depending on the trading platform, a trade order could reside on a computer – and not a server. What that means is that if an Internet connection is lost, an order might not be, sent to the market. There could also be a discrepancy between the "theoretical trades" generated by the strategy and the order entry are platform component that turns them into real trades. Most traders should expect a learning curve when using automated trading systems, and it is generally a good idea to start with small trade sizes while the process is refined.

Monitoring- Although it would be great to turn on the computer and leave for the day, automated trading systems do require monitoring. This is due to the potential for mechanical

failures, such as connectivity issues, power losses or computer crashes, and to system quirks. It is possible for an automated trading system to experience anomalies that could result in errant orders, missing orders, or duplicate orders. If the system is, monitored, these events can be, identified and resolved quickly.

Over-optimization- Though not specific to automated trading systems, traders who employ back testing techniques can create systems that look great on paper and perform terribly in a live market. Over-optimization refers to excessive curve fitting that produces a trading plan that is unreliable in live trading. It is possible, for example, to tweak a strategy to achieve exceptional results on the historical data on which it was tested. Traders sometimes incorrectly assume that a trading plan should have close to 100% profitable trades or should never experience a drawdown to be a viable plan. As such, parameters can be adjusted to create a "near perfect" plan – that completely fails as soon as it is applied to a live market. Server-Based Automation

Traders do have the option to run their automated trading systems through a server-based trading platform such as Strategy Runner. These platforms frequently offer commercial strategies for sale, a wizard so traders can design their own systems, or the ability to host existing systems on the server-based platform. For a fee, the automated trading system can scan for, execute and monitor trades – with all orders residing on their server, resulting in potentially faster and more reliable order entries

2.2.8 Experiences in commodity exchange in African countries

The gradual liberalization of agricultural trade combined with the reduction of government support to agricultural producers outside the OECD, heightened the interest in the use of risk management and other modern financial instruments, including commodity exchanges, in the developing world (Alemu and Meijerink 2010)

In recent years, there is substantial growth in emerging commodity markets driven by the continued growth of existing exchanges, particularly those in China and India, and also by the rise of other exchanges situated in emerging markets.

In Africa, the Pan-African Commodities and Derivatives Exchange (PACDEX) initiative has stimulated the development of national exchanges in a number of countries, including Nigeria, Ethiopia, Kenya and Uganda (its establishment has been, strongly supported by the African Union). The PACDEX model comprises a hub in Botswana managing a common exchange, as

well as a back-office platform that links together various national exchanges and warehouses to facilitate regional trade in contracts across the agricultural, metals, energy and currency sectors. The experiences with the commodity exchange in Kenya and Uganda a reviewed below

2.2.8.1   Kenyan Experience in commodity exchange

Currently, Kenya has three commodity exchanges: The Nairobi Coffee Exchanges dealing with coffee, the Tea Auction in Mombasa, and the Kenya Agriculture Commodity Exchange (KACE), a spot exchange that deals with a variety of commodities but mostly maize and beans.

The Kenya Agricultural Commodity Exchange (KACE) is a private sector firm that has been in operation in Kenya since 1994. KACE has been an important private sector initiative that has made significant contributions to agricultural marketing in the country, and to smallholder farmers in particular in two ways: linking producers and buyers of agricultural commodities, and provision of market information for commercial actors within the subsector. However, KACE faces several challenges among which the following two are the most important:

(i) The poor quality of produce that farmers deliver combined with the fact that most small-scale farmers find it difficult to deliver in bulk. Which, is ideal for an exchange, and (ii) most of the commodities in Kenya are heavily regulated by boards and are grown and marketed in an environment of struggling cooperatives, which are inefficient, mismanaged and have cumbersome internal bureaucracies (Mukhebi 2004).

To overcome the stated challenges, KACE is supporting smallholder farmers to organize themselves into marketing associations in order to cost effectively access market and information services provided by the exchange. This allows them to consolidate supplies of marketable quality commodities for offer through the exchange, and purchasing of inputs in volumes to achieve economies of scale. In addition, KACE's electronic market information system, the Regional Commodity Trade and Information System (RECOTIS), is providing market information throughout the eastern and central Africa region to promote regional trade.

In general, faced with fragmented markets, government intervention and significant infrastructural deficiencies, trade through KACE has always been minimal. Instead, focus has been on information dissemination with KACE acting as a provider of paid-for price information, a business model supported by private sector partnerships and aid donor funding.

For June 2010, the Nairobi bourse plans to launch a commodities exchange by a joint effort of the National Cereals Produce Board (NCPB), the Kenya Agricultural Commodities Exchange

(KACE), Eastern African Grain Council (EAGC) and Nairobi Stock Exchange. It will consist of a platform where futures can be, traded. The market will initially trade major grains produced in East Africa, including maize, wheat, rice and beans but will ultimately trade other agricultural commodities, including inputs such as fertilizers and seeds.

The plans have met with some criticism. Kenya Coffee Planters and Traders (KCPT), the association that runs Nairobi Coffee Exchange, said the country has not established the fundamentals for a credible commodities exchange. Experts reckon that for commodities exchange to work in Kenya, the government needs to back the initiative with sound legal and regulatory frameworks such as enacting a Commodities Exchange Act and a Warehouse Receipts Act. The system also requires major improvements in road networks connecting farms and a substantial investment in NCPB facilities to fit them with modern equipment like severs and driers to enable hold grains for longer periods (Omondi 2010).

2.2.8.2   Ugandan experience in commodity exchange

Uganda Commodity Exchange Limited (UCE) is a corporate entity registered in 1998 through the initiative of private sector players with four founding shareholders namely, the Ugandan Cooperative Alliance, Ugandan Coffee Trade Federation, National Farmers' Association and Commercial Farmers Association. The UCE became operational in 2002. The commodities currently traded at the exchange are coffee, sesame, maize, beans, soya beans, and rice with quantity specification of minimum 10 tons per lot for every commodity. UCE aims to serve several objectives. One objective is to help link producers and buyers easily and cheaply and to make the process of price discovery more transparent. A second objective is to ensure that only standard commodities are, traded. The commodity exchange is linked to the Warehouse Receipt System and UCE has been delegated the regulatory function of warehouse receipts. Standards being developed to ensure that farmers produce what the market requires to avoid wastage that currently characterizes production of rural producers. Once standard commodities are available in the rural areas, exporters will be, assured of supply and farmers will get good prices through the exchange.

There have been a few auctions on the floor of the exchange with encouraging results, but Operations had been, suspended to improve the system with the assistance of the European Union. There are several initiatives aiming at enabling farmers to access markets and have better

bargaining power through bulking. One of these initiatives includes the formation of Area Cooperative Enterprises (ACEs). These ACEs are, formed by primary societies to handle input distribution, bulking of farmers' agricultural commodities, which they sell to most the competitive buyer. In order to ensure predictable quality, some have started value addition. It has been, mainly the ACEs that have utilized the services of both the UCE and WRS so far

2.2.8.3   The Abuja Securities and Commodity Exchange

Nigeria is an agrarian society having over 70% of its estimated population engaged in agricultural sector. However, Nigerian agricultural sector is, characterized by low output, low access to financing, poor quality of agricultural products and lack of efficient market. In order to address these problems government intervened through the establishment of Abuja Securities and Commodity Exchange. ASCE was, originally incorporated in 1998 as a stock exchange. Later it was, converted to a commodity exchange by the federal government of Nigeria. ASCE mainly uses email based information dissemination and has certified warehouses to issue warehouse receipts (Raji 2016).

2.2.8.4   Agricultural Commodity Derivatives Market of South Africa

The agricultural commodity derivatives market in South Africa established in 1995 as a separate division of the South African Future Exchange. The primary reason for the establishment of the market was the emergence or recognition of agricultural price risk within the sector. Around 20% of commercial farmers are actively involved in the market. Indeed, the price discovery role of the exchange is such that the price is, used throughout South Africa as reference price. Warehouse receipts are, used as collateral. This enhances strong participation from the market players; apart from fraud, there is a view that the certificate is reliable; legally not protected, but still accepted by everyone in the market; banks have established credit limits for each participant who is warehousing. And only certain approved silos (warehouses) can issue the certificate (Adelegan 2009).

2.3 Empirical review

Before ECX was, launched agricultural market characterized by high transaction costs and high risk of transacting which forces the producers into global isolation. From the commodity produced only one third of the produced products reached the market. To avoid the fear of cheating or default, the sellers of the commodity prefer to sale to customers. Trade was,

conducted based on visual inspection to check the quality of the commodity while there was no possibility to recognize assurance of product quality or quantity at that time. Also there was no means that the producers get market information about the current price of their products and to reduce market risk(Markham 1991).

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 (Markham 1991). From the above definitions of scholars about exchange indicated that, it (commodity exchange) could 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". According to (Markham 1991) 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.

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 enforcing contracts. But these is not the only focus for the Ethiopia commodity exchange and it designed to serve smallholder farmers and small traders without excluding those with less education or capital and also balance the interests of all actors and of the public and private sectors. 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".

There are six core elements required for a successful exchange(Gabre-Madhin 2006):

A trading platform: An exchange needs a system to match multiple offers to sell and bids to buy, whether this is a system where buyers and sellers are physically present or an electronic system where trading is done remotely. The trading platform must be efficient, robust, not too

expensive, and fit with clients' needs. With advances in information technology, traditional open outcry trading is giving way to electronic trading. However, with or without technology, every exchange needs a trading system that efficiently matches offers and bids.

Brokers: Brokers are a vital part of an exchange. Brokers, who are formally licensed and insured, act as marketing agents, enabling a wide population of buyer and seller clients to participate in the exchange. The integrity of the brokers on the exchange is core to the integrity of the exchange itself. With an exchange, the business of brokers redefined from information provision to enabling the process of matching buyers and sellers.

Contract: The exchange needs to offer contracts that are commodity and grade specific, with standard specifications for grade, lot size, delivery, payment, measurement, and dispute resolution, among others. By offering standardized contracts, the exchange makes it easier, cheaper, and less risky for unknown partners to trade with each other. However, the contracts need to be ones that the target clients need or are looking for and they need to be well, designed to reflect actual trading practices. For example, a maize contract with a lot size of 1000 tons would be difficult to implement under current conditions in Ethiopia, while a lot size of 5 tons (the equivalent of an Isuzu truck) will draw in many players.

Counterparty risk management: One of the key reasons for trading on the exchange is because it greatly reduces the likelihood of contract default or non-performance.   The exchange manages counterparty risk in a variety of ways. Through imposing discipline on its users with strict rules of trade, through requiring margin deposits of funds in advance of bidding, through requiring that products weighed, graded, deposited in an insured warehouse in advance of an offer, and through operating a clearing, and settlement mechanism. Where the Exchange itself or an affiliated body ensures that payments are, made against delivery and vice versa. To ensure this, the Exchange must work closely with banks as well as warehouse operators.

