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**COMPARATIVE ADVANTAGE OF NEWLY REFORMED ETHIOPIAN
COFFEE MARKET VALUE CHAIN OVER THE MARKET CHAIN OF
ETHIOPIAN COMMODITY EXCHANGE**

ETSUBDINK TSEGAYE

ID. NO: SGS/0167/2009A

JUNE, 2018
ADDIS ABABA, ETHIOPIA

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List of Abbreviations/ Acronyms

ECX	Ethiopian Commodity Exchange
ECXA	Ethiopian Commodity exchange Authority
SNNPR	Southern nations nationalities and peoples region
GDP	Growth domestic product
GTP	Growth transformation program
IVT	Interactive voice response
LIC	Leading inventory control
IC	Inventory control
FGDs	Focus group discussion

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Abstract

The Ethiopian Commodity Exchange (ECX) was established in April 2008 with the objective of improving market efficiency by better linking smallholder farmers to markets, encouraging reliable trading relationships and increasing market information. In December 2008 it became mandatory to trade all coffee through the ECX. However, recently the Ethiopian coffee and tea authority has formulated a new reform on Ethiopia coffee market value chain over the ECX in the assumption to ensure traceability, profitability among actors, reduce illegal trade and increase foreign currency. This paper examines the comparative advantages of the newly reformed Ethiopian coffee market value chain over ECX. Multistage sampling techniques were applied to collect both qualitative and quantitative data. Accordingly, the results of this study showed that, the newly reformed Ethiopian coffee market value chain has many advantages than ECX such as it reduces the volume of coffee illegally traded, more traceability, create a room for exporters to buy a coffee based on its grade as per the buyer's choices. Furthermore, an integral parts of the respondents also indicated that the newly reform coffee market chain solve the problem associated with warehouse, benefits sharing and wastage of time for delivering the commodity. Therefore, the research concluded that, the newly reformed Ethiopian coffee market value chain brought a significant number of benefits for the actors in the value chain.

Key words: ECX, newly reformed coffee market chain, challenges, benefits

CHAPTER ONE

1. Introduction

1.1 Background of the study

‘‘The way for a nation to become richer was to restrict imports and stimulate exports. Thus, one nation could gain only at the expense of other nations.’’ (Dominick Salvatore)

The export sector of most eastern and central African countries is dominated by coffee, which accounts for over 70 percent of foreign exchange earnings from total exports (USAID, 2010). As a result, coffee has been one of the most valuable agricultural commodities with trade networks spreading worldwide (Daviron and Ponte, 2005; Labouisse *et al.*, 2008). As such, the international exchange markets largely determine the prices. This in general makes it difficult for most of the coffee producing countries to influence world price formation. Consequently, the international nature of coffee marketing directly exposes coffee producers in developing countries to international price fluctuations. As a result, coffee growers in Ethiopia and elsewhere in developing countries have been exposed to price fluctuations and impacts of unpredictable and uncontrollable shocks.

The birthplace of coffee, Ethiopia is home to some of the finest coffees in the world. Ethiopia is currently the top African coffee exporter and ranked sixth in the global market. Ethiopia exported 170,888 tons of coffee and earned \$525.2 million during June/July 2007/08 period compared with 176,390 tons worth \$424.2 million in 2006/07. Coffee generates 70 percent of Ethiopia's foreign exchange earnings and provides livelihoods for 15 million Ethiopian smallholder farmers. The coffee economy employs several hundred thousand workers in processing either red cherry (*key eshet*) or dried pulp coffee (*jenfel*) in hundreds of washing stations and hulling mills around the country. Government institutions are responsible for the state coffee plantations with approximately 8000 permanent employees and an estimated 50,000 casual jobs annually. Coffee generates a considerable number of jobs on-farm, in the processing plants and in the transport sector. In Ethiopia, coffee constitutes a very important source of casual employment for many poor people and most agro-processing employees are women.

Coffee marketing in Ethiopia has undergone several transformations over the decades. Recent initiatives to increase value and benefit the coffee sector include fair trade certification by cooperatives, organic and specialty coffee promotion, and the trade-marking and licensing initiatives that has successfully established international branding of three of Ethiopia's major coffee types: Sidamo, Yirgachefe, and Harar. In July 2008, a new law (Proclamation 702/2008) and the supporting regulation issued by the Council of Ministers replaced the existing coffee quality control and marketing legislation governing the sector for the past nearly four decades. The law stipulates that all supply coffees, with the exception of grower direct exports, are to be traded in the newly established Ethiopia Commodity Exchange (ECX).

Small farmers sell to local merchants, who in turn sell to distributors and collectors who export through the ECX. Cooperative farms sell directly to the ECX and capture margins that would otherwise be captured by merchants and collectors. Prior to listing on the exchange, coffee producers must submit coffee to the coffee inspection centers for grading and consolidation through mills/warehouses. The government's goal is to standardize coffee by region (Harar, Sidamo) and grade (1-9) rather than regionally or locally specialized produce. This enables buyers to source a standard region at a standard grade, and trade for a set price on the ECX.

Ethiopia Commodity Exchange (ECX), a modern trading system based on standard coffee contracts establishes standard parameters for coffee grades, transaction size, payment and delivery, and trading order matching, while, at the same time, preserving the origins and types of coffee as distinct. Unlike the existing auction trading system, quality control is undertaken in liquoring and inspection units located in the major coffee producing areas and the coffee is then weighed and inventoried in ECX operated warehouses. On the contrast, recently the Ethiopian coffee and tea export agency has reformulated a new coffee and tea value chain in order to make the actors (i.e., produces, brokers, sellers and also the country) fair beneficial as per their contributions. Therefore, this study attempted to address the comparative advantage of Ethiopia Commodity Exchange for coffee and newly reformed Ethiopian coffee export value chain.

1.2 Statement of the problem

Export trade is one of the most important activities in economic growth and development of a country. It plays a crucial roles in different parts and sectors, however, the coffee sub-sector generated about 823 million USD or 32% of the foreign exchange earnings in 2011 (Ministry of

Trade 2012). The sector further provides income for a large number of households with an estimated 7.5-8 million households depend on coffee for a considerable share of their income, and provides jobs for many more people in coffee-related activities (e.g. coffee processing, transporting or marketing). It is estimated that the sub-sector impacts on approximately 15% of the population, and around 20% of the land area (McMillan et al, 2003). This in general indicates the significant role that coffee plays in Ethiopian economy and the livelihood of the people. Despite with the above potentials, the contribution of Ethiopian coffee to the global coffee market remains to be minimal with a share of only 3-4% of the coffee global export market. Lack of well integrated market system, high market fluctuations in both price and volumes in the international market and also high number of broker's involvement in the value chain have been identified as major factors that hampered the realization of the existing coffee production and export trade potential. For the last many years the government of Ethiopia and also producers and sellers fail to receive reasonable benefits from coffee production and trade. This situation, discouraged actors to sell the coffee products in legal ways. Consequently, the illegal trades practices have been encourage and the foreign currency becoming decrease.

With the assistance of Economy Success Planning Sector, Ethiopia has introduced strict regulations in the sector, including the exclusion of foreign companies and traders from coffee trading within the country. As one of the first countries in SSA, Ethiopia also established a central commodity exchange (ECX) in 2008 on which the majority of coffee production is traded. This local regulatory and institutional context mediates how international traders' practices and financial dynamics impact on local producers', processors' and exporters' exposure to price risks and ability to mitigate these risks. In the similar line, the ECX was launched to ensure sustainable beneficial of the coffee producers, brokers, sellers and the country by itself through increasing foreign currency and also reducing illegal trade practices.

With this, the government of Ethiopia continuous in finding challenges affecting the Ethiopian export situations through reforming a policy and strategies so as to get maximum benefits from different internationally traded products including coffee. In March of 2018, the Ethiopian coffee and tea development and marketing authority has revised the previous ECX market value chains and finally, they developed a newly reform Ethiopian coffee export value chain.

While some promising results have been achieved in the volume of production and export in the last decade, little is known about the comparative advantage of the ECX and the newly reformed Ethiopian coffee export value chain. Therefore, based on this premises, the aim of this study was to examine the comparative advantage of the ECX and newly reformed Ethiopian coffee export value chain by considering: those possible challenges hindering before the reform and its possible advantages considered in the newly reformed Ethiopian coffee export value chain. This helped to identify the major determining factors for revising Ethiopian coffee export chain on ECX market chain and the achievements made trough interventions to improve the country's export earnings as well as benefits for producers.

1.3 General objective

To assess the comparative advantage of Ethiopian commodity exchange and newly reformed Ethiopian coffee export value chain

Specific objectives

- To assess the challenges associated with the Ethiopian commodity exchanges
- To investigate the comparative advantages followed the newly reformed Ethiopian coffee export value chain

Research Questions

- ✓ How coffee market chain through ECX was performing and what are the drawbacks?
- ✓ What are the possible advantages followed the newly reformed Ethiopian coffee market value chain over ECX?
- ✓ What is the expected contribution of the newly reformed Ethiopian coffee market value chain for Ethiopia's export earning?
- ✓ What are the major challenges or problems of this reform?
- ✓ How feasible is the newly reform on export coffee value chain for raising earnings for farmers?

1.4 Significance of the Study

The use of conducting this study is to analyze the contribution of the new reform to the country's economy and the coffee farmers, to provide useful information about the comparative advantage of this reform and the possible measures that must be taken by the ECX to avoid problems relating to the performance of other commodity exports. Hence, this study would contribute in digging out the most crucial advantages and the possible future prospects of the newly reform as well as challenges it might face and to produce a wise recommendations and practical policy suggestions based on the study findings.

1.5 Scope of the Study

The study was designed from the angle of the assessment of the comparative advantages and identifying the major drawbacks of the new reform on coffee export value chain. The scope of the study was limited to the analysis of the trends of Ethiopian coffee export value chain through ECX market chain and the promising changes by the newly reform to be achieved, challenges or problems encountered in the past and future prospects of the new. The study focused on coffee export only which it brings a high amount of foreign exchange to the country's economy and higher export earnings and it involves exporters and producers & coffee associations in Addis Ababa within six months time frame using both primary and secondary data.

1.6 Limitation of the Study

Since the study was focused on the new bill of reform that has been authorized recently, the researcher fail to find available data registered as needed that shows continuous and longer period trends especially the feasibility of the proposed benefits and the challenges to be faced when putted on action.

CHAPTER TWO

2. Literature review

2.1. Ethiopian coffee and the economy

Ethiopia is known for being the birthplace of Arabica coffee, which still grows wild in the forests of the former “Kaffa region” and in the current administrative arrangement located in the regions of Southern Nation Nationality People (SNNP). It is also the country’s main export crop, accounting for approximately 40% of export earnings (IMF, 2006); and responsible for the livelihoods of an estimated 15 million people including: producers, wage workers, transporters and their families (Petit, 2007). For this reason, analysts and policy-makers alike regard coffee as one of the key subsectors of the economy in terms of its potential to raise agricultural production and increase both smallholders’ income and government revenue. However, during the last decades, the world coffee market has evolved into a highly specialized and complex global chain involving a wide range of actors that interact in order to satisfy an even wider range of market demands. This global context poses particular challenges to a poor coffee-producing country, such as Ethiopia. Ethiopia is, currently, the largest coffee producer in Africa and among the ten top producers in the world after Brazil, Vietnam, Colombia, and Indonesia. According (International Coffee organization , 2012), in 2011/12 Ethiopia was the fifth largest coffee producer after Brazil, Vietnam Indonesia and Colombia, with total production of 8,313,000 bags and the seventh largest exporter worldwide. According to the recent Government figures, in 2010/11 Ethiopia exported coffee to 53 destination countries with a total volume and value of coffee export 2010/11 were 196,117 ton and 841.65 million American dollars respectively. This volume and value of coffee export as compared to the 2009/10’s export increased by 13.9 % and 59.3%, respectively. More than 120 Ethiopian coffee exporters did participate in processing and exporting coffee to all destination of the world. In 2010/11, the top five coffee export market destinations for the country were Germany, United States of America, Saudi Arabia, Belgium, and Italy.