Product integrity: Unlike a stock exchange, a commodity exchange involves the transfer of ownership of a physical agricultural product that must be graded, weighed, stored, handled, and ultimately delivered from one location to another. This greatly increases the complexity of a commodity exchange. Exchange viability depends on whether it trades products of integrity. With grades that are well understood and unadulterated, and guarantees that the sample truly

represents the entire lot, that what is in the warehouse is actually there in the quality, quantity, and condition in which it was deposited, and that it will be delivered in that condition at the completion of the trading transaction. For this to happen, the Exchange must work very closely with warehouse operators, insurers, and transporters.

Viable regulation and enforcement: Ultimately, the whole exchange system relies on trust – trust in the exchange (and its clearinghouse), trust in the brokers to whom clients entrust their money, and trust in the warehouses and collateral managers who will issue the pieces of paper that will, actually delivered on the exchange. A good system of regulation is necessary to ensure such trust. Although the exchange is a self-regulatory organization, there needs to be an over-arching regulatory and legal infrastructure in place to ensure regulation at different levels: self-regulation by the brokers, warehouses and the exchange, regulation by trade associations who license and monitor their members, and regulation by a state regulator, such as an Exchange Commission.

Three factors influence market prices. First, there are the market fundamentals of actual supply and demand. Second, there are expectations regarding the underlying fundamentals. Expectations how they formed and informed is a science unto itself. Third, there is the market conduct of market actors, such as speculation or market manipulation. There is a subtle but important difference between speculation and manipulation. Speculation is behavior in response to expectations of price trends (such as holding grain if one believes there will be continued price increase). Speculation, when not excessive, is a normal part of market conduct. Manipulation is illicit or illegal behavior intended to wrongly influence prices (such as creating false scarcity by hiding stocks of grain or spreading false information about supply or demand)(EleniZ.Gabre-Madhin May 16(2008)).

The basic reason for having commodity exchanges in the first place. 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 (EleniZ.Gabre-Madhin May 16(2008)).

2.3.1 The purpose of commodity exchanges

Commodity exchanges are organized market venues where buyers and sellers of a commodity meet to trade it or its derivatives. They are, designed to help mitigate counterparty risk and ensure that payments are, made through reliable financial service providers. Exchanges provide a framework for market actors, financial institutions, and commodity operators to interact based on rules that provide legal protections.

Exchanges further reduce information asymmetry. This encourages competition among buyers and sellers by allowing them to discover the real value of commodities in the market.

Commodity exchanges in emerging markets typically trade with spot contracts that offer immediate delivery of the traded good, while those in more advanced economies tend to trade in futures and options contracts.

Commodity exchanges actually serve a vital role in the economy and it is unlikely that the U.S. would have experienced as economic growth in the last 100 years as it has without them.

The purpose of exchanges is to provide a centralized marketplace where commodity producers the commercials can sell their commodities to those who want to use them for manufacturing or consumption. The beauty of a commodity futures exchange is that someone like a corn farmer can lock in a price for his crops months before even harvested. This process increases business survival among farmers, and the exchanges always make sure there's a buyer for every seller, provided their prices meet(Kowalski January 01,2018).

2.3.2 Commodities Traded in Ethiopia Commodity Exchange

Reflecting the agrarian nature of the country in which it is situated, the Ethiopia Commodity Exchange concentrates on agricultural commodities. The commodities traded at the ECX are as follows:

Coffee: since Ethiopia generally held to be the place where coffee was first cultivated, it is entirely appropriate that coffee is, traded as a commodity on ECX. In fact, dozens coffee contracts are available, each having its own particular contract code/ticker symbol, delivery point

and contract specification. Many of these contracts are, directly related to the regional varieties that have developed over the millennia comprising Ethiopia's history of coffee cultivation: major varieties include Harare, Jimma, Sidama and Yirgacheffe.

Corn (Maize): corn, also known as maize, is one of the world's primary agricultural commodities, and its importance in the Horn of Africa is increasing as population growth puts pressure on traditional crops. Two corn contracts are traded on MCX: Mixed Maize (contract code: MM) and White Maize (contract code: WM).

Haricot Beans: haricot bean contracts on the Ethiopian Commodity Exchange are, split into two main types, Red Kidney Beans and White Pea Beans:

> **Red Kidney Beans**: the two contracts available are Processed Red Kidney Beans (contract code: PRKB) and Unprocessed Red Kidney Beans (contract code: URKB).

> **White Pea Beans**: again, two contracts are available – Processed White Pea Beans (contract code: PWPB) and Unprocessed White Pea Beans (contract code: UWPB).

Sesame: as with coffee, it is likely that Ethiopia is the place where Sesame was first cultivated. This commodity is still important to the region's economy, and so contracts for three varieties are offered on ECX: Gondar (contract code: GSS), Humera (contract code: HSS) and Wollega (contract code: WSS).

Wheat: like maize, wheat is a key foodstuff in Ethiopia and surrounding countries. Three varieties are traded on the Ethiopia Commodity Exchange: Hard Wheat (contract code: HW), Soft Wheat (contract code: SW) and Mixed Wheat (contract code: MW).

2.4 Operation of ECX

2.4.1 Warehouse

ECX offers an integrated warehouse system from the receipt of commodities based on industry accepted grades and standards for each traded commodity by type to the ultimate delivery. Commodities are, deposited in warehouses operated by ECX in major surplus regions of the country. At the ECX warehouse, commodities are sampled, weighed and graded using state-of-the-art technology grading and weighing equipment. ECX warehouses issue an Electronic Goods

Received Note and provide the depositor or his/her representative with a signed print copy. The Electronic Goods Received Notes are not negotiable, transferable or represent legal title to the deposited commodity. The depositor has to get Electronic Warehouse Receipt issued by the ECX Central Depository in order to establish legal title to the deposited commodity. The Deposited commodities are stored using global standards of inventory management, which rely on First-In-First-Out principles, rotation, and careful environmental control. ECX Inventory Management system guarantees the quality and quantity of the commodity throughout the pre-determined period of storage. Further, ECX warehouses are, insured at maximum coverage to protect against loss and damage of deposits. ECX have 21 warehouses in the country(http://www.ecx.com.et/).

Services

ECX warehouses provide the following services:

- Sampling, Grading, weighing and certifying of the grain and coffee coming to each warehouse using equipment provided by ECX according to ECX established standards
- Weighing, receiving and issuing Electronic Goods Received Note which matches ECX automated system
- Recording system for incoming and outgoing grain and daily stock position reports Proper handling of the commodity at the warehouse (store layout stacking, bin no, inventory management)
- Reporting system and formats for up-to-date information exchange between ECX and the area warehouses
- Maintain the quality of received products.

2.4.2   Central depository

ECX maintains a Central Depository or Registry of warehouse receipts, which guarantee product integrity. The Electronic Goods Received Note issued at an ECX warehouse is a precondition for issuance of Electronic Warehouse Receipt by the ECX Central Depository. The ECX Central Depository is the sole entity authorized to and responsible for issuing Electronic Warehouse Receipts, printing copies of receipts, transferring legal title, and canceling receipts. The Electronic Warehouse Receipt issued by the ECX Central Depository represents legal title to the

deposited commodity. The Electronic Warehouse Receipt is transferable and negotiable on ECX through the function of the ECX Central Depository. The Central Depository maintains separate accounts for every depositor. ECX is currently working towards introducing the use of Electronic Warehouse Receipts for the purposes of securing collateral finance or also known as inventory financing in the near future. The Exchange Central Depository provides the following services. (http://www.ecx.com.et/)

* Create Electronic Warehouse Receipts;

* Maintain and edit required electronic warehouse receipt data;

* Maintain a register of Depositors;

* Effect settlement of contracts traded on the Exchange by transferring Electronic Warehouse Receipts between holders;

* Issue Delivery Notices after transfer of Electronic Warehouse Receipt;

* Void or cancel Electronic Warehouse Receipts;

* Reconcile records daily

2.4.3 Trading

Trading at ECX: - The Ethiopia Commodity Exchange (ECX) is a spot exchange established in Addis Ababa, Ethiopia. More than 200 different spot contracts are, traded by the ECX members or their authorized representatives through, open outcry trading system but now it is, replaced by electronics trading. (http://www.ecx.com.et/)

The Trading Floor: - The trading floor is an octagonal area where open outcry trading takes place. Operating during regular business hours, the ECX trading floor holds various sessions for transacting different commodity contracts.(http://www.ecx.com.et/)

Trades are, made in the pits by bidding or offering a price and quantity of contracts, depending on the intention to buy (bid) or sell (offer).

This is, generally done by using a physical representation of a trader's intentions with his hands. If a trader wants to buy ten contracts of grade 1 of Jimma A, at a price of three hundred, for example, in the floor he would yell " Jimma A1 at three hundred", stating grade before price, and turn his palm inward toward his face. If the trader wants to sell the same, he will yell the same quote, and show one hand with the palm facing outward. The combination of hand-signals and vocal representation between the way a trader expresses bids and offers is a protection against misinterpretation by other market participants but now the system is, changed into electronics trade.

Trading system: - Transaction orders for sales and purchases in standard lot sizes of standardized commodity grades (referred to as contracts) are, recorded on Order Tickets. The ECX automated back office system ensures the existence and validity of the Warehouse Receipt backing the sale, the availability of buyer funds in a deposit account, and where applicable the validity of the Member-Client agreement. This automated reconciliation takes just minutes and is key to giving all market players confidence in the market. (http://www.ecx.com.et/)

Market Data: - The ECX Market Data strategy involves harnessing the power of modern information and communication technologies (ICTs) to empower all market actors, including smallholder farmers to access markets more efficiently and profitably. The key market dissemination channels at ECX are rural based Market Information Tickers, mobile phone Short Messaging Service (SMS), Interactive Voice Response (IVR) service, Mass media (TV, Radio, and Newspaper) and Website.(http://www.ecx.com.et/)

ECX collects, processes, updates and disseminates market information in real-time to all market actors and other market intermediaries through the MIS. Market information includes prices of commodities in different markets, and commodity offers to sell and bids to buy, as well as short extension messages.

The application of ICTs is taking the market to the doorstep or farm-gate of the farmer, commodity dealers, processors, exporters and importers. The components of the ECX MIS are:

- Electronic Tickers
- Mobile Phone Short Messaging Service (SMS)

- Interactive Voice Response (IVR) service
- Bulletins – Market Commentary
- Mass media (radio, TV, print)
- Information Center

2.4.4 Compliance

The Compliance Division is responsible for formulating and enforcing the Rules of the Exchange and all other relevant laws affecting the operation of the Exchange. To achieve this broad objective, the Rules of the Exchange establish four separate units with specific mandates. These are: (1) Rules and Regulations; (2) Compliance Monitoring and Investigation; (3) Discipline and Enforcement; and (4) Arbitration Tribunal. The Compliance Division also serves the official liaison with all local and international regulatory bodies and provides overall legal counsel to divisions of the Exchange on the proper and sound operation of the Exchange.(http://www.ecx.com.et/)

Rules and Regulations Unit: The Rules and Regulations Unite ("RRU") is responsible for the drafting of Rules of the Exchange; the research and analysis of regulatory issues requiring new rules and regulations; the amending of the existing rules based on feedbacks received from members, customers and other stakeholders; and the interpretation of the Rules of the Exchange.

Compliance Monitoring and Investigation Unit: The Compliance Monitoring and Investigation. Unit ("CMIU") is responsible for overseeing that compliance is, maintained with the relevant law of the Exchange, Rules and policies of the Exchange, and Directives of the Ethiopia Commodities Exchange Authority at all levels the Exchange's operations; conducting and coordinating investigations of violations of the Rules of the Exchange, the Authority is Directive and other pertinent laws. The CMIU is also responsible for the reviewing of membership applications for compliance with the applicable laws of the Exchange and the Authority, the conducting of on-site Member visits, the inspection of Member books and accounts, and the monitoring and reviewing of Members' annual and other regular compliance reports.

Discipline and Enforcement Unit: The Discipline and Enforcement Unit ("DEU") is responsible for enforcing the Rules of Exchange and other pertinent laws through a disciplinary rules enforcement mechanism. The DEU works closely with the Authority and relevant law enforcement agencies to protect the integrity of the Exchange's price discovery Mechanism as well.

Arbitration Tribunal: 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

In keeping with global best practices, the Ethiopian Commodity Exchange Authority (ECEA) is the regulatory body established with the purpose of ensuring the development of an efficient modern trading system and to regulate and control the secure, transparent and stable functioning of the Exchange and to protect the rights and benefits of sellers, buyers, intermediaries and the general public.

Its specific objectives are to:

- ➢ Promote responsible innovation, access to market information by all market participants and fair competition among markets and market participants;
- ➢ Deter and prevent price manipulation or any other disruption of market integrity;
- ➢ Ensure the financial integrity of all transactions subject to this Proclamation and the avoidance of systemic risk; and
- ➢ Protect all market participants from fraudulent or other abusive trading practices and misuses of customer assets.

2.4.5 Authority Recognition

The powers and duties of the ECEA extend to recognition and oversight of Exchange. Actors (Members and their representatives), recognition and oversight of clearing Institutions (domestic banks or other financial institutions engaged in clearing and settlement of payments). Oversight

of the Rules of the Exchange and regulation of Exchange-traded contracts, as well as regulation of the conduct of investment advisors, consulting companies, law practices, accounting and audit professionals, as this conduct relates to ECX business. In addition, the ECEA has the power to investigate wrongdoing and adjudicate cases falling under its jurisdiction or to refer criminal cases to the appropriate court. (http://www.ecx.com.et/)

Given the multi-sectorial nature and its broad scope of powers and duties, the ECEA is accountable to the Prime Minister. Moreover, in a unique and appropriate governance structure, ECEA is, governed by a Board comprised of a Chairman, and a member from each of the following relevant government bodies: Ministry of Finance and Economic Development, Ministry of Trade and Industry, Ministry of Agriculture and Rural Development, and the National Bank of Ethiopia. Thus, by law, the ECEA Board shall exercise the full powers and duties of the ECEA. The operations of the ECEA are executed by a Director General, who is also an ex-officio member of the Board.(http://www.ecx.com.et/)

Actor Association

Alongside the development of the ECX corporate entity and the regulatory body, the National Exchange Actors Association (NEAA) plays a vital role in the ECX Ecosystem. Following global best practices, Members and their Authorized Representatives are required to participate in the NEAA, which is an institution recognized by the Authority for the purpose of upholding and maintaining the standards of integrity, professionalism, and skills of all Exchange Actors.(http://www.ecx.com.et/)

The NEAA will maintain a database of Exchange Actors and be responsible for developing

1. Commodity Marketing and ECX Rules training standards and proficiency testing;
2. Self-audit programs for Members to enforce compliance with relevant ECX Rules and authority directives governing accounting, financial standards, and trading practices;
3. Public database on grievances filed against exchange actors or the Exchange by Clients or others;
4. Public education and sensitization on the Commodity Exchange for media, policymakers, stakeholder groups, students, and others; and
5. Advocacy on behalf of Exchange Actors.

2.4.6 Being A Client

A Client can be, represented through an Intermediary Member (IM) or Limited Intermediary Member. A client of an IM has the opportunity to buy and sell all of commodities offered by the exchange.(http://www.ecx.com.et/)

Clients have the right to submit to the Exchange Arbitration Tribunal any claims, controversies or disputes initiated by the intermediary member on the invalidation, performance termination, or cancellation of the trade contract.(http://www.ecx.com.et/)

Know Your Client Procedures

Although the relationship between a Member and Client is strictly private, the Exchange operates under certain Know Your Client (KYC) procedures, which protect the client and enable a smoothly functioning system for all. When a Client signs up to trade through a Member, the Member must submit the Member-Client Agreement (MCA) to the Exchange. In addition, the Client must furnish the following information to the Exchange: (http://www.ecx.com.et/)

- ✓ Business License
- ✓ Tax Identification Number
- ✓ VAT Registration
- ✓ Kebele ID

2.5 Conceptual Framework

The conceptual framework developed for the study considers the current context of ECX integration technology solution and examine the operational performance of the company and its effect on customer satisfaction to achieve the objective of the study. The dependent variables are customer satisfaction and the independent variables are Warehouse measurement, Regulatory body, and Automated system.
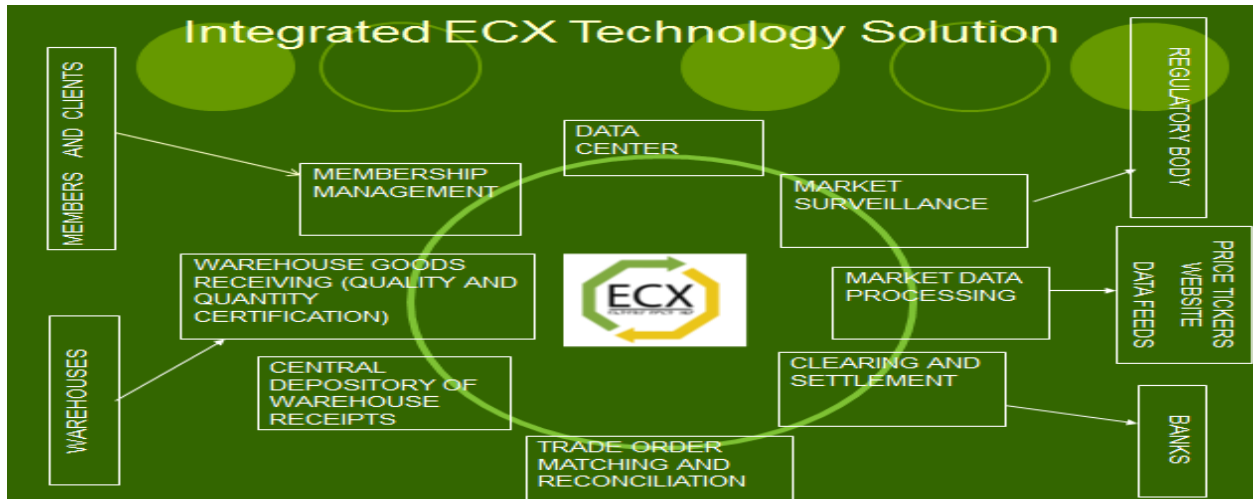
Figure 2 - ECX operational model (Eleni.Gabre-Madhin@ecx.com
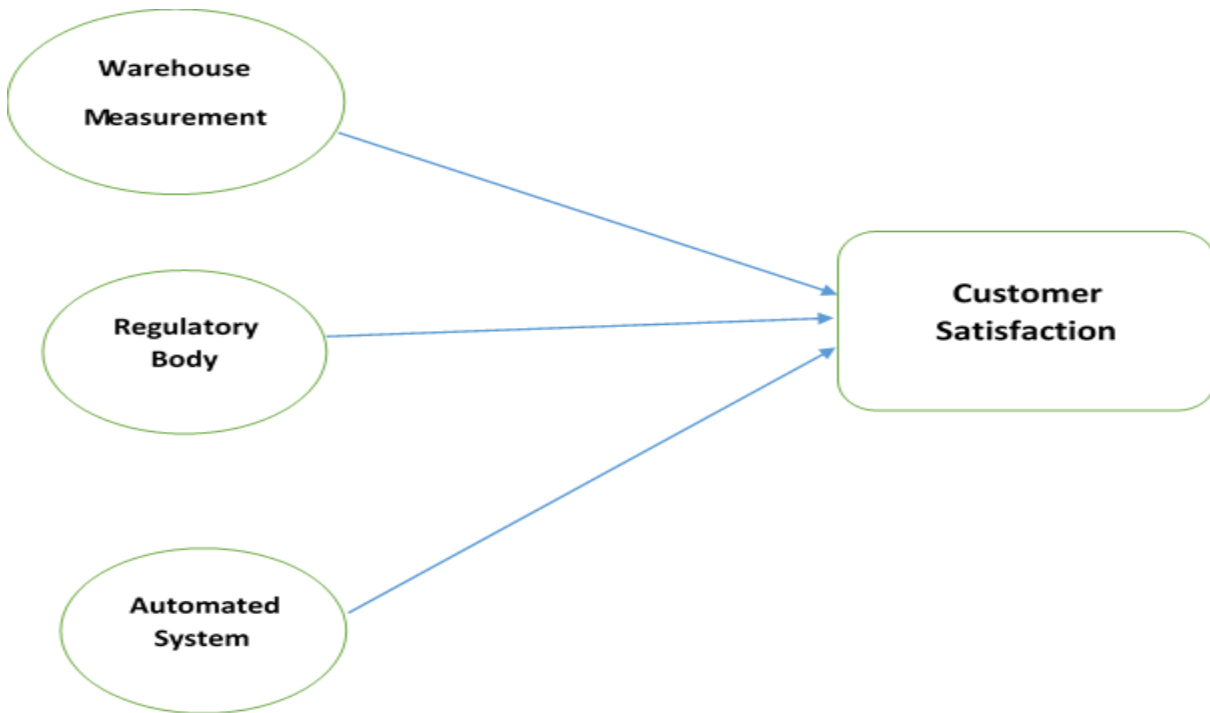
Source: conceptual framework from integrated ECX technology solution(Eleni.Gabre-Madhin@ecx.com.et)

CHAPTER THREE

3. RESEARCH METHODOLOGY

In this chapter are going to justify the methods used for research design, data sources, sample size, sampling method, the instruments for data collection, and the reason for choosing procedures.