2.2. The uniqueness of Ethiopian coffee

Ethiopia’s role in the global value chain lies not in the volume of its exports; but, in the fine quality of its coffee (Ponte and Daviron, 2005). In order to understand the relationship between domestic and international chain actors, it is important to first understand how, where and by

whom coffee is produced in a country. Ethiopia, as mentioned earlier, produces only Arabica coffee, which is believed to have originated in the Kaffa region. Coffee-farming systems in Ethiopia can be classified into four categories: forest coffee, semi-forest coffee, garden coffee, and semi-modern plantation. Most farmers cultivate without the use of fertilizers, pesticides, and herbicides that is why yields per unit area are fairly low in Ethiopia compared to other countries. Geographically, coffee districts (woreda) are classified by their extension into major, medium, and minor producers. Coffee production is concentrated in the Oromia and the Southern Nations, Nationalities and People's Region. Each woreda produces coffee varieties with distinct characteristics, the most popular of which internationally being Yirga cheffe, Limu, and Harar varieties. Dry and wet processing are the most widely used methods in Ethiopia. Historically, about 90% of production used to be sun-dried; but, washing has become more popular in recent years because of significantly higher premiums in the market. Petit (2007) reported smallholders produced about 95% of total production, against 4.4% of state-owned coffee farms and 0.6% private investor plantations (cited by Mechal,2013).

2.3. The Importance of Coffee for the Ethiopian Economy

Agriculture remains the largest sector in the Ethiopian economy, contributing about 47% of GDP and providing employment to more than 80% of the rural population (World Bank, 2011). In addition, it continues to be the major source of export earnings. The low levels of agricultural technology and rural infrastructure, together with land degradation, recurrent droughts and the demographic pressure on rural areas, are among the main causes of low agricultural productivity, poverty (44.2% of the population living below the poverty line of USD1 per day), and low social indicators (ibid). In this context, a better performance of the agricultural sector is vital in order to: guarantee food security; produce exportable goods to pay for imports; the aim to generate a surplus for the development of other sectors; secure a sustainable use of natural resources; and to improve the living conditions of rural dwellers (Gebre-Selassie, 2003). The fact that the Ethiopian economy has shown mixed results in the past two decades with GDP growth rates going from 3.8% in 2002/2003 to an unprecedented 11.8% in 2005 and down to 8.7% in 2009. This is an example of the direct link between the performance of the agricultural sector and the performance of the economy as a whole. (Petit, 2007; World Bank, 2011 cited by MechalTadele, 2013).

Although the performance of the Ethiopian agriculture as a whole has improved over the past decade – partly due to the reforms introduced in 1992; and partly because of the brief periods of favorable weather conditions– productivity levels remain low compared to the increase in rural population (Petit 2007).

2.4. The purpose of commodity exchanges

The purpose of a commodity exchange is to provide an organized marketplace in which members can freely buy and sell various commodities in which they have an interest/sake. The exchange itself does not operate for profit. It just provides the facilities and ground rules for its members to trade in commodity futures and spots and for non-members also to trade by dealing through a member broker and paying a brokerage commission. The purposes served by a commodities exchange depend in part on the nature of the specific contracts that are traded. Just by centralizing trade in a commodity an exchange can facilitate title transfer, price discovery and market transparency. Transaction costs are decreased because coordination through a centralized exchange can decrease costs associated with identifying the market outlets, physically inspecting of the product quality, and finding purchaser or sellers.

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

Trading contracts for future delivery, commodity exchanges can assist strengthen market liquidity, increase profit, improve price discovery and facilitate price risk management. According to Rashid *et al.* 2010, an exchange can improve liquidity because a futures contract is a fungible financial instrument which buyers and sellers are willing to hold and exchange. While futures contracts efficiently remove price level risk, they do not eliminate the risk. Instead they replace price risk with basis risk, where the basis is the difference between the spot market and futures market prices. Unexpected shifts in the basis can result in losses or gains, and the degree of basis risk can highly influence the effectiveness of the exchange in risk management.

As explained by Rashid *et al.* 2010, providing the services of a commodity exchange is expensive. The costs include physical investments in warehousing, operational space and communications as well as operational costs involved in screening participants and enforcing contracts. Moreover, an exchange typically must provide clearinghouse services which allow buying and selling the commodities traded at the stated prices with limited fear of default for participants. These services disclose the exchange to both working capital costs and risk. For an exchange to succeed its services must be adequately valued by users that they are willing to pay fees to cover these costs.

According to Rashid *et al.* 2010, market failures, including inadequacies in physical infrastructure, asymmetry in information, inadequate supporting legal and financial institutions can all impede the formation of futures exchanges.

2.5. Functions and benefits of commodity exchanges

The Exchange is currently trading five commodities: Coffee, Sesame, Haricot Beans, Maize and Wheat. The strategic importance of coffee to the economy, nevertheless, is evidently reflected in the Exchange's trading sessions and the volume of the transaction.

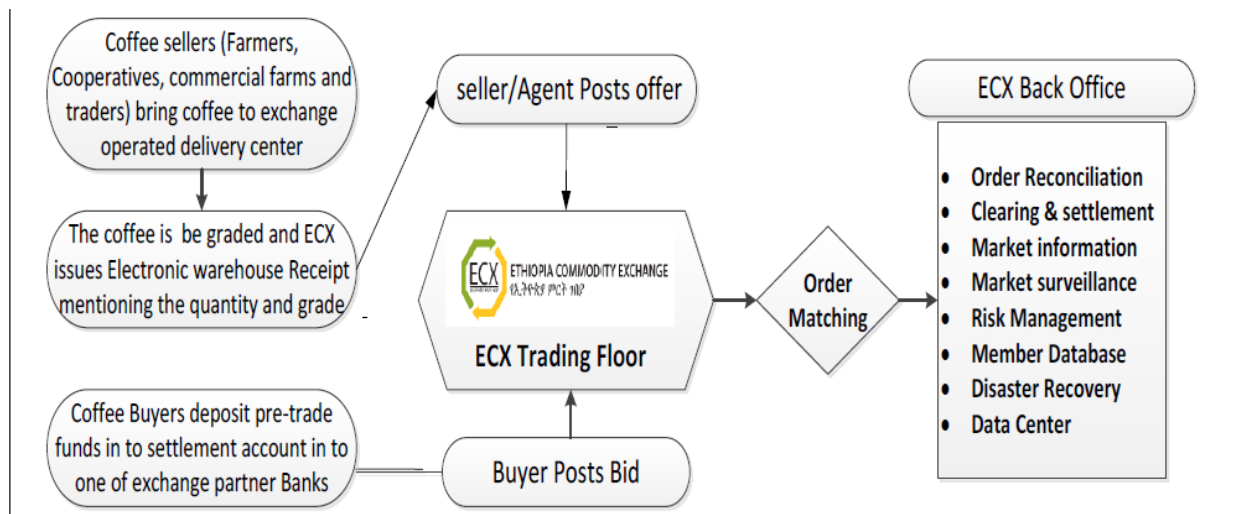
Coffee trading at ECX is explained in the below figure. The seller of coffee uses electronic depository, which clearly describes amount and quality of the deposited coffee to trade at the exchange. The seller then instructs his/her broker to post offer in the trading floor. On the other side, the buyer deposits fund into settlement accounts in one of the exchange partner banks and instructs his/her broker to bid price (ABDUREZACK; Fernández; Rogstadius, 2009). There is a spot exchange on ECX's octagonal trading floor and uses an *open-outcry* system to ensure competitive method of price discovery (Zewdu, 2010). Trading can only occur on the basis of warehouse receipts and can only be conducted by registered members of the exchange, trading either for themselves or on behalf of clients.

A typical coffee trading day at the exchange can be explained in the following few steps: (a) The Exchange staff make announcement to brokers of both buyers and sellers with a specific coffee category in same warehouse to enter the trading floor. Surveillance persons also enter trading floor and there is also a surveillance camera to record the trading. (b) Following the ringing of

the bell, buyers shout out the coffee grade, the price and the quantity they want (e.g to buy 5 lots of grade 2 of Sidama B coffee at a price of 600 Birr1, the buyer shouts out “*Sidama B2 at 600 5 lots*”) making his palm inward toward his face. (c) If a seller agreed with the bid, he/she shouts out the same quote showing one hand with the palm facing outward and if he/she does not get what it wants the seller shouts out its own different offer (whenever offers/bids are made it has to be pronounced loudly). (d) When offers and bids are matched, the two traders shake hands and they record their contract on Order Tickets. (e) Finally, the exchange staffs make a voice announcement to traders when one minute is left to end the trading and ring the desk-bell when the time is up.

A well organized and managed commodity exchange market has the following benefits. An exchange reduces transaction costs by facilitating contact between buyers and sellers and enables centralized grading of products ensuring that contracts are enforceable. According to Gabre-Madhin and Goggin (2005) a commodity exchange provides mechanism for price discovery which simplifies transactions with standard contracts and transmits information about a volume and prices. An exchange provides a mechanism for increasing market liquidity, enabling transfer of price risk and creates trust, order, profit and integrity in the market

A Commodity Exchange is fundamentally designed to provide service and add value to all market players. It adds value to the market by addressing two types of risk namely contract performance risk and the risk of contract default on physical delivery or payment. Market risk is the risk of adverse unforeseen price movements or changes in supply and demand in the future (Paul, 2011).



Source: *Ethiopia coffee trading manual, 2012*

Figure 1:- Coffee Trade at ECX

2.6. Contribution of commodity exchange for agricultural development

Agricultural commodity futures are market-based instruments for managing risks and they help in orderly establishment of efficient agricultural commercialization. Future markets are important to hedge commodity price risks. It also serves as a low cost, highly efficient, and transparent mechanism for discovering prices in the future by providing a forum for exchanging information about supply and demand conditions. The hedging and price discovery purposes of future markets promote more efficient production, market storage, and agro-processing operations, and help in the enhancement of overall agricultural marketing performance UNCTAD (2008). The basic purpose of a futures contract is to provide price-change protection.

Commodity exchange can also play an important role in empowering the farmers, the buyers, and traders. As a result they are able to perform efficient agriculture marketing system. This service provides relevant and timely marketing information and a transparent and competitive market price discovery mechanism for the buyers and the sellers. Additionally, it can be used as a basis for comparison of the price of a commodity with the prices within different countries market (Paul, 2011).

2.7. Brief history of commodity markets

The gradual organization of supply and demand through commodity exchanges has brought several advantages to producers, consumers, and to the world economy in general. First, the prices available on commodity exchanges provided information on fundamental market conditions, informing future decisions about production and consumption. Moreover, prices quoted on commodity exchanges supplanted prices set by monopolistic producers, which contributed to an increase in the competitiveness of commodity markets. Second, commodity exchanges lowered transaction costs by reducing intermediaries and facilitating the matching of buyers and suppliers. Third, they provided storage facilities and clearing services, thereby further increasing the liquidity and efficiency of commodity cash markets. (Piero Cinquegrana , 2008)

In spite of these advantages, international market integration has allowed producers to increase their market power. The more commodity markets become integrated, the more opportunities for consolidation and market concentration in the industry arise. For example, a handful of players control the world's aluminum market from extraction to semi-finished products. Soft commodities markets such as cocoa and coffee also experience a high level of concentration. (Piero Cinquegrana, 2008) Price volatility has been an inherent characteristic of commodities for centuries because supply, demand, and inventories – the main determinants of spot prices – can be affected by such diverse factors as floods, droughts, war, technology, fluctuations in economic activity, and the disruption of distribution or production. Moreover, the seasonality of agricultural products has exacerbated this problem, and only with the advent of storage facilities has the issue been somewhat mitigated. In spite of their long-term decline, real commodity prices have witnessed ample short- and medium-term fluctuations throughout history.

In particular, volatility has been rising since the early 1970s driven by the demise of fixed parities and increasingly volatile exchange rates (Cashin & McDermott, 2001).

Because commodities are generally priced in dollars, massive swings in real and nominal dollar exchange rates vis-à-vis other currencies affect commodity prices both directly and indirectly. Directly means that prices move mechanically in light of exchange rate movements; indirectly means that these mechanical changes affect the supply and demand of the commodity (ibid, p.23).

Risk management tools have emerged to battle against commodity price volatility. Although certain primitive forms of forward markets existed in the pre-Christian and middle Ages, the modern practice of forward contracting slowly emerged in Japan in the 1700s and in the United States in the mid-1800s. (Piero Cinquegrana, 2008 cited)

Forwards are defined as contracts between two parties to deliver a certain product at a certain date at an agreed price. By selling crops at the time of planting, producers hedged against the risk that the price of the commodity would drop below a threshold under which production became unprofitable. Forward contracts, however, generated new risks for the parties involved in the forms of transportation risk, delivery risk and credit risk. The first category pertains to the deterioration of goods during transportation, unforeseen changes in shipping costs and extraordinary events such as wars, riots or strikes that may prevent the transportation from happening at all. Delivery risk refers to the concern that the quality and the quantity of the good delivered does not correspond to the agreed contract. Credit risk regards the payment of the good delivered. (Piero Cinquegrana, 2008)

The need to counter the risks associated with forwards and the lack of transparency in forwards markets led to the establishment of highly standardized contracts becoming freely exchangeable on the marketplace – futures contracts. Futures are similar to forwards, but they are standardized contracts in terms of quality, quantity, date, and place of delivery, all of which reduce transportation and delivery risks. Moreover, they are cleared by a clearing-house, drastically reducing the scope of credit risk. From the 1970s on, the increased liquidity driven by the evolution of commodity derivatives has provided a wide variety of risk management tools to producers and consumers of commodities in the form of options, futures, and over-the-counter (OTC) contracts. Finally, the high level of transparency in futures prices provides information about market conditions and expectations of supply and demand. (PieroCinquegrana, 2008)

2.8. The Ethiopian Commodity Exchange (ECX)

Agriculture is the backbone of Ethiopia's economy. To bring millions of Ethiopians out of poverty requires a fundamental change in the way agriculture is done. Substance agriculture should be replaced with technology-driven and market-oriented production. As Ethiopia is poised to transform its agrarian economy, so too must Ethiopia's marketing system take the

country into the new millennium. It is time to enter the modern age of globally connected trading systems, relying on technology and knowhow, while tailored to Ethiopia's realities and conditions. It is time to forge a new partnership between the private and the public in the new arena created by market liberalization.

Currently, Ethiopia's marketing system is traditional and backward (See Figure 1). It is mainly characterized by high costs and high risks of transacting, forcing much of Ethiopia into global isolation. The vision driving the Ethiopia Commodity Exchange is to revolutionize Ethiopian agriculture through a dynamic, efficient, and orderly marketing system that serves all.

Ethiopia Commodity Exchange also provides standardized commodity based contracts. The contract specifies the grade, delivery location, lot size, and other contract terms. The contracts will be either for immediate delivery or at a pre-specified date in the future. Currently the Ethiopia Commodity Exchange offers contract for immediate delivery. Ethiopia Commodity Exchange implements two types of trading system at the physical trading floor located in Addis Ababa. Buyers and seller can participate in "open outcry" bidding for commodities or they can use one of the electronic remote access trading system.

Besides, Ethiopia Commodity Exchange has 20 remote electronic trading centers in different parts of the country (See Figure3), namely, Addis Ababa, Bure, Metema, umera, Nazareth, Awassa, Dire Dawa, Jimma, Nekempte, Shashemene, Bahir Dar, Gondar, Mekele, Dessie, Hosaina, Bale Robe, Harar, Assela, Asayita, Arba Minch, and Asosa. These centers will be equipped with computers and high speed Internet connection. Via the Internet farmers/traders can get access to live market information.

2.9. Impact on Coffee Marketing Chain

One of the major impacts expected from implementing a commodity exchange is reducing the length of the long chain of channels exhibited in a traditional agricultural commodities market. In this sub-section, therefore, we will try to investigate whether this expected impact is actually realized through the ECX by describing the current coffee marketing system in the study area and comparing it with the one that existed before ECX is implemented.

The coffee marketing chain shows how coffee currently flows from farm gate to export in eastern Ethiopia. The important features of the current coffee chain in the study area, as compared to the one that existed before the ECX can be summarized using the following points:

1. Just like the period before the ECX was implemented, coffee in the study is still distributed from farm gate to export\domestic buyers through two main channels: the cooperative and private channels.

2. With regard to the cooperative channel, the current channel is almost the same as the ones that existed before the ECX both in the way coffee flows and the types of actors involved in it. The only change between them is that while the cooperative union (Oromia Coffee Farmers Cooperative Union (OCFCU) in this case) in the present system is permitted to sell its coffee through the ECX and in addition directly to foreign buyers, the only option of the union prior to formation of the ECX system was to sell directly to foreign buyers but was not allowed to sell through auction centres.

3. Many changes, however, are observed in the current private channel as compared to the ones that existed before the ECX. The notable changes peculiar to the study area are presented in the following sub-section and include:

I. One of the major intentions of the ECX was to remove the coffee collectors (*Sebsabies*) who were originally legally recognized agents between farmers and suppliers in the previous system. However these individuals are still involved in the current marketingsystem and perform their usual duties either by themselves or as employees of suppliers. This is, according to most interviewed actors, due to the following two reasons:

- Firstly, the effort of establishing the Primary Transaction Centres (or local coffee markets), with the aim of linking farmers directly to suppliers, did not succeed in the study area. While the concerned government bodies provide the necessities required for the operation of such markets, the major factor for the failure is that farmers do not avail themselves of this market facility because either it requires them to go long distances to reach such markets, or they do not get higher prices than they usually get from the local primary society. Some are also hesitant to use such markets.

➤ Secondly, the necessary activities required to promote the primary collectors to suppliers are not taking place. For example, collectors do not get credit access to fill the capital gap that would enable them to be suppliers.

II. In addition, a wide array of local shops, which were not in existence before, have emerged as new type of actors in the coffee marketing system since the creation of the ECX. These actors buy coffee from farmers and sell either to local markets or to suppliers. According to most of the suppliers' responses, the emergence of such actors has had huge negative implications in terms of coffee quality since these bodies usually mix coffees with different qualities.

In summary, we can generally say that the effort of reducing the number\types of actors involved in coffee marketing through ECX system was not realized in this particular study area. What we actually observed is that the actors involved in the coffee marketing system in the study area are increased both in number and types since the creation of ECX. (Gemoraw Adinew, 2011).

2.10. Interacting activity systems: Farmers, Suppliers, Exporters, Warehouse and ECX operation

Commodity exchange activity can be hardly imagined as a single activity system. Since there exists involvement of many stakeholders and each stakeholder plays a pivotal role in itself. Therefore, it is better to pay a due attention on each key market actor's activity system and analyze the entire interactive activity system. Not only the exchange stakeholders are connected, interestingly ECX system heavily relies on other service providers such as internet, power and road infrastructures. The activity of coffee production object is to sell the coffee to world market at the end, in general terms. However, the involvement of farmers, suppliers, exporters and the gate way for both domestic and world market in other word ECX are the major pillar of the activity. I described the activity systems of these key stakeholders below as they all are in a way connected one other. To sum up, all activities share broadly same object which is "selling coffee or exporting". The input of each and every market actor contributes a great deal in making the most out of the coffee produce. The end target of selling coffee or exporting realized when different stakeholders (farmers, suppliers, exporters, and ECX personnel) are work harmoniously by forming chain. The chain activity system seems to me directly or indirectly tied to the demands of world coffee market. Therefore, considering the overall activity as an interacting activity seems a far more plausible scenario.

2.10.1. Farmers' activity system

Coffee farming activity has two sources of production the first one is planting and growing of coffee seedlings. Usually, near to the backyard of the farmer and the second source of coffee production is from forests by collecting the beans that are ready to harvest. Although, the majority of coffee produce still comes from planted seedlings. The instruments used for coffee growing and later harvesting tasks are farming and agricultural tools such as shovels, machete, fork hoes, pickaxes, basket, sacks and the likes. The instruments can be categorized as a light hand tools and instruments without any sophisticated machines. It also remains the same for big and middle level coffee farms. They hire laborers aplenty to collect the harvest using these instruments. Another important instrument of farmers is the information acquisitions instruments and these includes mobile phones SMS, toll-free number, media (radio, TV and newspapers), price displaying tickers and ECX Interactive Voice Response (IVR). Subject of the activity system is the coffee farmer. It then follows the object, which are cultivating the coffee, collecting the harvest and selling coffee at primary market etc... The rules of the activity at this level comes from the regional government's primary market rules and regulations and ECX rules that gives clear direction how suppliers should be acted. As for community of the activity system: family members, suppliers, regional government agricultural desk workers, coffee farmers' work unions, coffee washing stations workers and warehouses personnel etc. Division of labor of the farmers depends on family work divisions for the tasks of collecting the harvest as well as selling beans.