3.1 Research Design

The research design refers to the overall strategy that you choose to integrate the different components of the study in a coherent and logical way, thereby, ensuring you will effectively address the research problem; it constitutes the blueprint for the collection, measurement, and analysis of data.

In order to achieve the general objective of the study, the research used a combination of descriptive and exploratory research methods. Descriptive method is set out to describe and to interpret what is going on. Descriptive research is concerned with conditions or relationships that exist; practices that prevail; beliefs, points of views, or attitudes that are held; processes that are going on; effects that are being felt; or trends that are developing(Tavakoli 2012). The main objective of descriptive research is to analyze the state of affairs as it prevails at the time of the study. In this view, descriptive research will help to analyze the existing trading practice at ECX operation performance.

Exploratory research is a valuable means of finding out 'what is happening; to seek new insights; to ask questions and to assess phenomena in a new light'. It is particularly useful if there is a need to clarify and understand a problem, such as if there is uncertainty in the precise nature of the problem(Robson 2002).An exploratory design is, conducted about a research problem when there are few or no earlier studies to refer. The focus is on gaining insights and familiarity for later investigation or undertaken when problems are in a preliminary stage of investigation. In light of this, the study used this research design to explore the challenges, the factors and feasibility of customer satisfaction in ECX.

3.2 Source of data

The study used both primary and secondary data sources. The primary data for the research was collected from the members of ECX through questionnaires. A questionnaire was prepared to get idea about the customer's perception on the operation performance of as well as for understanding the importance and satisfaction of each customers of ECX. The secondary data was collected from Books, journals and research papers were also used to carry out the study.

3.3 Data type and Collection Methods

To conduct the study fruitfully, the researcher used close-ended questionnaire as a primary data-gathering instrument. Sets of questionnaires designed by the researcher to collect the data. The questionnaire has two parts. The first part of the questionnaire consists of individual level basic information such as age, level of education, employment status etc. Part two consists of operation and customer satisfaction issues. Generally, the questionnaire contains a broad range of information on operational performance of Ethiopian commodity exchange (ECX) and its effect on customer satisfaction.

3.4 Target population and sampling

Sampling is the process of selecting sample from the entire population of the study to make statistical inference about that population. Because of feasibility and cost constraints, it is difficult to study the entire populations. Therefore, from the population in the study the researcher required to select the representatives, which call it sample. Target population of the study includes all units of analysis with the characteristics that one wishes to study, therefore in this study target population for the study was both buyers and sellers of ECX members and 205 ECX members were, selected as samples.

3.5 Sample size Determination

The sample size of ECX members are 205. The sample size is based on Yamane (1967:886) cited by (Israel 1992) formula to calculate sample size whose precision level is 0.05. Suitability of the Yamane technique is due to its power to generate a large sample on which reliable analysis can be, conducted. This sample was, calculated based on the 95% confidence level, 5% precision level and 10% non-response rate. The Yamane formula is, denoted as:

$$n = \frac{N}{1 + N(e)^2}$$

$$n = \frac{347}{1 + 347(0.05)^2}$$

$$n = 186$$

Then 10% of the non-respondent rate was calculated

$$n = 186 \times 10\% = 19$$

$$n = 186 + 19 = 205$$

Where, n is the sample size, N is the population, and e is the level of precision. Then respondents were selected at their business premises based on a simple random sampling (lottery method).

3.6 Reliability and Validity

3.6.1 Reliability

The term 'Reliability' is a concept used for testing or evaluating quantitative research, through the idea is, used in all kinds of research. The most important test of any qualitative study is its quality. Reliability is a concept to evaluate quality in quantitative study with a "purpose of explaining" while quality concept in qualitative study has the purpose of "generating understanding" (Stenbacka 2001)

Reliability is, defined as the ratio of variance of the true score to the variance of the actual measured score. The result lies between zero and one and most of the widely used scales have reliabilities between 0.65 and 0.8. In general, we can say that reliability of a study is a pre requirement for the results to be interpretable and generalizable.

3.6.2 Validity

In order to ensure validity, the questionnaire composed carefully and constructs questions then classified in to clusters to avoid ambiguity and in order to answer all the research questions. The questionnaire design for the study and review & commented by this thesis advisor. This process helps to ensure the content validity of the instrument.

3.7 Ethical Consideration

Ethical clearance was, assured from ethical review board of University. Permission asked from the Ethiopia commodity exchange and the respondents. Emphasis was, given to confidentiality issues to assure the confidentiality. Data collectors were business professionals who had experience in data collection; the subjects name are not be displayed in the data collection checklist. The results of the study described the individual values and the collected information were, locked by passwords in personal computers.

CHAPTER FOUR

4. RESULTS AND DISCSSIONS

This chapter discusses the results of the analysis that has been, conducted to address objectives of the research. The chapter divided into three major sections. The descriptive statistics, inferential statistics, and regression result and analysis.

To analyze the collected data in line with the overall objective of the research undertaking, statistical procedures were, carried using SPSS 23. In this part to identify the major issues and to provide workable recommendations for the problems concerning operation performance and customer satisfaction, the researcher has collected data through self-administered questionnaire. In this chapter, the findings of the study are, presented. During the survey 205 questionnaires were distributed to customers. Out of the total, 180 distributed questionnaires were returned. Therefore, the analysis was, made based on 180 responded questionnaires.

The questionnaire was developed in five scales ranging from five to one; where 1 represents strongly agree, 2 agree, 3 neutrals, 4 disagree, and 5 strongly disagree. Descriptive statistics were, used for demographic factors and correlation and regression analysis were, conducted for scale typed questionnaires.

4.1 Descriptive Statistics

4.1.1 Profile of Respondents

This section aims to presents and analyzes the data regarding to the demographic characteristics of the respondents. In the table below demographic data such as Gender, Age, and Educational status, Employment status, Work experience and their Position in the organization are, presented. The purpose of the demographic analysis in this research is to describe the characteristics of the sample respondents accordingly, and the following tables provide the demographic profile of the respondents.

Totally, 205 respondents were participated making a response rate of 87.8%. Among the total sample ECX members,114 or 63.3% are male and 66 or 36.7% of the respondents are female. The ECX members, number of female are lower than number of male (Table 1)

Table 1: Socio- Demographic characteristics of the respondents

Measure	Characteristics	Frequency	Percentage
Gender	Male	114	63.3
	Female	66	36.7
Age	20-25	36	20.0
	26-30	74	41.1
	31-35	30	16.7
	36-40	18	10.0
	41-45	7	3.9
	46-50	4	2.2
	51-55	11	6.1
Education status	Primary education	11	6.1
	Secondary education	19	10.6
	College diploma and above	150	83.3
Employment status	Full-time	168	93.3
	Contract	6	3.3
	Part-time	6	3.3
Work experience	1-2 years	39	21.7
	3-5 years	79	43.9
	6-10 years	62	34.4
Position in ECX	Buyer	67	37.2
	Seller	91	50.6
	Both	22	12.2

Source: Survey data, 2018

The age of respondents was ranged from 20 to 55 with a mean age of 33.64(SD=6.32)

Concerning age 36 (20%) of the respondents are 20-25 age category,74(41.1%) are 26-30 and 30(16.7) are 31-35 age category, 18(10.0%),7(3.9%),4(2.2%),11(6.1%) are 36-40,41-45,46-50,51-55 of age category respectively this showed us that most of the employees are young age group.

Based on the resut from table 1 among the sample ECX members, Educational statuses of the respondents is none of them are illiterate and Read & write only, 11 or 6.1% of them have completed primary school,19 or 10.6% of them were attain secondaryschool, and 150 or 83.3% of the remaining respondents are College diploma and above. This shows that most respondents

are graduates with college diploma and above. Therefore, this implied that the information, which these respondents provide for the study was, definitely speaking reliable information.

With Regard to the Employment statuses of the respondents as shown in table 1 among the sample of ECX members 168 or 93.3% are full time employers, 6 or 3.3% are contract employers and 6 or 3.3% part timers. This indicates that the bigger portions of the respondents are fulltime employers.

Among the total sample of ECX members, 39(21.7%) of the respondents had 1-2 years' working experience; 79(43.9%) of the respondents had 3-5 years' work experiences which is the biggest from the respondents; 62(34.4%) of the respondents also had 6-10 years.

The resut from table 1 among the sampleof ECX members, 67 or (37.2%) of respondents have position of ECX are buyers, 91 or (50.6%) of respondents have position of ECX are sellers, and 22 or (12.2%) of respondents have position of ECX in both (buyers and sellers). This indicates that the majority of the respondents are sellers in Ethiopian commodity exchange.

4.1.2   Warehouse Measurement of ECX Dimension Analysis

As shown in the table 2 the majority of the respondent that are 86(47.8%) Agree that about the commodities are, sampled weighed and graded appropriately by grading and weighting equipment. Among the respondent, 19(10.6%) are strongly agree about commodities are sampled, weighed and graded appropriately by grading and weighting equipment. Among 29 (16.1%) respondents are neutral, about commodities are sampled, weighed and graded appropriately by grading and weighting equipment. 29(16.1%) respondents are disagreeing, about commodities are sampled, weighed and graded appropriately by grading and weighting equipment. 17(9.4%) are strongly disagree, about commodities are sampled, weighed and graded appropriately by grading and weighting equipment.

Based on the resut from table 2 among the sample of ECX member 73(40.6%) of the respondents Agree that the warehouse locations are available to all customers. 16(8.9%) are strongly agree that the warehouse locations are available to all customers. Among 30(16.7%) respondents are neutral, that the warehouse locations are available to all customers. 48(26.7%) respondents are disagreeing, that the warehouse locations are available to all customers. 13(7.2%) are strongly disagree, that the warehouse locations are available to all customers.

The resut from table 2 among the sample of ECX member 87(48.3%) of the respondents or the majority of the respondents agree about the warehouse operator holds the stored commodity by the way of safe custody. 28(15.6%) are strongly agree about the warehouse operator holds the stored commodity by the way of safe custody. Among 39(21.7%) respondents are neutral, about the warehouse operator holds the stored commodity by the way of safe custody. Around 14(7.8%) respondents are disagreeing, about the warehouse operator holds the stored commodity by the way of safe custody. 12(6.7%) are strongly disagree, about the warehouse operator holds the stored commodity by the way of safe custody. So from this we can conclude that the majority of the respondents Agree in the warehouse measurement.

Table 2: Warehouse measurement

s.no	Variable	SA	A	N	D	SDA
		Fre(%)	Fre(%)	Fre(%)	Fre(%)	Fre(%)
1	Commodities are sampled, weighted and graded appropriately by grading and weighting equipment	19(10.6)	86(47.8)	29(16.1)	29(16.1)	17(9.4)
2	Warehouse locations are available to all customers	16(8.9)	73(40.6)	30(16.7)	48(26.7)	13(7.2)
3	Warehouse operator holds the stored commodity by the way of safe custody	28(15.6)	87(48.3)	39(21.7)	14(7.8)	12(6.7)

SD=strongly disagree, D=Agree, N=Neutral, A= Agree, SA= strongly agree,
Source: Survey data, 2018

4.1.3 Regulatory body of ECX Dimension Analysis

Based on the resut from table 3 among the sample of ECX member the highest portion of the respondents or 64(35.6%) agree about ECX authority ensure avoidance of the systematic risk. 61(33.9%) agree that ECX authority protects all marketing participants from fraudulent. The majority of the respondents 86(47.8%) agree about ECX protects all marketing participants to misuse of customer assets. From 180 respondents 88(48.9%) agree that ECX authority prevent price manipulation. 99(55%) of the respondents agree that ECX authority access to market information by all market participants. From the responses of respondents, the researcher can conclude that the Regulatory body is good for the customers and should work more than this to satisfy and to fulfill the customer's needs.

Table 3: Regulatory body

s.no	Variable	SA	A	N	D	SDA
		Fre(%)	Fre(%)	Fre(%)	Fre(%)	Fre(%)
1	ECX authority ensure avoidance of the systematic risk	25(13.9)	64(35.6)	45(25.0)	40(22.2)	6(3.3)
2	ECX authority protects all market participants from fraudulent	31(17.2)	61(33.9)	36(20.0)	43(23.9)	9(5.0)
3	ECX protects all market participants to misuse of customer assets	33(18.3)	86(47.8)	38(21.1)	21(11.7)	2(1.1)
4	ECX authority prevent price manipulation	30(16.7)	88(48.9)	26(14.4)	31(17.2)	5(2.8)
5	ECX authority access to market information by all market participants	30(16.7)	99(55.0)	25(13.9)	19(10.6)	7(3.9)

SD=strongly disagree, D=Agree, N=Neutral, A= Agree, SA= strongly agree,
Source: Survey data, 2018

4.1.4 Automated System of ECX Dimension Analysis

From the below table 4 the majority of the respondents or 97(53.9%) agree that electronic trade is better than floor trade. 122(67.8%) of the respondents agree that networked banks are close to ECX. From this the researcher conclude that online or automated commodity exchange is preferable from floor trade to improve market access to various market actors, improve trading volume, Electronic trading is a game changer for markets and Online trading provides for market expansion. Though modern exchanges have evolved into complex organizations by adopting new ideas and innovations to improve their overall structure, the physical floor remained the cornerstone of trading. The model worked successfully, despite the noisy chaos on the floor.

Table 4:Automated system Respondent

s.no	Variable	SA	A	N	D	SDA
		Fre(%)	Fre(%)	Fre(%)	Fre(%)	Fre(%)
1	Electronic trade is better than floor trade	61(33.9)	97(53.9)	5(2.8)	13(7.2)	4(2.2)
2	Networked banks are close to ECX	33(18.3)	122(67.8)	14(7.8)	11(6.1)	-

SD=strongly disagree, D=Disagree, N=Neutral, A= Agree, SA= strongly agree,
Source: Survey data, 2018

4.1.5 Customer Satisfaction of ECX Dimension Analysis

From the below table 5 the majority of the respondents or 116(64,4%) agree that ECX employees are friendly for their customer. 125(69.4%) of respondents agree that ECX have helpful employees for their customers. From 180 respondents 112(62.2%) agree that ECX have knowledgeable employees.78(43.3%) of the respondents agree that ECX have a service quality for their customers.

From the below table 5 from 180 respondents 107(59.4) & 86(47.8) agree that ECX employees give an information courteously and ECX gives a quick service for their customers.82(45.6%)&101(56.1%) of the respondents agree that ECX gives a good value for the customers and ECX employees gives information for their customers accurately.

Table 5:Customer satisfaction Respondents' characteristics

s.no	Variable	SA	A	N	D	SDA
		Fre(%)	Fre(%)	Fre(%)	Fre(%)	Fre(%)
1	ECX employees are friendly for their customers	12(6.7)	116(64.4)	20(11.1)	27(15)	5(2.8)
2	ECX have a helpful employees for their customers	22(12.2)	125(69.4)	15(8.3)	16(8.9)	2(1.1)
3	ECX have a knowledgeable employees	17(9.4)	112(62.2)	26(14.4)	23(12.8)	2(1.1)
4	ECX have a service quality for their customers	18(10.0)	78(43.3)	31(17.2)	45(25.0)	8(4.4)
5	ECX employees give an information courteously	26(14.4)	107(59.4)	21(11.7)	16(8.9)	10(5.6)
6	ECX gives a quick service for their customers	19(10.6)	86(47.8)	36(20.0)	33(18.3)	6(3.3)
7	ECX gives a good value for the customers	17(9.4)	82(45.6)	47(26.1)	29(16.1)	5(2.8)
8	ECX employees gives information for their customers accurately	28(15.6)	101(56.1)	18(10.0)	23(12.8)	10(5.6)

SD=strongly disagree, D=Agree, N=Neutral, A= Agree, SA= strongly agree,
Source: Survey data, 2018

4.1.6 Summary of the Descriptive Statistics

A summary of the descriptive statistics of all variables for this study with 180 observations. The table reports the mean, standard deviation, number of observations (N) of all variables to give an overall description of data used. (Table 6)

Table 6 shows the descriptive statistics of Warehouse measurement, Regulatory body, Automated system and Customers Satisfaction computed based on the 180 observations recorded for the total sample.

Warehouse measurement had a mean of 2.6(SD=0.87782) the result indicate that most of them respond on neutral which reflects their uncertainty about the Warehouse measurement. Regulatory body had a mean value of 2.4(SD=0.81994) indicates that most of the respondents agree in Regulatory body and concerning the mean value of Automated system 1.95, which indicates that most of the respondents agree on Automated system with standard variation 0.64052. Customer satisfaction data (mean value of 2.43 with SD= 0.688815) indicates that most of the respondents show that agreed on customer satisfaction.

Table 6:Summary of Mean and standard deviation of the variables

Descriptive Statistics			
Variable	N	Mean	Std. Deviation
Warehouse measurement	180	2.6352	.87782
Regulatory body	180	2.4622	.81994
Automated system	180	1.9583	.64052
Customer satisfaction	180	2.4396	.68815

Source: Survey data, 2018.

4.2 Inferential statistics

4.2.1 Correlation Analysis

Correlation is a measure of association between two variables. According to (Kothari 2004)positive values indicate positive correlation between the two variables (i.e., changes in both variables take place in the stated direction), whereas negative values indicate negative

correlation i.e., changes in the two variables taking place in the opposite directions. A zero value of indicates that there is no association between the two variables. When r = (+) 1, it indicates perfect positive correlation and when it is (−) 1, it indicates perfect negative correlation. In the same way relation and r ranging from 0.50 to 1.00 may be, regarded as a high degree of correlation

Table 7:Correlation

		WAREHOUSE MEASUREMENT	REGULATORY BODY	AUTOMATED SYSTEM	CUSTOMER SATISFACTION
WAREHOUSE MEASUREMENT	Pearson Correlation	1			
	Sig. (2-tailed)				
	N	180			
REGULATORY BODY	Pearson Correlation	.445**	1		
	Sig. (2-tailed)	.000			
	N	180	180		
AUTOMATED SYSTEM	Pearson Correlation	.203**	.193**	1	
	Sig. (2-tailed)	.006	.009		
	N	180	180	180	
CUSTOMER SATISFACTION	Pearson Correlation	.361**	.704**	.207**	1
	Sig. (2-tailed)	.000	.000	.005	
	N	180	180	180	180

**. Correlation is significant at the 0.01 level (2-tailed).
Source: Output from SPSS primary data, 2018
Cohen (1998) cited by(Warokka, Gallato et al. 2011), also interpreted the coefficient of correlation between 0 and 1 as in the following manner. The correlation coefficient (r) ranging from 0.10 to 0.29 may be, regarded as indicating a low degree of correlation, r ranging from 0.30 to 0.49 may be considered as a moderate degree of correlation, and r ranging from 0.50 to 1.00

may be regarded as a high degree of correlation. Based on this, interpreted the test of Pearson correlation coefficient for this study that presented in the above table 7.

Warehouse management and customer satisfaction correlation coefficient is (0.361) this explains that there is moderate degree of correlation between the two variables. Regulatory body and customer satisfaction correlation coefficient is (0.704) this result indicate that there is strong degree of correlation between the two variables and also Automated System & customer satisfaction correlation coefficient is (0.207), this explain that there is low degree of correlation.

4.3 Reliability Test

The study used Cronbach's alpha, to measure or assess the internal consistency of the research instrument. (Cortina, 1993; DeVellis, 2003; Nunnally& Bernstein, 1994; Vaske, 2008)as cited by (Fabio, CaprÃ¬ et al. 2018)have suggested that alphas in the .65 to .80 range are acceptable. Therefore, the scales used in this study demonstrate the acceptability of the scale for further analysis.

Table 8:Result of reliability statistics

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.656	.636	5

Source: Output from SPSS primary data, 2018

4.4 Result of regression analysis for Customer satisfaction

In this section, the researcher used multiple regression analysis to detect the relationship between the dependent (customer satisfaction) and independent variables (Warehouse measurement, Regulatory body and Automated system). For determining the extent to which Customer satisfaction affected by the explanatory variables that are Warehouse measurement,

Regulatory body and Automated trade researcher used multiple regression analysis models below table 9

Table 9:Model Summary of Multiple regressions

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.709[a]	.502	.494	.48958

a. Predictors: (Constant), WAREHOUSE MEASUREMENT, REGULATORY BODY AND AUTOMATED SYSTEM

b. Dependent Variable: CUSTOMER SATISFACTION

Source: Output from SPSS ,2018

The above Table 9 Indicates R, R Square, Adjusted R Square and standard error of the estimate. Further, it lists the independent variables that are, entered in to the regression model. R (0.709) is the correlation of independent variables with the dependent variables after all the inter correlation are taken into account. The model summary, above shows the R Square is 0.502. This tells us how much of the variance in the dependent variable (customer satisfaction) is explained by the independent variables / (Warehouse measurement, Regulatory body and Automated system)/. This means that the model (independent variables) explains 50.2% of the (dependent variable). On the other side, it indicates that 49.8% is explained by other than those 3 independent variables.

4.4.1 Normality assumptions test

According (Wonnacott and Wonnacott 1990)one of the most commonly applied tests for normality is tested graphically using histogram and the residuals normally distributed with a mean of zero, the .histogram is bell-shaped.