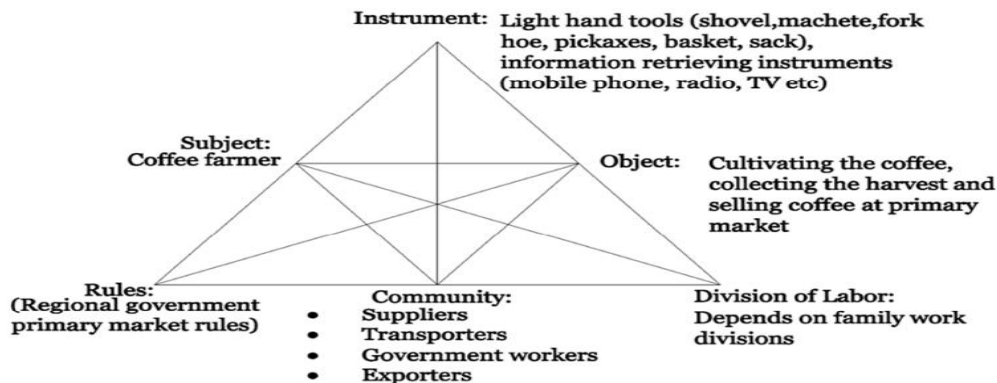


Figure 2:- Farmers' activity system

The farmers' activity system dynamics has changed from being scarcely informed about the market price to the extent of engaging in well-informed setting. Farmers' activity system seems to get better and make advancements in the future as well. There is a growing tensions emerging in demanding the concerned government bodies to work hand in hand to address the limited capacity obstacles of ECX system, combat corruption and to help them to minimize the risks of world market price fluctuations and so on.

2.10.2. Suppliers' activity system

The role of suppliers extends from remotest primary market till capital city commodity exchange trading floor. Suppliers need to be members or client represented by members as a prerequisite to be an active supplier. Trading license and deposited financial capital for exchange purposes in one of the eleven ECX partner banks are compulsory requirements. These components constitute the instrument of the suppliers' activity system. Then, the subject is the supplier himself. The object of supplier is targeting to buy as much as possible quality unwashed coffee. It then followed by transport the produce and sells it in trading floor deals for exporters/buyers after it has been washed in coffee washing stations. The governing rules and regulations of the activity are ECX warehouse operation manual, ECX rules and regulations, directives, signed agreements between the ECX and suppliers etc. The community mainly includes the coffee producing farmers, the warehouse and washing station personnel, transporters and laborers, and the coffee receiving exporters and/or buyers. The division of labor of suppliers basically stretched from personnel who assigned to finalize the process of buying and collecting of coffee beans from primary markets. In addition, getting the beans properly washed with the desire level of moisture percentage. Thus, it involves agents who enter to transact in ECX trading floor, accountants and cashiers, managers etc. Interestingly, suppliers' object is quite expanded from rural towns till urban exchange facilities. That makes them to be in a position to face setbacks such as capacity related limitations, corruption issues, ECX's insensitivity to their feedbacks and arbitration and punishment approaches. These are seemingly few developmental contradictions aggravating in suppliers' activity system.

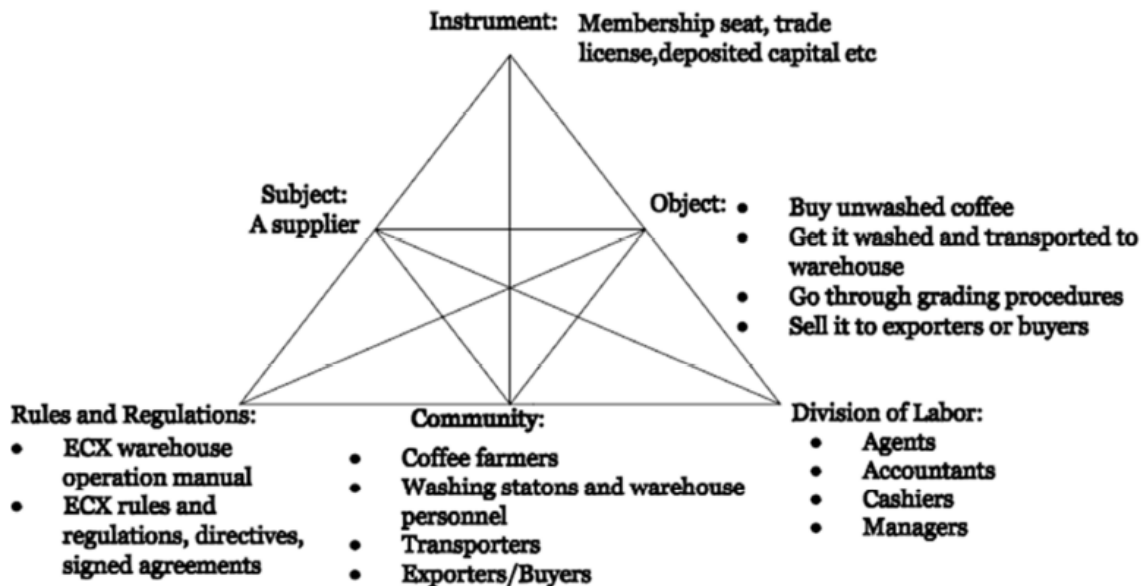


Figure 2:- Supplier's activity system

2.10.3. Exporters' activity system

In the flow of coffee, the last stakeholders are exporters by whom the foreign market accessed. The country earns foreign currency and the resource trickle down all the way to the bottom line farmer. Exporters are one of the key stakeholders of ECX, their activity system depicted and clarified below:

Exporters' instrument likewise suppliers, they need to be registered members, get compulsory exporting license and sufficient amount of capital deposited in the bank. Exporter would be the subject in this activity system. As we move on to the object, exporters' in this point targets to buy quality coffee from suppliers in trading floor transaction that meet their export demands and selling coffee for the world market based on international market price. In working towards these ends, the activity abides by rules and regulations of ECX and ECXA, binding signed agreements with ECX, ECX warehouse operation manual and other directives. For exporters the community deems to be the coffee supplying body, warehouse personnel, transporters and laborers, coffee receiving partners abroad. The organizational structure of exporters comprises of transit personnel, accountants, managers, exchange agents and commission agents etc.

The world market coffee price is becoming increasingly hard to predict. Exporters are in disadvantage in some cases. Due to the fact of lower export prices they tend to engage in domestic market, domestic market is barely gets depressed as Ethiopian market are the major consumer of coffee. It leaves exporters to be in conflict with government's pressure to increase export volumes. In addition, corruptions in some areas like warehouses add extra weight for their business.

2.11. Warehouse (grading and liquoring) activity systems

Warehouses are the most important objects in pursuing of agricultural market modernizing endeavors. Warehouses expected to give similar and consistent grading of commodities across the nation that would be ready for exchange. It is also a safest possible storage facility the produce can possibly get which prevents the produce from any quality deteriorations. This helps the commodity to be exported or ownership transferred from supplier to the buyer in the best way possible. In warehouse activity system, we would get instruments such as standardized and well-equipped laboratory, warehouse storage, work manuals and forms to serve customers of the warehouse. After all the instruments are being in place, the coffee will be graded and stored until the process of exchanging completed. The subject in warehouse activity system is the warehouse personnel.

The warehouse personnel comprise diverse staff members. It include individuals whose role are to load and unload the produce from and to the trucks.²⁰ In addition, other warehouse staffs with supervising role such as warehouse supervisor, LIC (i.e. leading inventory controller) and to some extent Inventory Control (IC). The staffs working in tasting and grading of coffee as well as others contributes significantly for grading and liquoring centers activity success. As a result, the subject in warehouse appear to be diverse than for instance the likes of supplier or exporter. Subsequently, object of the activity system are receiving of washed coffee that needs to be given standard/grade, weighed and stocked in good condition. In order to enforce exchange based on quality and item grades as well as to avoid any harm of produce's quality deteriorations by stocking it in warehouses temporarily. It gives key services like grading, GRN issuing for the owner of the coffee and dispatching the coffee by GIN. Rules of the warehouses embrace ECXA rules and regulations, ECX warehouse operation manual and other directives. The warehouse community represents different collection of market actors such as suppliers, farmers' work

unions, exporters and /or buyers. Finally, the warehouse division of labor includes major activities such as laboratory unit, receiving commodity, delivering commodity, inventory management and reporting etc. In these activities there are divisions like Leading Inventory Control (LIC), Inventory Control (IC), warehouse supervisors, warehouse cleaners, security marshal and warehouse guards etc... The warehouses are criticized by suppliers and exporters for lack of consistent grading, some cases of corrupt personnel and limited capacity are few of the shortfalls. There are some efforts taking place to reduce service inconsistencies of warehouses by improving warehouses' personnel capacity building. The mounting tension on warehouses' struggle to maintain consistent and reliable services pushing ECX to try develop the warehouses' work setting again.

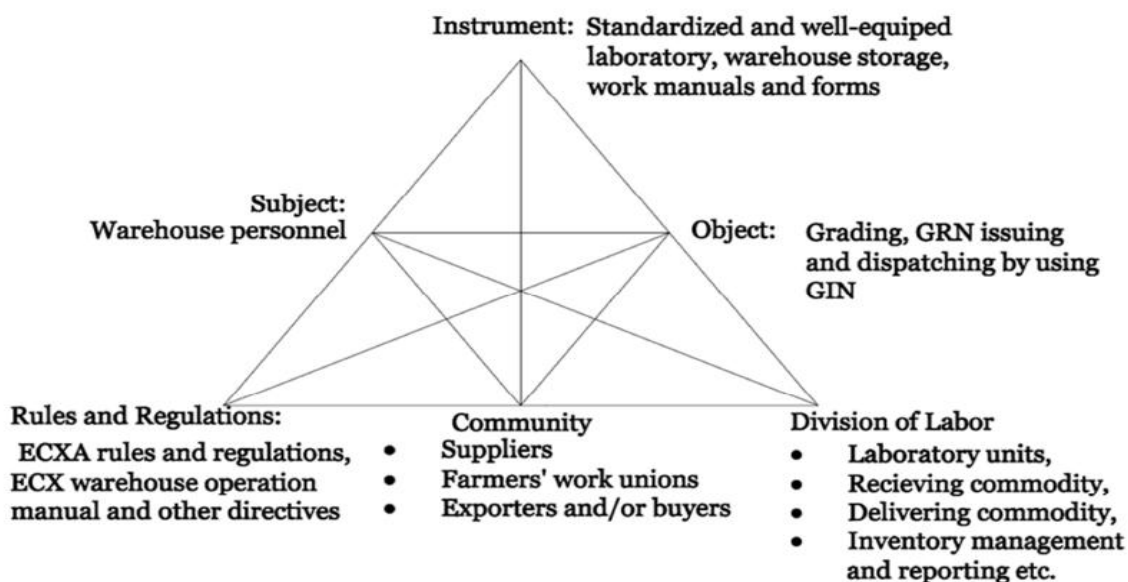


Figure 3:- Warehouse activity system

2.12. The newly reformed coffee market value chain

The bill was drafted by the Ethiopian Coffee & Tea Development and Marketing Authority. A bill, which will paralyze the Ethiopia Commodity Exchange (ECX) in the coffee export value chain, was finalized last week and sent to Ministry of Agriculture & Natural Resources and the Office of the Attorney General for some improvements and additions. The legal frameworks that are going to bring major reforms in the coffee market value chain were drafted by the Ethiopian

Coffee & Tea Development & Marketing Authority. The new bill allows farmers to sell coffee before it reaches the warehouses of ECX. The Authority, head by Sani Redi, has been working on the amendment of the proclamation, directive, and regulation over the past eight months following the demand from the people who seek the reform, according to Kahsu Berhanu, representative of legal directorate at the Authority.

The consecutive meetings of the Prime Minister with coffee exporters and findings of research done by different stakeholders forced the Authority to reform the sector. The proclamation, which is currently under reform, was first issued in 2008 and entitled "Coffee Quality Control and Marketing Proclamation." The National Export Coordination Committee identified the major bottleneck of the coffee market and pointed out 11 major challenges of the coffee value chain. The committee also suggested the solutions (Fasika Tadesse, 2018).