Figure 3: Normality assumption for customer satisfaction
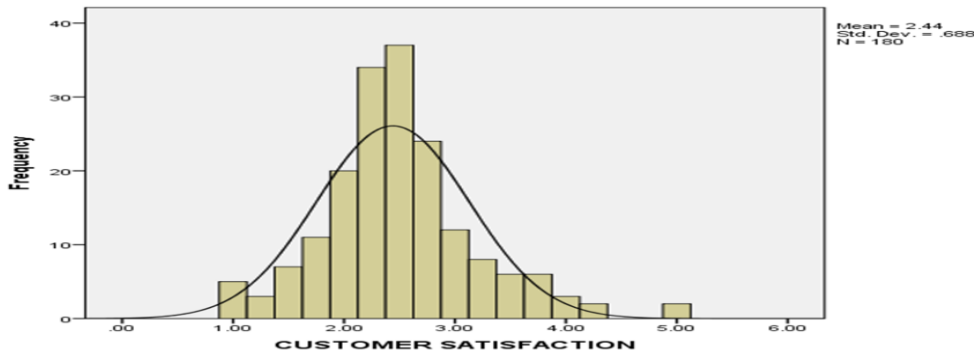
Thus, the study was test for assumption of Normality and as it can be seen from the above figure the Histogram and bell-shaped; this implies that it is normally distributed. Hence, the normality assumption fulfilled and the data were consistent with a normal distribution assumption.

4.4.2 Linearity Assumptions Test

In linear regression, analysis it assumed that there is a linear relation between the predictors and the dependent variable. This implies that if this assumption violated, then the data will not fit the linear regression model. We thus assessed linearity by testing the goodness of fit of the model by conducting an ANOVA test.

Table 10:ANOVA Regression Analysis for customer satisfaction

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	42.579	3	14.193	59.214	.000[b]
	Residual	42.186	176	.240		
	Total	84.765	179			

a. Dependent Variable: CUSTOMER SATISFACTION

b. Predictors: (Constant), WAREHOUSE MEASUREMENT, REGULATORY BODY AND AUTOMATED SYSTEM

Source: - SPSS output, 2018

ANOVA result shows overall goodness of fit of the model. From the above table we concluded that the model is a good and fit. Since, the p-value, 0.000 is less than = 0.05. This result indicates a linear relation between the dependent variable Customers Satisfaction and the independent variables (warehouse measurement, regulatory body and automated system).

According to (Pallant 2005) to confirm independent variable as unique contributor or explain to dependent variables, we have to check the sig must be less than .05. This may tell us whether this variable is making a statistically significant unique contribution to the equation. Based on this, the below table shows that all independent variable has insignificant value that is greater than 0.05 except Regulatory body. Therefore, only Regulatory body is independent variables that have significant value to explain Customers satisfaction. According to (Pallant 2005) we need to look in the column labeled B under Unstandardized Coefficients interpret the regression result that depicted on the below table 11

REGRESSION EQUATION

CS= 0.814+ 0.039 WM + 0.561 RB +0.072AS+e

i.e.   WM= Warehouse Measurement

RB= Regulatory Body

AS= Automated System

CS= Customer Satisfaction

Table 11:Coefficients of multiple regression equation for customer satisfaction

Model		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B	
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound
1	(Constant)	.814	.158		5.139	.000	.502	1.127
	WAREHOUSE MEASUREMENT	.039	.047	.049	.821	.413	-.054	.131
	REGULATORY BODY	.561	.050	.669	11.185	.000	.462	.660
	AUTOMATED SYSTEM	.072	.059	.067	1.231	.220	-.044	.188

a. Dependent Variable: CUSTOMER SATISFACTION
Source: Output from SPSS primary data, 2018

According to the regression result, warehouse measurement positively affects customer satisfaction of ECX in Addis Ababa and has a beta coefficient of 0.039. Regression coefficient of warehouse measurement 0.039 implies that holding other factors constant, when warehouse measurement increases by 1% then the customer satisfaction will increase by 3.9%. Referring the above table, the warehouse measurement has positive beta coefficient of 0.039. However, P=0.413 (p>0.05) implies it is insignificant. In addition, warehouse measurement has the lowest effect on customer satisfaction.

Table 11 indicates that the beta coefficient (i.e. 0.561, P=0.00) associated with regulatory body of ECX. This result indicates regulatory body of ECX positively and significantly affects customer satisfaction. The regression coefficient of regulatory body implies that, holding other factors constant, as 1% increases in regulatory body will lead to increase customer satisfaction of ECX in Addis Ababa by 56.1%. regulatory body has the strongest & consistent effect on customer satisfaction and it should be the highest focus.

Referring table 14, the automated system has positive beta coefficient of 0.072. However, P=0.220 (p>0.05) implies it is insignificant and inconsistent.

Generally, based on Standardized Coefficients of beta, first warehouse measurement with beta value 0.049 is not highly affects Customer satisfaction of ECX. Secondly, regulatory body with beta value 0.669 highly affects Customer satisfaction of ECX. Thirdly automated system affects positively with beta value 0.067.

The constant value was 0.814, which means that if there were no changes of warehouse measurement, regulatory body of ECX and automated system the customer satisfaction is, positively increased at 0.814-point value.

4.4.3   The Multi-Collinearity Test

Variance Inflation Factor (VIF) measures are suggested to test the presence of multi-collinearity. Variance Inflation Factor used to test for association among the explanatory variables. The technique of variance inflation factor (VIF) were, employed to detect the problem of multi-collinearity. According to(Wonnacott and Wonnacott 1990) Multi-collinearity refers to the situation in which independent variables are highly correlated. Resulting in a paradoxical effect,

whereby the regression model fits the data well, but none of the independent variables has a significant impact in predicting the dependent variable.

The existence of Multi-collinearity is, tested by calculating the Variance Inflation Factor (VIF) where a VIF coefficient greater than 10 indicates the presence of Multi-collinearity

When we come to VIF assumption it is defined as VIF=1/T. When VIF>10 there is an indication of Multi collinearity to be present.

Table 12:Collinearity diagnosis for customer satisfaction

Model	Collinearity Statistics	
	Tolerance	VIF
(Constant)		
WAREHOUSE MEASUREMENT	.788	1.270
REGULATORY BODY	.791	1.265
AUTOMATED SYSTEM	.946	1.058

Dependent Variable: CUSTOMER SATISFACTION

Based on the above result all the explanatory variables have no serious multi-collinearity problem. The data were, found to have no serious problem of multi collinearity and therefore the variables were, retained in the model.

The multivariable logistic regression showed three variables, i.e. Warehouse Measurement, Regulatory Body, and Automated System were associated with customer satisfaction of ECX.

4.5   Discussion

A commodities exchange is an exchange where various commodities and derivatives products are traded. Most markets across the world trade in agricultural products and other raw materials (like wheat, barley, sugar, maize, cotton, cocoa, coffee, milkproducts, porkbellies, oil, metals,   etc.)   and   contracts   based   on   them.   These   contracts   can   include spot prices, forwards, futures and options on futures. But here in Ethiopia commodity exchange market is only five agricultural products likes maize, coffee, Haricot bean (red and white bean), Sesame and Wheat. So Ethiopian commodity exchange should increase varies commodities other than agricultural products.

Today, apart from numerous regional exchanges, India has six national commodity exchanges namely, Multi Commodity Exchange (MCX), National Commodity and Derivatives Exchange (NCDEX), National Multi-Commodity Exchange (NMCE) and Indian Commodity Exchange (ICEX), Universal Commodity Exchange (UCX) and the ACE Derivatives exchange (ACE). However, here in Ethiopia only have one regional exchange so the regulatory body of ECX should open other regional exchange places.

According to(Worku 2016)the majority of the exporters did not perceive the fee imposed by the ECX for the membership seat positively. Therefore, the fee required by ECX was more exaggerated which fails to consider the capacity of exporters to buy the full membership seat i.e. they are also expected to pay around 1.3 million birr and above to buy the seat and engage in the system. Furthermore, the finding of (Haregeweyn, Gebrekiros et al.Haregeweyn, Gebrekiros et al.)Indicated that higher membership fee lowers the participation of exporters in to full membership categories in the ECX.

KACE (Kenya Agricultural Commodity Exchange) primarily functions as an information service to enhance price discovery as well as a spot exchange. Futures contracts are not traded on KACE. The main objective of Kenya Agricultural Commodity Exchange is to facilitate linkage between buyers and sellers, exporters and importers of agricultural commodities in trade. It provides farmers and market intermediaries such as traders, and consumers, with information about market, and other services that enhance their bargaining power and competitiveness in the market place. It also provide a transparent and competitive price discovery mechanism through the operations of the exchange trading floors and apply information and communication technologies for rural value addition and empowerment.

There have been instances where suppliers and exporters raised their concern over limitation of the membership seat, which hinders them from direct market participation. Suppliers often voiced their complaints on the composition of the membership seat, which they believe is not representative as exporters dominate it. Clients at the export end, however, complained that the membership seat is so limited that they are forced to pay added commission fees which could have been avoided had they got a membership seat. Due to indirect market participation through intermediary members, suppliers (non-ECX members) complained that they do not get their proceeds from sale of their commodity in time, as there is no dependable system in place to

ensure timely transfer of funds from the intermediary member's account to that of their account. Clients both at the supply and export end collectively demand that the Exchange open up a window of opportunity for direct participation. Further, suppliers have developed a perception that their agents fall short of maximizing the best possible value from sale of their commodities.

While every effort and monitoring/surveillance mechanisms are being implemented and in place, it continues to remain a challenge to eliminate possible collusion and other incidents, including deliberate entry of different transactions on the tickets from what has been agreed up on the floor during the trade session. There were also incidents where trades were, entered on the tickets for transactions not "shouted out" on the floor during the trade sessions. (ECX)

Although the performance of ECX has been remarkable in reducing transaction and physical marketing costs, there is stillroom for further improvement of the level of efficiency of ECX operations in terms of cost and service delivery. The amount of paper (in thousands during peak season) that get produced including Member Client Position (MCP) report, Floor Representative reports, Delivery Notice (DN), and Net Obligation Report (NOR) on a daily basis result in major expenses along with the associated labor costs to distribute and handle these documents, and the space requirements. (ECX)

Even if the success of ECX with the existing floor based trading system is significant, it is high time for the Exchange to introduce an integrated online trading system to address the stated concerns and ensure the continuity of its growth trajectory.

With online trade, the flexibility to set longer trading session time is much greater than the open outcry model. Providing more trading time can maximize the chance for trading to get best value for their commodities or money and will allow members to trade multiple contracts simultaneously.

CHAPTER FIVE

5. SUMMARY, CONCLUSION AND RECOMMENDATION

The chapter summaries and concludes the findings of the study in the operational performance of ECX and its effect on customer satisfaction.

5.1 Summary of the Findings

The present study measured the operational performance of ECX and its effect on customer satisfaction. The research distributed 205 questionnaires to the target respondents. The collected data analyzed by using SPSS Version 23. Out of 205 samples distributed, the researcher managed to collect back 180 questioners. Based on the analysis made on chapter four the following major findings summarized.

➤ The mean value of Warehouse measurement was 2.6 with SD =0.877, Regulatory body has the mean value 2.4 with 0.819, mean value of Automated system was 1.95 with SD=0.640 and mean value of Customer satisfaction was 2.4 with SD =0.688.

➤ The result from correlation shows that all the independent variables used in the study, Warehouse measurement, Regulatory body, and Automated system, have statistical significant relationship with the dependent variable.

➤ The regression result of this study confirm that all independent variables (Warehouse measurement and Automated system) are insignificant except Regulatory body. So only Regulatory body have effect on customer satisfaction.

➤ With regard to the effect of each independent variable to the beta coefficient show that Regulatory body has a strong effect on the dependent variable of customer satisfaction. While Warehouse measurement explaining the variable of the dependent variable of customer satisfaction to less.

5.2 Conclusion

The main purpose of this study was to assess the operational performance of ECX and its effects on customer satisfaction. The formulated objective of this study was to see the existing of operational performance of the company, to investigate the relationship between the operational performance of the company and customer satisfaction & to assess the effect of customer satisfaction.

- ✓ The first specific objective of this study was to examine the existing of operation performance of the company. Based on the finding of this study the researcher concluded that from the descriptive part could see that the respondents responded operation performance exists in the company of ECX.

- ✓ Regarding, the second specific objective of this study was to investigate the relationship between the operational performances of the company (Warehouse measurement. Regulatory body and Automated system) on customer satisfaction. Based on the finding of this study the three independent variables have linear relation with customer satisfaction.

- ✓ Finally, the researcher concludes the third specific objective of the study was to assess the effect of operational performance of ECX on customer satisfaction. Based on the finding of this study the researcher concluded that customer satisfaction has effects on Warehouse measurement. Regulatory body and Automated system. Especially the highest and positive effects show that on Regulatory body and the lowest effect shows on Warehouse measurement.

5.3 Recommendation

Based on the findings of this study, the following recommendations are forwarded.

- ✓ The trading system or ECX website may occasionally be inaccessible for various reasons including power, telecom, high volume trade and other system issues. Therefore, ECX should upgrade and develop their performance and do have reliable telecom facility, power and skilled workforce to avoid the problems related to this and satisfy the customer of ECX. Trainings on the fundamental and technical skills should also be given to all market actors in order to create a relatively balanced state of knowledge.

- ✓ ECX should give a program training to aware the customer about the automated trade until the customers are into the system, the customer might get lack of understanding, data entry error and unexecuted trade because of this issues the customers are dissatisfied or cannot trade so the regulatory body should develop this problem to satisfy their customers.

- ✓ The Authority of ECX should increase the membership seat to increase the suppliers and exporters and to increase direct participation of the members.

- ✓ The regulatory body also needs to upgrade its staff with the necessary knowledge as things would significantly change from pits to bits. With online trading, it is with deep analysis that the Exchange and ECXA the regulatory body that can identify any market manipulations or fraudulent behaviors of market actors. In order to do so both parties should focus on need tailored capacity building programs that could help them run and monitor the market efficiently.

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Annexes

Socio- demographic characteristics of respondents

Measure	Characteristics	Frequency	Percentage
Gender	Male	114	63.3
	Female	66	36.7
Age	20-25	36	20.0
	26-30	74	41.1
	31-35	30	16.7
	36-40	18	10.0
	41-45	7	3.9
	46-50	4	2.2
	51-55	11	6.1
Education status	Primary education	11	6.1
	Secondary education	19	10.6
	College diploma and above	150	83.3
Employment status	Full-time	168	93.3
	Contract	6	3.3
	Part-time	6	3.3
Work experience	1-2 years	39	21.7
	3-5 years	79	43.9
	6-10 years	62	34.4
Position in ECX	Buyer	67	37.2
	Seller	91	50.6
	Both	22	12.2

Warehouse Measurement Respondents' characteristics

s.no	Variable	SA Fre(%)	A Fre(%)	N Fre(%)	D Fre(%)	SDA Fre(%)
1	Commodities are sampled, weighted and graded appropriately by grading and weighting equipment	19(10.6)	86(47.8)	29(16.1)	29(16.1)	17(9.4)
2	Warehouse locations are available to all customers	16(8.9)	73(40.6)	30(16.7)	48(26.7)	13(7.2)
3	Warehouse operator holds the stored commodity by the way of safe custody	28(15.6)	87(48.3)	39(21.7)	14(7.8)	12(6.7)

Regulatory body Respondents' characteristics

s.no	Variable	SA	A	N	D	SDA
		Fre(%)	Fre(%)	Fre(%)	Fre(%)	Fre(%)
1	ECX authority ensure avoidance of the systematic risk	25(13.9)	64(35.6)	45(25.0)	40(22.2)	6(3.3)
2	ECX authority protects all market participants from fraudulent	31(17.2)	61(33.9)	36(20.0)	43(23.9)	9(5.0)
3	ECX protects all market participants to misuse of customer assets	33(18.3)	86(47.8)	38(21.1)	21(11.7)	2(1.1)
4	ECX authority prevent price manipulation	30(16.7)	88(48.9)	26(14.4)	31(17.2)	5(2.8)
5	ECX authority access to market information by all market participants	30(16.7)	99(55.0)	25(13.9)	19(10.6)	7(3.9)

SD=strongly disagree, D=Agree, N=Neutral, A= Agree, SA= strongly agree,
Source: Survey data, 2018

Automated system Respondents' characteristics

s.no	Variable	SA	A	N	D	SDA
		Fre(%)	Fre(%)	Fre(%)	Fre(%)	Fre(%)
1	Electronic trade is better than floor trade	61(33.9)	97(53.9)	5(2.8)	13(7.2)	4(2.2)
2	Networked banks are close to ECX	33(18.3)	122(67.8)	14(7.8)	11(6.1)	-

SD=strongly disagree, D=Disagree, N=Neutral, A= Agree, SA= strongly agree,
Source: Survey data, 2018

Customer satisfaction Respondents' characteristics

s.no	Variable	SA	A	N	D	SDA
		Fre(%)	Fre(%)	Fre(%)	Fre(%)	Fre(%)
1	ECX employees are friendly for their customers	12(6.7)	116(64.4)	20(11.1)	27(15)	5(2.8)
2	ECX have a helpful employees for their customers	22(12.2)	125(69.4)	15(8.3)	16(8.9)	2(1.1)
3	ECX have a knowledgeable employees	17(9.4)	112(62.2)	26(14.4)	23(12.8)	2(1.1)
4	ECX have a service quality for their customers	18(10.0)	78(43.3)	31(17.2)	45(25.0)	8(4.4)
5	ECX employees give an information courteously	26(14.4)	107(59.4)	21(11.7)	16(8.9)	10(5.6)
6	ECX gives a quick service for their customers	19(10.6)	86(47.8)	36(20.0)	33(18.3)	6(3.3)
7	ECX gives a good value for the customers	17(9.4)	82(45.6)	47(26.1)	29(16.1)	5(2.8)
8	ECX employees gives information for their customers accurately	28(15.6)	101(56.1)	18(10.0)	23(12.8)	10(5.6)

SD=strongly disagree, D=Agree, N=Neutral, A= Agree, SA= strongly agree,

Source: Survey data, 2018

Summary of Mean and standard deviation of the variables

Descriptive Statistics			
Variable	N	Mean	Std. Deviation
Warehouse measurement	180	2.6352	.87782
Regulatory body	180	2.4622	.81994
Automated system	180	1.9583	.64052
Customer satisfaction	180	2.4396	.68815

Source: Survey data, 2018.

Correlation

		WAREHOUSE MEASUREMENT	REGULATORY BODY	AUTOMATED SYSTEM	CUSTOMER SATISFACTION
WAREHOUSE MEASUREMENT	Pearson Correlation	1			
	Sig. (2-tailed)				
	N	180			
REGULATORY BODY	Pearson Correlation	.445**	1		
	Sig. (2-tailed)	.000			
	N	180	180		
AUTOMATED SYSTEM	Pearson Correlation	.203**	.193**	1	
	Sig. (2-tailed)	.006	.009		
	N	180	180	180	
CUSTOMER SATISFACTION	Pearson Correlation	.361**	.704**	.207**	1
	Sig. (2-tailed)	.000	.000	.005	
	N	180	180	180	180

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.656	.636	5

Model Summary of multiple regressions

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.709[a]	.502	.494	.48958

a. Predictors: (Constant), WAREHOUSE MEASUREMENT, REGULATORY BODY AND AUTOMATED SYSTEM

b. Dependent Variable: CUSTOMER SATISFACTION

Source: Output from SPSS ,2018

Normality assumption test

ANOVA Regression Analysis for customer satisfaction

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	42.579	3	14.193	59.214	.000[b]
	Residual	42.186	176	.240		
	Total	84.765	179			

a. Dependent Variable: CUSTOMER SATISFACTION

b. Predictors: (Constant), WAREHOUSE MEASUREMENT, REGULATORY BODY AND AUTOMATED SYSTEM

Coefficients of multiple regression equation for customer satisfaction

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	.814	.158		5.139	.000	.502	1.127
	WAREHOUSE MEASUREMENT	.039	.047	.049	.821	.413	-.054	.131
	REGULATORY BODY	.561	.050	.669	11.185	.000	.462	.660
	AUTOMATED SYSTEM	.072	.059	.067	1.231	.220	-.044	.188

a. Dependent Variable: CUSTOMER SATISFACTION

Source: Output from SPSS primary data, 2018

Collinearity diagnosis for customer satisfaction

Model	Collinearity Statistics	
	Tolerance	VIF
(Constant)		
WAREHOUSE MEASUREMENT	.788	1.270
REGULATORY BODY	.791	1.265
AUTOMATED SYSTEM	.946	1.058

Dependent Variable: CUSTOMER SATISFACTION

St. Mary's University

School of Graduate Studies

Marketing Management Program

Questionnaire

Dear respondent,

I am Helina Gezahegn a post graduate student at St. Mary's University (SMU) School of graduate studies. Thank you for your willingness to participate in this study. The purpose of this study is to describe the **Factors affecting operational performance of Ethiopian commodity exchange (ECX) and its effect on customer satisfaction**. Your answers are confidential and it is only used for writing a paper in partial fulfillment of a master thesis. If you have any questions or concerns about completing the questionnaire, please do not hesitate to ask me via the address provided below.