Apart from establishing the Institute, recently the Authority received a green light from the Parliament for a proclamation that is conceived as a game changer for the coffee market in the country. The new proclamation focuses on ensuring traceability of coffee and allowing coffee to be traded during consignments and at processing plants.

Currently, the draft regulation is up for public discussion including with stakeholders in the coffee value chain. And subsequently will be sent to the Office of the Attorney General and MoANR to beef up the bill, before sending it to the Council of Ministers. It is expected to get approved by the Council of Ministers once it is back from recess, according to Heiru. "It particularly merits small scale coffee growers to produce coffee with better quality and quantity," said Yilma. During the recently ended fiscal year, the country generated 866 million dollars from 235,000tn of coffee export; this number is up from 722.4 million dollars generated in the 2015/16 fiscal year.

2.13. Conceptual framework

Development of a conceptual framework was essential to identify existing challenges within each coffee market value chain analysis. In this case between ECX and newly reformed Ethiopian coffee market value chain. It also helps to clearly investigate comparative advantages between ECX and newly reformed Ethiopian coffee market value chain for the actors.

Commodity/ Value chain approach examines the key actors and their functions in the chain to analyze the relationships between them and the factors affecting the performance of the chain (Kula et al., 2006). Thus it emphasizes on three elements namely actors, factors and relationships that determine the outcomes of the chain. Factors include access to and the requirements of end markets; the global, national, regional and local business enabling environments; vertical linkages between actors that permit the flow of products and services, learning and benefits; horizontal linkages; support services and opportunities for upgrading. The relationship component includes the power dynamics, distribution of benefit and access to learning and innovation.

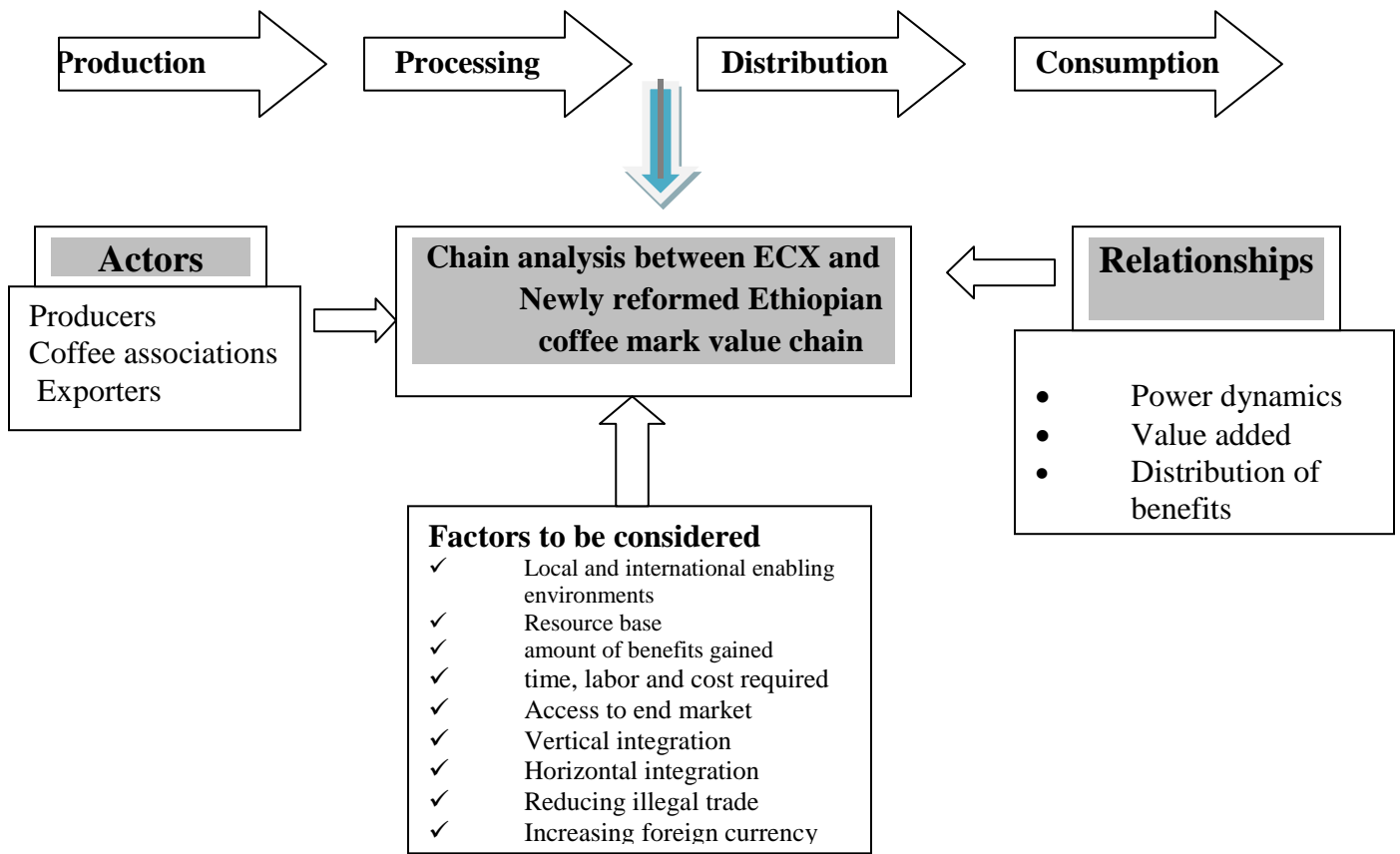


Figure 4:- Conceptual framework for commodity chain analysis

CHAPTER THREE

2. Research Methodology

This chapter of the study deals with the research design and methodology of the study. It includes the research design, target population, sample and sampling designs, data collection instruments and methods of data analysis of the study.

3.1. Research Design

Multistage sampling technique was employed to select the target population and collect the necessary data for the study. In the first stage, actors found in the coffee market value chain were systematically stratified into producers, coffee associations and exporters. In the second stage, from each stratified group, the actors were further systematically stratified into two groups based on take into account the experience they had on coffee market value chain. In the third stage, from each group i.e. producers, coffee associations and exports a sample population were selected by using simple random sampling techniques. Based on the aforementioned criteria 150 and 151 producers and coffee association plus exporters were identified respectively. For the purpose of this research 20% of sample populations were selected from each group. Accordingly, 30 individuals from each two group, a total of 60 individuals were selected so as to administer in-depth interviews.

3.2. Data sources and collection methods

The data sources used were both primary and secondary data sources. The primary sources are in-depth interview, key informants and focus group discussions (FGDs).

3.2.1 In-depth interview

Survey Method was used to collect the primary data for the study. Accordingly, a semi-structured questionnaire was prepared. Questionnaires were pre-tested. The questionnaire frequently amended based on the feedbacks from pre-test and focus group discussion (i.e recommendations for the researcher to focus on assessing the comparative advantage of the new reform on coffee market chain over ECX). Finally, the survey was administered through face-to-face interview. Descriptive survey research design was employed for conducting this study as the

study was believed to be helpful in obtaining pertinent and precise information and that also help to draw valid conclusion about the events or activities of a target population.

The research focuses on quantitative data sources. Accordingly, to collect all the necessary data for the study, both primary and secondary data were employed. The primary data were gathered from individual discussion with coffee producers and coffee exporters (members) using pre designed questionnaires for interviewing and secondary data were also collected from different literatures found in ECX. The qualitative data collected from the actors during focus group discussion and key informants were used for supporting and triangulating the information gained from primary data source. During data collection the following issues were considered challenges encountered and benefits obtained by those actors found in both ECX and newly reformed Ethiopian coffee value chain; existing policies, legislations as well as the institutional framework guiding in coffee marketing chain. For this purpose, as a baseline the study has investigate and digest all the information found Ethiopian Coffee and Tea Development and Marketing Authority and the ECX main office and also the Ethiopian coffee exporters as a sampling frame and members are planned to be interviewed. The format of the research questionnaires is both close and open ended. Finally, the survey was administered through face-to-face interview.

3.2.2 Key informant interview

Key informant interviews were conducted with people who have firsthand information about the production-consumption system of coffee so as gain a general overview on hindering factors within the coffee value chain and also benefits sharing activities among different actors within the chain. The key informants for this study were selected by snowballing techniques where by previous respondents refer the names of the key informant and their location. Snowball sampling involves the use of participants to identify other respondents (Atkinson and Flint, 2001). It is an informal method to reach a target population, particularly relevant in qualitative, explorative, and descriptive researches through the use of interviews. However, the use of snowball sampling limits the validity of the sample due to non-random sampling and biasness towards the inclusion of individuals with inter-relationships (Atkinson and Flint, 2001). These limitations were handled by increasing the number of respondents and using additional methods and sources for triangulation.

3.2.3 Focus Group Discussion (FGDs)

In order to understand the whole picture between ECX and the newly reformed Ethiopian market value chain with regard to challenges of each approaches have and also benefits they have for actors with respect to: reducing number of actors within the value chain; increases benefits sharing among the actors; reducing illegal trade activities, increases foreign currency for the country; increases the chance of producers direct to exports; reducing needed costs, labor forces and time for delivering the coffee products form production areas to end users. For that purpose a total of 2FGDs, which is 1FGDs in each group in the coffee market value chain (i.e. Producers, Coffee associations and exporters) with a member of 6-8 participants were participated, which representing all socio-economic classes, gender, Ethiopian Coffee and Tea Development and Marketing Authority and the ECX main office were included in each of the FGDs.

3.2.4 Secondary Data Sources

Review of secondary sources were conducted from the Government organizations such as Ethiopian Coffee and Tea Development and Marketing Authority and the ECX main office, and also from exports to gather information about the general process regarding the challenges and comparative advantages of the ECX and the newly reformed Ethiopian coffee market value chain. These secondary data was used to supplement, and in some cases to compare with the primary data collected from the field.

3.3 Data Analysis Technique

The qualitative methods of data analysis were employed for the analysis of data that were collected through personal interviews. Data collected through questionnaires were analyzed quantitatively by utilizing statistical tools such as tabulation, bar charts, and pie charts to present data. In addition, Descriptive statistics (average, ratio, and percentage) were applied using SPSS to examine the advantage of the new reform on coffee market chain over the market chain of ECX.

CHAPTER FOUR

4 Result and Discussion

This section presents the results of the assessment of the comparative advantage of the newly reformed Ethiopian coffee market value chain over that of ECX through identifying challenges associated with the previous ECX and possible advantages gained by the actors within the coffee value chain process followed the newly reformed Ethiopian coffee market value chain which was launched by the Ethiopian coffee and tea development authority.

4.2 The Goals for the establishment of ECX

In its broadest sense, the establishment of ECX set its target on modernizing Ethiopian agricultural market which was once considered as more bureaucratic and less transparent market. It seems a straight forward question that would be encountered by a straight forward answer. However, it is indeed a tricky one and the respondents probably find themselves dragged into different aspects of the institution's achievements. Hence, I have got different answers that categorically grouped into seven distinct opinions from my interviewees, from these respondents I have found about five major contradictions from my empirical data which are presented in the below Table 1:

Table 1:- The Goals for the establishment of ECX. The numbers refers to the number of statements mentioned (n=60)

Category	Respondents (%)	Types of expression
a. To solve accumulated market contradiction such as unsafe exchanges or payments and exchange crime prevention	92	“Unorganized systems and activities, informal market and price volatility...”
b. Empowering farmers with market information: To encourage farmers to sell their produce with accurate price information	83	“Farmers are much better off with the new system
c. To create more socio-economic opportunities such as reducing contraband	75	Contraband is very unlikely to occur with the new system

and create job opportunities etc....		
d. Facilitates safe, cost efficient and less risk transaction	67	There were different forms of acquaintances or kinship because of the market risk
e. Improving quality control of coffee production: Coffee quality has been improving continuously	70	Farmer comprehends his focus on quality would later bring him value
f. Bring market stability and balance between stockholders	42	Because of the transparency around the pricing, all the farmers in the country are now using the ECX price as the reference price
g. Project the system from exchange and other related crimes	33	When one commits (exchange related) crime it will be sued and judged here

4.3 Success and challenges ECX recorded so far

The study measured opinion of members and clients towards the efficiency of ECX so far by taking five major aspects of the ECX market value chain. These are regulation and enforcement, facilitating trade, market price discovery, and accuracy and reliability of market information.

4.3.2 Regulation and Enforcement

One of the functional dimensions used to measure the ECX success is regulation and enforcement. This dimension measures the knowledge of members and clients towards ECX trading rules, the effectiveness of the surveillance system employed by the exchange, and the effectiveness of compliance system to monitor trading rule violation. The regulation and enforcement dimension is fundamental as it is one of the determinants of the success and failure of the market flows within the ECX. As can be seen in Table 2 below, respondent's knowledge on the contracts traded at the ECX market chain, knowledge on trading rules and regulations, knowledge on the order types availed at the ECX and execution rules is

relatively good. These are the very basic regulations that should be understood and followed at the market value chain process.

The study revealed that respondents are well aware of the contracts that are traded at the ECX, with 83% of respondents having well and above. 75% of respondents responded that they have good and above knowledge on order types and execution rules and on trading rules and regulations that the ECX applies in running the coffee trading. The result gives a good sign that members who have direct market access to the trading floor and clients who are expected to have this privilege when the online trading platform is availed having a good knowledge of the stated determinants can easily integrate themselves in the online trading platform.

One of the interviewees', who is closely working in the trading operations, explained the major contribution of the ECX floor based market is its restructuring and organizing of the traditional marketing system and bringing the trading system into modern institutional arrangement that facilitates trading in an orderly and regulated manner. The ECX trading model established the foundation rule for trading contracts in the country. Traders learned to trade based on rules and standards using an open outcry trading system. Before ECX came to the scene, traders have to have commodities physically to transact.

Table 2:- Regulation and enforcement variables (n=60)

Regulation and Enforcement	Percentages (%) of respondents who responded Good and above
Indicate your knowledge regarding the products traded at ECX	83%
Indicate your knowledge regarding the ECX rules and regulations	75%
Indicate your knowledge regarding the types of orders and order execution rules set by ECX	70%

Variables	Percentage of the respondents
Traders deliberately submit trade tickets different than that of what is agreed on the ECX	28%
Traders submit tickets for transactions not shouted out on the ECX commodity trading	21%
Surveillance system employed by ECX helps to monitor market manipulation by traders	58%
Compliance system employed by the Exchange helps to monitor rules violation	62%

Source: Own Computation (2018)

The other issues under the regulation and enforcement dimension were related to rule violation, market manipulation and the systems employed by the Exchange to deter and prevent rule violators from manipulating ECX based trade system. From the study performed, as it is described on table 10, only 28% of respondents believe that ECX trading deliberately submit trade tickets different of what they have agreed on the trading floor. Moreover, only 21% of respondents believe that traders submit tickets for transactions not shouted out on the trading floor. This shows that members and clients believe there is less market manipulation related to submission of agreed tickets different from what has been agreed. As majority of the respondents are clients, who doesn't have direct market access to the ECX market chain, they may not be aware of such situations. But from the interview made with ECX experts, and data obtained from the Exchange, market manipulation related to submission of tickets different from what has been agreed is a critical problem at the Exchange trading floor.

4.3.3 Accuracy and Reliability of Market Information

The accuracy and reliability of market information displayed at the ECX price tickers is fundamental to the efficient and effective running of the trading floor. ECX displays at its trading floor, contracts traded and their last prices; international reference prices of different countries. On top of all these, the price tickers show the existing session's contracts with last closing prices, price ranges, executed prices, change from last closing prices and volume of traded contracts.

The respondent's reaction in this regard shows that ECX is in a good path in recording and disseminating market information that is crucial for trading.

The interview conducted with the market data manager reinforces the results obtained in this regard, explaining that the reliability of the market information displayed by ECX is very critical to the smooth running of marketing coffee products in particular and the Exchange in general. The information that ECX possess while trade is going on and throughout the country in major cities enabled market actors to have balanced power of negotiation. The negotiating power of market actors facilitates price discovery. The dissemination of market data is closely linked to primary markets as it disseminates price information across major primary markets using price display board and other media of communication. During the focus group discussion with key informants one of the participants explained that, this contributes to the improved functioning of primary markets by providing information that allows market actors to make better and informed decision, and this ultimately results in fair distribution of income in the coffee market value chain.

Table 3:- Accuracy and reliability of market information variables (n=60)

Variables	Percentages of the respondents
I know the status of my orders or transactions instantly	70%
The market information displayed from ECX	67%
The market information displayed from ECX is reliable	83%
The recording of executed trades at the ECX is accurate	78%

Source: Own Computation (2018)

4.3.4 Price Discovery

ECX aims to provide price discovery function in its trading. Price discovery as a function of competitive bid and offers for price discovery, having sufficient buyers and sellers, market information dissemination contribution for price discovery and having a transparent price discovery mechanism were analyzed in the study. The findings of the study revealed that respondents believe that the market information disseminated facilitates price discovery with a maximum percentage of 80% with the item the exchange has a transparent price discovery mechanism and the others also discussed on the below table 5.

Table 4:- Price discovery variables (n=60)

Variables	Percentages of the respondents
The Exchange has a transparent price discovery mechanism	80%
There are sufficient buyers and sellers at ECX market chain	85%
There is competitive bid and offer for price discovery	81%
ECX market information dissemination facilitates price discovery.	84%

Source: Own Computation (2018)

4.3.5 Socio-economic opportunities

I discovered from my interviewees' response the third major contradiction that has been solved led to the broader economic and social merits that comes along with the new system. According to the respondents during group discussion and interviewees, they reflected about the socio-economic opportunities of ECX based on contraband business reduced, foreign currency earning and job opportunity increased. I was analyzed each this issues as follows:

The backbreaking burden was on the overall economy by smuggling produce to the neighboring countries with a motive of getting comparative advantage. Brokers and exporters had played disastrous role as the economy is highly agriculture-dependent. This dreadful illegal activity understandably flourished from failure of a system that was in place; the incapability of the then market system of the country arguably brought the economy down to the brink of severe catastrophe.

Therefore, unfavorable activities such as contraband business severely damaged the economy and the new route laid by ECX looked to ascertain the commodities are exchanged within the newly formed platform. Unfortunately, the challenge is far from being over and it seems to me it may remain a challenge and requires proactive attitude of the institution to continuously improve the system. Regardless of the fact the system is too transparent to get away with contraband as the warehouse personnel said:

WH#1: This problem [contraband] is very unlikely to occur with the new System, because information is open online, the system is highly transparent. One can easily trace the transactions and see how the coffee moves within the market. This makes it very easy to take action on any outliers.

The warehouse respondent was referring to the contraband business that used to happen from the warehouses of the institution itself. Now, the transparency and computerized stock management solved the problematic paper based data storage systems. I would argue that eliminating contraband activities needs a concerted effort. The produce that has already been in ECX store could have too low risk of being smuggled out. While the millions of quintals of coffee that are already at the hands of farmers could be target for smuggling. In a very recent parliamentary annual report the chief of ECX admitted that transgression of rules and corruption are making the institution's job difficult, *Ethiopian Reporter* quoted in its June 22, 2014 Amharic edition as the chief saying:

The transgression of laws and corruption is happening because of the fact business people with abundant of money and personnel that could possibly be deceived are meeting. He said coffee and sesame are the two major commodities with higher level of transgression of laws.²³

It looks sensible move for ECX and concerned government bodies to exert an effort more to make sure there is no going back. The Ethiopian commodity market needs to avoid by any cost the returning of contraband. In my assumption, ripping apart of such system could not possibly be achieved in overnight and the resistance obviously remains immense. Those individuals within such network of business are conceivably influential in the market to say the least. From interview extract the following excerpt is one of the few descriptions given on the issue:

WH#2: ECX, of course, succeeded because of the support it received from government and otherwise it would have been nearly impossible. ...Businessmen of the system have stayed for a very long time on the market they know how to trick you. Their system is hard to predict and you never know what they would do and this was also a challenge...

In the underlined phrase, the interviewee expresses the toughness of the sector and unpredictability of the stakeholders because they are expertise of the business. They have extremely rich experience of doing this business which they can potentially use it to their own advantage. The interviewee sounded the situation was out of hand '*their system is hard to predict*' and government intervention required to get out of the difficulty '*otherwise it would have been... impossible*' and it is a double bind situation. Thus, it can be inferred as a manifestation of contradiction between less benefiting or rewarding system that handicapped the economy and relatively better rewarding exchange system. The subject of the activity system interacts well with object to obtain the outcome in more convenient way than before as well as

the rules (i.e. warehouse and exchange rules and guidelines) attempted to create transparency and it appeared to reduction of contraband business extremely. It is worth noting the very recent report of ECX chief to parliament could be an indication for need of further studies on the area and it is likely new contradictions are emerging in the current activity system which is beyond the research interest of mine at this moment in time.

Meanwhile, it created job opportunity for citizens as well as earn hard currency for the country, this regarded as another economic and social merit dimension of ECX. Halting illegal smuggling of produces makes the new route to become successful in encouraging many business people to intensively engage in this activity. The demand for laborers and skilled workforce gradually increased throughout the process starting from rural producing areas to the metropolitan destinations. These job opportunities include service sectors such as transportation of the produce, warehouse services, and financial institution services and so forth. Depending on the skill of the individual thousands of jobs has been created at different levels starting from laborers to highly qualified personnel.

4.4 Paradigm shift from ECX to newly reformed Ethiopian coffee value chain

4.4.2 Perception of actors about the newly reformed Ethiopian coffee market value chain

73% respondents replied that the newly reformed Ethiopian coffee market value chain has paramount benefits so as to ensure the coffee quality over ECX, due to the following reasons: actors in the coffee value chain can easily get every information related to cap and raw values, and also coffee washing; it also play a great role in reducing number of actors in the coffee value chain thereby, reduce cost of transport and increase benefits sharing among producers, suppliers and buyers. The newly reformed Ethiopian coffee market value chain brought a great chance for the exporter to buy quality coffee as per their choice. In addition, the respondents also replied that, the newly reformed coffee market chain create for them to get full of information about the market situation and also coffee price with different grades. While 27% of the respondents said, there is no significant different between the ECX and the new one apart from naming change. They also responded that the government intervention is poor on the trade value chain. Furthermore, as above figure-6 indicates that some of the interviewed respondents don't have awareness about the clear function of the newly reformed coffee market value chain over ECX (27%) and

for those who do the system doesn't put in place a strong incentive for farmers to upgrade production quality and better meet the requirements of evolving commodity-supply chains by rewarding them.