Thank u

Email:helugezi7@gmail.com

Tel Phone- 0911107515

Part 1. Socio- Demographic Characteristics [circle the choice]			
S.No	**Questions**	**Responses**	**Remarks**
1	Age in complete years		
2	sex	1. Male 2. Female	
3	Educational background	1. Unable to read and write	
		2. Able to read and write only	
		3. Primary education	
		4. Secondary education	
		5. College diploma and above	
4	Employment status	1. Full-time 2. Part-time	
5	Work experience	/_____/years /_____/months	
6	Position in ECX	1, Buyer 2, Seller 3, Both	

Part 2. please put a tick mark

S. No	Items /Statements/	SA	A	N	DA	SDA	Remarks
7	Electronic trade is better than floor trade						
8	Floor trade is better than electronic trade						
9	System failure for electronic trade are factors affecting the performance of ECX						
10	Deal entry errors are the factors for the performance of ECX						
11	Documentation failure are factors for the operation of ECX						
12	Online trading system will improve the performance of trading						
13	Doing trade or business online is safe						
14	Banks are easily accessible						
15	Networked banks are close to ECX						
16	Central depository create electronic warehouse receipt appropriately						
17	Central depository reconcile records daily						
18	Central depository void or cancel electronic warehouse receipts						
19	Central depository maintain a register of depository						
20	You are satisfied by the operation of ECX						
21	Warehouse of ECX maintain the quality of received products						
22	Commodities are sampled, weighted and graded appropriately by grading and weighting equipment						
23	Warehouse locations are available to all customers						
24	Warehouse operator holds the stored commodity by the way of safe custody						

25	Grades and standards are essential to warehouse operation						
26	market data information disseminates properly through timely and regular basis						
27	ECX authority access to market information by all market participants						
28	ECX authority protects all market participants from fraudulent						
29	ECX protects all market participants to misuse of customer assets						
30	ECX authority ensure avoidance of the systematic risk						
31	ECX authority prevent price manipulation						
32	ECX employees are friendly for their customers						
33	ECX have a helpful employees for their customers						
34	ECX have a knowledgeable employees						
35	ECX have a service quality for their customers						
36	ECX gives a quick service for their customers						
37	ECX employees give an information courteously						
38	ECX gives a good value for the customers						
39	ECX employees gives information for their customers accurately						
40	ECX sets a program to train their customers						

ቅድስተ ማርያም ዩኒቨርሲቲ

በኢትዮጵያ ምርት ገበያ የውስጥ የአሰራር ችግሮች በደምበኞቻቸው እርካታ ላይ ምን አይነት ተፅዕኖ እንደሚያመጣ እና ተያያዥ ችግሮች ላይ በተመለከተ የዳሰሳ ጥናት፣

ለጥናቱ ተሳታፊዎች የቀረበ መረጃ

እንደምን አደሩ/ዋሉ? በቅድሚያ ይህን መጠይቅ ለመመለስ ጊዜዎን መስዋት አድርገዉፍ ቃደኛ ስለሆኑ እናመሰግናለን። ስሜ _____ ይባላል። አሁን ከዚህ የምንገኘው ቅድስተ ማርየም ዩኒቨርሲቲን በመወከል ነው። የዚህ ጥናት ዋና አላማ በኢትዮጵያ ምርት ገበያ የውስጥ የአሰራር ችግሮች በደምበኞቻቸው እርካታ ላይ ምን አይነት ተፅዕኖ እንደሚያመጣ እና ተያያዥ ችግሮችን ለመፈተሽ ነዉ። ይህ ጥናት ከ10 እስከ 15 ደቂቃ ሊወስድ ይችላል። እርስዎ የሚሰጡት ማንኛዉም መረጃ በሚስጥር የሚያዝ ከመሆኑም በላይ የእርስዎ ስም መጠይቁ ላይ ስለማይጻፍ መረጃዉ የማን እንደሆነ አይታወቅም።

ስለዚህ ዉጤታማ ስራ ለመስራት እርስዎ የሚሰጡት ዉነተኛ ምላሽ በጣም አስፈላጊ ነዉ። ይህ ጥናት ይሳካ ዘንድ ለሚሰጡን ግብአት ሁሉ ከፍተኛ ግምት እንሰጣለን።

አሁን ይህን መጠይቅ ለመመለስ ፍቃደኛ ነዎት?   ፍቃደኛ ከሆኑ፣ ወደ ሚቀጥለዉ ገፅ ይሻገሩ። ፍቃደኛ ካልሆኑ፣ ወደ ሌላ ተሳታፊ ይለፉ።

የመረጃ ሰብሳቢ ስም -- ፊርማ ----------------------

ክፍል 1- የማህበራዊና ግላዊ መግለጫ	
ተ.ቁ	ጥያቄ	መልስ
1	እድሜ	/-------------/ ዓመት
2	ጾታ	1. ወንድ 2. ሴት
3	የትምህርት ደረጃ	1. ማንበብ እና መጻፍ የማትችል 2. ማንበብ እና መጻፍ የምትችል 3. የመጀመሪያ ደረጃ ት/ት 4. ሁለተኛ ደረጃ ት/ት 5. የኮሌጅ ዲፕሎማና ከዚያ በላይ
4	የቅጥር ሁኔታ	1. ቋሚ 2. ኮንትራት 3. በትርፍ ስዓት
5	የስራ ልምድ	_____ ዓመት _____ ወር
6	የምርት ገበያው ውስጥ ያለህ(ሽ) ደረጃ	1. ገዢ 2. ሻጭ 3. ሁለቱንም

ክፍል 2 ከምርት ገበያው ጋር የተያያዙ ጥያቄዎች						
ተ.ቁ	ሀሳብ	በጣም እስማማለው	እስማማለው	ገለልተኛ	አልስማማም	በጣም አልስማማም
7	የኤሌክትሮኒክስ ንግድ ከሰፈው ንግድ (ከመደረክ ንግድ) የተሻለ ነው፤					
8	የመድረክ ወይም የወለል ንግድ ከኤሌክትሮኒክስ ንግድ የተሻለ ነው፤					
9	የኤሌክትሮኒክስ ንግድ ሳይሳካ ሲቀር በኢትዮጵያ ምርት ገበያ ግብ ላይ ተፅእኖ ያሳድራል፤					
10	የንግድ ስምምነት መጣስ በኢትዮጵያ ምርት ገበያ ውስጥ ተፅእኖ ያሳድራል፤					
11	የሰነድ መበላሸት በኢትዮጵያ ምርት ገበያ የምርት ልውውጥ ላይ ተፅእኖ ያሳድራል፤					
12	የኤሌክትሮኒክስ ግብይት የንግድ ስርአት አፈጻጸምን ያሻሽላል፤					
13	ንግድ ስራን ወይም የንግድ ስራን በኢንተርኔት ማካሄድ አመቺ ነው፤					
14	ለግብይት ተብለው የተገናኙት ባንኮች በቀላሉ ስራቸውን ይሰራሉ፤					
15	ለግብይት ተብለው የተገናኙት ባንኮች ከኢትዮጵያ ምርት ልውውጥ ጋር ቅርበት አላቸው፤					
16	ማእከላዊው ተቀማጭ ገንዘብ የኤሌክትሮኒክስ የመጋዘን ደረሰኝን በተገቢው መንገድ ይቆርጣል፤					
17	በየቀኑ የተተቀሩትን የምዝገባ ማስታወሻዎች ይይዛሉ፤					

ተ.ቁ	ሀሳብ	በጣም እስማማው	እስማማለው	ገለልተኛ	አልስማማም	በጣም አልስማማም
18	የማእከላዊው ማስቀመጫ በኤሌክትሮኒክስ ግብይት የተቆረጡትን ደረሰኞች ይሰርዛል፤					
19	የማእከላዊው ቦታ ተቀማጭ ገንዘብ የማቆያ መዝገብ ይይዛል፤					
20	በኢትዮጵያ የግብይት ልውውጥ ስርአት ደስተኛ ነህ፤					
21	በኢትዮጵያ ምርት ገበያ ወደ መጋዘን የሚገቡትን ሸቀጦች ጥራታቸውን የጠበቁ መሆኑን ያረጋግጣል፤					
22	ምርቶች በቅደም ተከተል እና በጥቅል መሳሪያዎች የተፈተሹ ናቸው፡					
23	የመጋዘን ቦታዎች ለሁሉም ደንበኞች ተደራሽ ናቸው፡					
24	የመጋዘን ሀላፊው የተቀመጠውን ምርት በአስተማማኝ ጥበቃ ስርአት ውስጥ ያስቀምጣል፤					
25	የምርት ደረጃዎች ለመጋዘን ስራ ወሳኝ ናቸው፤					
26	የኢትዮጵያ ምርት ገበያ የገቢያ መረጃን በየጊዜው ያሰራጫል፤					
27	የኢትዮጵያ ምርት ገበያ የሁሉም የገቢያ ተሳታፊዎች ለገቢያ መረጃ የተሰማሩ ናቸው፤					
28	የኢትዮጵያ ምርት ገበያ ባለስልጣን ሁሉንም የገቢያ ተሳታፊዎች ከማጭበርበር ይጠብቃል፤					
29	የኢትዮጵያ ምርት ገበያ ግብይት ሁሉንም የገቢያ ተሳታፊዎች የደንበኞችን ንብረቶችን አላግባብ መጠቀምን ይከላከላል፤					
30	የኢትዮጵያ የግብይት ልውውጥ ባለስልጣን ስልታዊ አደጋን ያስወግዳል፤					
31	የኢትዮጵያ ምርት ገበያ ባለስልጣን የዋጋ ንጣፍን ይቆጣጠራል፤					
32	የኢትዮጵያ የግብይት ልውውጥ ሰራተኞች ለደንበኞቻቸው ተስማሚ ናቸው፡					
33	የኢትዮጵያ ምርት ግብይት ለደንበኞቻቸው ጠቃሚ ናቸው፡					
34	የኢትዮጵያ የግብይት ልውውጥ ዕውቀት ያላቸው ሰራተኞች አሉት፡					
35	የኢትዮጵያ ምርቶች ልውውጥ ለደንበኞቻቸው የአገልግሎት ጥራት አላቸው፡					
36	የኢትዮጵያ ምርቶች ልውውጥ ለደንበኞቻቸው ፈጣን አገልግሎት ይሰጣል፤					
37	የኢትዮጵያ ምርቶች ልውውጥ ለደንበኞቻቸው በይፉ መረጃ ይሰጣል፤					
38	የኢትዮጵያ ምርቶች ልውውጥ ለደንበኞቹ ጥሩ ዋጋ ይሰጣል፤					
39	የኢትዮጵያ ምርት ገበያ ሰራተኞች ለደንበኞቻቸው መረጃን በተክክል ይሰጣሉ፡					
40	የኢትዮጵያ ምርት ገበያ ለደንበኞቻቸው የሚያሰጥኑ ፕሮግራም አዘጋጅታል፤					