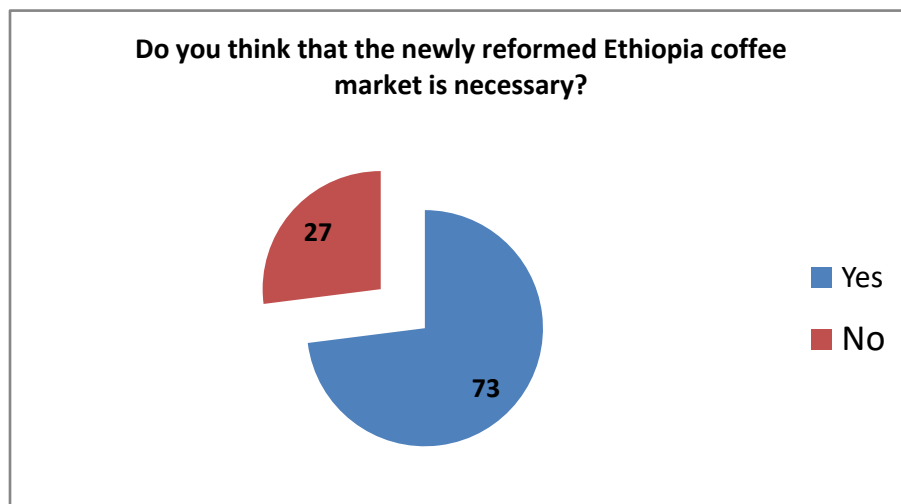


Figure 5:-The need for the emergency of newly reformed Ethiopian coffee market value chain

4.5 Challenges associated with Ethiopian Commodity Exchanges

Actors in the coffee market value chain had faced many challenges. wastage of time (90%), delivering system was time taken (80%) and lack of clear market information for each actors in the market value chain (70%) were the most challenges the actors faced in the Ethiopian commodity exchanges. a significant number of respondents also indicated that bad warehouse establishment and conditions, lack of skilled manpower in the ECX, presence of corruption and expansion of illegal trade were also another bottleneck problems so far identified by the actors in the coffee market value chain (Figure 7). Similarly, during focus group discussion with representatives of ECX and key informants, they explained that actors in the coffee market value chain have been severely influenced by the policy related issues, that in most cases the policy makers under consider the existing situation of the coffee market in Ethiopia and the world while formulation different governing rules and strategies. They also described that, lack of strong law enforcement to tackle illegal trading by the respective bodies was also another challenges ECX so far faced (Figure 7 and key informants). Export business significantly jeopardize ECX price discovery like import substitution strategies of exports. Some of private operators also couldn't

update their old strategies followed the international advancements in the industry; this might have a chance to directly affect the competitive capability of the exports in the international markets. During the focus group discussion some key informants indicated that the ECX doesn't perform the function of facilitating financing for coffee market actors at all as coffee is excluded in the warehouse receipt financing scheme. This implies that coffee producers typically are paying high rates of interest for borrowing, through both formal and informal channels.

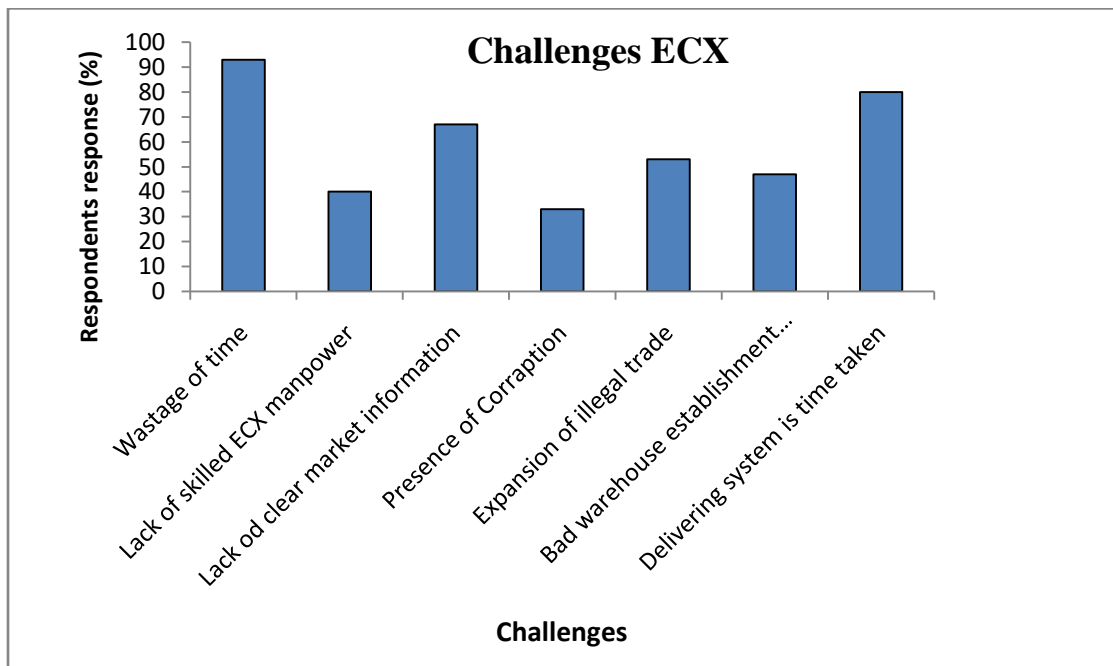


Figure 6:- Challenges of Ethiopian commodity exchange (n=60)

4.6 Comparative advantages of newly reformed coffee market over ECX

Usual when a new system and strategies formulated or the old one becoming revised and reformulated it brought significant advantages and possible some weakness also. According to the respondents responses, the newly reformed Ethiopian coffee market value chain has received many benefits for them than the previous ECX once, such as it plays a great roles in fighting illegal trade by creating wide market chance for the exports, and also providing training for the producers, suppliers and exporters on how they establish and manage their warehouse so as to reduce coffee quality loss specially during the storage conditions (Table 5). Similarly, during focus group discussion key informants were indicated the advantages of the new reform over the previous ECX once (Key informants). In the newly reformed coffee market chain trading takes

place through ‘open-cry’ bidding in which buyers and sellers use their hands to negotiate prices and quantities; deals are sealed through a clash of palms’. Clearance and settlement of everyday transactions take place through the information system explained above. Therefore, it highly creates a good chance for exporters to buy any coffee grades as per their interest and market destination while suppliers also had got a chance to bargaining power on the price of their coffee products.

Table 5:-Advantage of Newly reformed Ethiopian Coffee market value chain over ECX (n=60)

Do you think a newly reformed Ethiopian coffee have a comparative advantage over ECX?	Yes	No	Neutral
	57%	30%	13%

4.7 Benefits of newly reformed coffee market chain

Time to time the export volume of the Ethiopia coffee has been increasing. As a result, the numbers of exporters, producers and suppliers becoming increases and the export trade of this commodity plays an integral part in the country growth and transformation program (GTP). To assure sustainable benefits of the coffee products there should be a viable and visible rules, regulation and guidelines to govern all the process within the value chain. ECX authority was launched in 2008 E.C so as to facilitate the process of coffee markets. Since that time all the Ethiopia export commodity governed and administered under ECX. However, in recent time the Ethiopian coffee and tea development authority had launched a new reform on coffee and tea products market value chain related process (Figure 8).

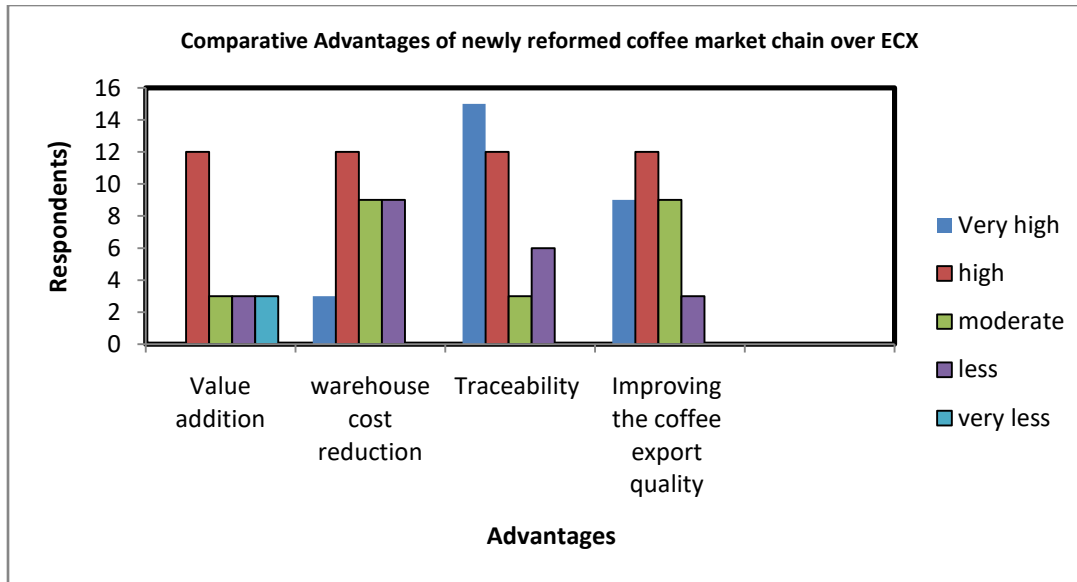


Figure 7:- Benefits of newly reformed Ethiopian coffee market value chain over ECX

4.8 Quality standards and the issue of traceability

Even though, the ECX works on formulating and implementing different coffee proclamation, regulations applicable by all actors within the commodity exchange chain so as to maintain the Ethiopian coffee quality in different international markets (Figure 8). Yet, as significant numbers of respondents indicated that, the newly reformed coffee market value chain has two important advantages that the ECX once such as it still increases and highly ensure the quality of coffee through creating a smooth and more transparent information flows between actors the value chains. Similarly, with respect to traceability, most respondents and also key informants during focus group discussion mentioned that, the newly reformed coffee market value chain increases the traceability of the coffee products throughout the chain in the sustainable way that the previous ECX. The newly reform coffee chain has a potential to improve the coffee products quality and also it has a high potential in reducing costs allocated for warehouse establishment than the existing ECXE (Figure 8 and Key informants).

CHAPTER FIVE

5. Summary, Conclusion and recommendation

5.1. Summary of Major Findings

The main objective of the study focused on analyzing the comparative advantage of the newly reformed Ethiopian coffee market value chain over ECX through assessing the overall activities so far done in the market value chain since ECX launched and challenges so far recorded within this truck. In addition to that the research tried to find the reasons behind why the new reformation on Ethiopian coffee market value chain need and implemented by the Ethiopian coffee and tea development authority? With this broad objective, the study also tried to answer the feasibility of implementing the newly reformed Ethiopian coffee value chain over ECX.

From the findings of the study it is witnessed that 70% of respondents have academic qualification of high school and below, with 30% of them having an elementary school qualification. The study also revealed that 80% of respondents have the experience of working with the Exchange for more than 5 years. Findings discovered that majority of the respondents were well familiar with rules and regulations and guidelines formulated by ECX. On the contrary, from the findings it can also be noted that some respondents were desperately mentioned that the ECX have still some challenges especially regarding highly ensuring traceability and reducing illegal trading.

- Analysis on the dimensions related to challenges recorded so far in ECX marketing value chain mentioned by the respondents and key informants were commodity delivering system within the value chain is time taken; expansion of illegal trading and corruption expansion; and with some extent lack of skilled ECX manpower were also mentioned by the respondents. Knowledge of respondents on ECX traded contracts, rules and regulations of the Exchange, order types and execution rules set by the Exchange was also found good with more than 83% of respondents scoring good and above knowledge status. On the other hand it was also found that respondents' knowledge on trade related market manipulations is low; with 28% of respondents believe that traders deliberately manipulate the market. But the Exchange experts admitted to having manipulations and limitations in controlling illegal trade totally.
- Price discovery as a function of competitive bid and offers for price discovery, having sufficient buyers and sellers, and other variables a percentage scored of 80% which is above

average. The dimension accuracy and reliability of market information has a percentage of 85%. In fact, most respondents indicated that the newly reformed Ethiopian coffee market value chain could possibly solve the problem associated with the ECX coffee market value chain process.

- As per qualitative information obtained from interview, the ECX system has its own significant and limitations. The major contribution is structuring and organizing the traditional marketing system to modern institutional arrangement, with balanced power of negotiations
- whereas its major limitation is lack of direct market access to the actual owners of the commodity or cash, limited trading platform that can accommodate only members. With regard to the prospects and challenges of introducing the new reform coffee market value chain found out the issues of transparency, greater market oversight, market integrity and more commodities by deploying online trading system. Moreover, the challenges awaiting the Exchange are also predicted mainly infrastructural problems, and capacity of traders in using the online trading system.

5.2. Conclusion

The goal of this thesis was to examine the comparative advantage of the newly reformed Ethiopian coffee market value chain over ECX. The research used a qualitative and quantitative data to achieve this goal. The main source of quantitative/descriptive survey data comes from a survey of 30 actors involved in the coffee market value chain. This data was used to identify challenges associated with the ECX, and the benefits gained by the actors followed the new reform over the ECX. For this purpose, the research considered factors included in the analysis parts such as value addition; warehouse establishment cost reduction; traceability; improvement of export coffee quality; lack of skilled ECX manpower; expansion of illegal traders and speed of commodity delivering systems between suppliers and buyers. The research was identified challenges associated with ECX. These problems were the market chain was time taking, lack of skilled ECX manpower also observed, and expansion of illegal traders was also recorded. On top of this, the research further investigates the comparative advantage of the new reform over the ECX such as the newly reform works on more value addition on the coffee products; it also reduces cost associated with warehouse establishment and maintenance thereby, improves the quality of exported coffee; more traceability and short the time required for delivering the

products from suppliers to exporters and buyers and furthers insure equity benefits sharing and bargaining power among suppliers and buyers. However, the research felt with some limitation to conduct a trend analysis between ECX and the new reform coffee market value chain because the newly reformed coffee market value chain has been launched before six months, therefore, there were no sufficient data for that purposes.

5.3. Recommendations

Owing to the current state of the resource base, efforts to ensure quality delivering of coffee products for international markets in a sustainable ways the actors in the value chain and also the coffee and tea authority should have to have a transparent and smooth relationship. There are a number of areas in which producers, exporters and the respective governance authority can be empowered to improve their income from coffee market value chain and create incentive for the sustainable gaining of benefits from the coffee products.

Furthermore, the research recommends the following points for further improvement and investigation

- The respective ECX authority bodies should provide a training for the staffs so as to facilitate the newly reformed Ethiopian coffee market value chain becoming more competent in international markets
- The newly reformed should also strengthen on quality improvement of the exported coffee products for each grade level through more improving warehouse related aspects, traceability and speedy delivering of the products and by engaging active actors involvements in the benefit sharing and bargaining power
- The newly reformed coffee market must fully works on reducing illegal trades of the coffee commodity and corruption through establishing a system that regulate the value chain
- The newly reformed coffee market author also focus on assessing different market places for the exporters nationwide
- The Authority should create a chance for actors in the value chain to get different training or capacity building about the overall situation of the value chain so as to maximize the quality of the coffee products thereby getting maximum returns.

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Appendices

To The Respondents:

This questionnaire was prepared to assess the comparative advantage of the new reform in the coffee market chain over the market chain of ECX. It intends to look into the current policies and guidelines, and the actual performances of the market chain in ECX and the expected benefit (comparative advantage) of the new reform on export coffee market chain over ECX. It was hoped that the outcome of this research were contribute to the improvement of increasing benefits from the sector to the country. Therefore, you are kindly requested to provide genuine response to the questions that follow.

Etsubdink Tsegaye

“Thank you in advance for your Cooperation

Interview Questions for key informants and FGDs

1. What are the challenges so far encountered in the coffee export marketing chain through ECX?
2. What are the practices of delivery process that ECX follows?
3. Does all actors actively involving in the coffee market value chain of ECX?
4. Do all actors gain reasonable returns for their contribution in the ECX coffee market value chain?
5. How do you judge the role of the new reform in improving the coffee market chain?
6. How do you evaluate ECX in terms of:
 - Reducing illegal trades and involvement of brokers;
 - Increasing income of the actors;
 - Its visibility in time and cost utilization and
 - Increasing foreign currency for the country?
7. How is the warehousing cost planned to be reduced?
8. What are the main reasons for formulating a new coffee market chain so called Newly reformed Ethiopian coffee market value chain?

9. Did you recognized the comparative advantages of the newly reformed Ethiopian coffee market value chain over the previous ECX in terms of:
 - Reducing illegal trades and involvement of brokers;
 - Quick delivering of the products to the end users
 - Increasing income of the actors;
 - Its visibility in time and cost utilization and
 - Increasing foreign currency for the country?
10. How actors react towards the newly reformed coffee market chain?
11. What is the expected contribution of the newly reform on coffee market value chain for the economic growth of Ethiopia’s export earnings?
12. What are the major possible challenges of the new reform?

I. Interview guide for in-depth interview with producers

A. Demographic characteristics

1. Name of respondents/ company name _____
2. Main source of livelihood/occupation? _____
3. What are the main motivations/ reasons for engagement in this activity?
 - A. Economically attractive(cash income)
 - B. Less income from agricultural production
 - C. Lack of other income sources

B. Socio-economic benefits

1. How far is the production area from the nearest market?- _____ (km)
 - A. Collection site
 - B. Village market
 - C. Regional market
 - D. Others (specify)
2. What processing activities do you perform before you sell your product?

3. What type of costs and amount do you spend for producing (kantar= 100 lb)coffee (including local duties and fees)?

Cost items	Amount in Ethiopian Birr

4. Do you have any information on the newly reformed Ethiopian coffee market value chain? Yes/No
5. If your answer is yes for question #16 how can you found its advantages over the previous ECX market value chain? please answer your questions based on the following points
- Benefits
 - Time requirement for delivering
 - Feasibility and sustainability
 - Reducing involvement of brokers
6. List the major challenges you faced/ encountered in ECX?

II. Interview guide for in-depth interview with traders (Coffee association/Exporters)

1. Do you think that the introduction of the newly reform on coffee market chain is necessary? Yes (a), No (b) I have no idea (c)
2. If your answer for **Q #1** is yes, what is the rationale behind saying this?
- _____
- _____
- _____
3. Do you think that Ethiopian commodity exchange is successful enough in the Coffee exchange process? A. yes B. No C. I have no idea
4. If your answer for **Q # 3** is No, what is /are the principal reason (s) for this?
- _____
- _____
- _____
5. Are there any challenges facing the EXC regarding the coffee export market chain? A. Yes B. NO C. I have no idea
6. If the answer for **Q #5** is yes, can you mention the existing challenges?

7. Do you think that the current reform on the coffee market chain have comparative advantage over ECX? A. yes B. NO C. little

8. If your answer for question #7 is „B“ or „C“ what do you think of the reasons?

9. What major benefits have you recognized from the introduction of the new reform on coffee market chain?

10. What rates do you give about the contribution of the new reform over ECX regarding the following perspectives? Select an appropriate answer from the given alternatives and put a tick (✓).

Factors to be influenced			Rates		
Value addition	Very high	High	Moderate	Less	Very less
Warehouse cost reduction					
Traceability of coffee					
Improving the coffee export quality					

11. Any extra information you want to suggest that will help the new reform to accomplish its goal and to bring about radical increment in the benefits from the sector?

12. Why ECX was established/ what were the objectives of ECX established for?

Category	Mark
a. To solve accumulated market contradiction such as unsafe exchanges or payments and exchange crime prevention	
b. Empowering farmers with market information: To encourage farmers to sell their produce with accurate price information	
c. To create more socio-economic opportunities such as reducing contraband and create job opportunities etc....	
d. Facilitates safe, cost efficient and less risk transaction	
e. Improving quality control of coffee production: Coffee quality has been improving continuously	
f. Bring market stability and balance between stockholders	
g. Project the system from exchange and other related crimes	

13. Does ECX have a strong rules, regulations and enforcement? Yes=1 No=2

14. f your answer is yes for Q13, fill the following table accordingly

Parameters	Poor	Good	High
Level of information you have regarding the products traded at ECX			
Level of information you have regarding the ECX rules and regulations			
Level of information you have regarding the types of orders and order execution rules set by ECX			
Traders deliberately submit trade tickets different than that of what is agreed on the ECX			
Traders submit tickets for transactions not shouted out on the ECX commodity trading			
Surveillance system employed by ECX helps to monitor market manipulation by traders			
Compliance system employed by the Exchange helps to monitor rules violation			

15. Please fill the following table regarding to accuracy and reliability of market information?

Variables	Yes	No
I know the status of my orders or transactions instantly		
I have an information on market displayed from ECX		
The market information displayed from ECX is reliable		
The recording of executed trades at the ECX is accurate		

16. Please fill the following tables regarding to price discovery by ECX? Yes/No

Variables	Yes	No
The Exchange has a transparent price discovery mechanism		
There are sufficient buyers and sellers at ECX market chain		
There is competitive bid and offer for price discovery		
ECX market information dissemination facilitates price discovery.		

17. Mention problems associated with commodity trading in EXC by focusing on illegal trading?

18. Does the government have a functional binding rules and regulations in the ECX market flow?

19. Tell as you information regarding to transgression of laws and corruption happening in the ECX market value chain?

Declaration

I, the undersigned, declare that the thesis entitled ‘Comparative Advantage of Newly Reformed Ethiopian Coffee Market Value Chain over the Market Chain of Ethiopian Commodity Exchange’ is my original work, prepared under the guidance of Dr. Temesgen Belayneh. All sources of materials used for the thesis have been duly acknowledged. I further confirm that the thesis has not been submitted either in part or in full to any other higher learning institution for the purpose of earning any degree.

Name

Signature

ST. MARY’S UNIVERSITY COLLEGE, ADDIS ABABA

JUNE, 2018

Endorsement

This thesis has been submitted to St. Mary's University College, School of Graduate Studies for examination with my approval as a University advisor.

Advisor

Signature

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JUNE, 2018