Factors Affecting Coffee Value Chain Activities In Case of Torban Anfillo Farmers Cooperative Union, Kellem Wollega Zone.

A thesis Submitted to Jimma University College of Business and Economics in Partial Fulfilment of the Requirement for the Award of the Degree of Master of Business Administration (MBA).

BY

Berihun Alene

Under the supervision of Mr.Mesfin Mekonnin

And

Co-Advisor Mr.Debebe Alemu

JIMMA UNIVERSITY

COLLEGE OF BUSINESS AND ECONOMICS

MBA PROGRAM, DEPARTMENT OF MANAGEMENT

August, 2020

JIMMA, ETHIOPIA

JIMMA UNIVERSITY

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Approved by Board of Examiners:

1._____   _____   _____

                      Advisor   Signature   Date

2._____   _____   _____

                  Co-Advisor   Signature   Date

3._____   _____   _____

              Internal Examiner   Signature   Date

4._____   _____   _____

             External Examiner   Signature   Date

LETTER OF CERTIFICATION

This is to certify that Berihun Alene has carried out his thesis on the topic of "Factors Affecting the coffee value chain in case of Torban Anfillo Cooperative Union" under my Supervision. This work is original in its nature and it is suitable for submission in partial fulfilment of the requirement for the award of the Degree of Masters of Business Administration.

Mr.Mesfin Mekonnin   -------------------------------

(Advisor)   Signature

                                                              Date

DECLARATIONS

I, Berihun Alene, declare that this Thesis entitled "Factors Affecting the coffee value chain in case of Torban Anfillo Cooperative Union" is my own work conducted under the supervision of my advisor Mr.Mesfin Mekonnin. I have adequately cited and referenced all the original sources. I further declare that this thesis has not been submitted to any other institution anywhere for the award of any academic degree, diploma or certificate.

Berihun Alene   _____

(The Researcher)   Signature

_____

Date

BIOGRAPHICAL SKETCH

The author was born in Oromia Region, Kellem Wollega Zone, Anfillo district, Muggi 02 kebeles, district town, on October 20, 1988. He attended his elementary education in Anfillo elementary school, secondary education in Dembi Dollo town in Kellem Comprehensive Secondary School and his preparatory education in Dembi Dollo preparatory school in Dembi Dollo town. He joined Mizan Tepi University in 2007 to pursue his B.A degree study and graduated in Psychology in 2009. Finally, he joined the school of Graduate Studies of the Jimma University in 2017 to pursue his MBA degree study in Business Administration.

ACKNOWLEDGMENTS

I express my deepest thanks to a number of individuals for their encouragement and help while conducting this thesis. First and foremost, I want to thank the valuable suggestions, scientific guidance and encouragingly responsive attitude expressed by my major advisor Mr.Mesfin Mekonnin and Co-advisor Mr Debebe Alemu to whom I am duly bound to express my gratitude. My respect and thanks should also go to manager of TAFCU Mr.Teshale Gobena for his Cooperation in terms of discussion and facilitation in the study area.

LIST OF ACRONYMS

ADOoARD   Anfillo District Office of Agriculture and Rural Development

CSA   Central Statistical Authority

ETB   Ethiopian birr

ECX   Ethiopian Commodity Exchange

FDRE   Federal Democratic Republic of Ethiopia

GDP   Growth Domestic Product

KWZOoARD   Kellem Wollega Zone Office of Agriculture and Rural
Development

OCFCU   Oromia Coffee Farmers Cooperatives Union

SPSS   Statistical Package for Social Science

TAFCU   Torban Anfillo Farmers Cooperatives Union

USA   United State of America

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ABSTRACT

Coffee sector has contributing a substantial value to the livelihood of the rural people. The aim of this study was to investigate the factors affecting the coffee value chain in case of Torban Anfillo Farmers Cooperative Union *in Oromia regional state, Kellem Wollega zone, Anfillo district. The study employed random sampling technique to select three sample kebeles from the total of twenty one kebeles from selected coffee producing kebeles. Primary data was collected from 269 members of Torban Anfillo Farmers Cooperative Union. Secondary data was mainly gathered from Official documents of Torban Anfillo Cooperative Union Office. Descriptive statistics, Correlation and multiple regression analysis methods were employed to analayze data. The result of the study revealed that the related factors of socio-economic, marketing, organizational and financial roles were significantly affected the coffee value chain of the Torban Anfillo cooperative union.Therefore,findings of the study identified that socio economic,marketing,financial and organizational roles are contributing to coffee value chain development. Finally, access to marketing information and infrastructure, Support of financial institution in encouraging modern farming of coffee and efficiency in coffee production are need more emphasis to enhance value adding of coffee in the study area.*

Key words:- Coffee, Value Chains, Factors, Role, Cooperative Union

CHAPTER ONE

INTRODUCTION

This section highlights about background of the study, Overview of TAFCU, statement of the problem, basic research questions, objectives of the study, scope, limitations, organization and Potential values of the study.

1.1. Background of the study

In recent global market different commodities are provided to international market among them coffee is one of the top cash crop. It is produced and exported by different nations, ranks as one of the top cash crops in developing countries, and is critical to the economies of several of them (Giovannucciet *et al*, 2008). Agriculture is still the backbone of the economy in most developing countries. According to farming report (2010), Ethiopia is one of the developing countries, where more than 85% of the population, residing in the rural area, is engaged in agricultural production as a major means of livelihood, and agriculture is still the most important economic sector of the country.

In Ethiopia, coffee is most important cash crop, more than 15 million people directly or indirectly depending on it for their livelihoods. It plays a central role in its economy and is an important source of foreign exchange. Not only its economic importance, but it is deeply intertwined in the social, cultural and historical identity. Ethiopia accounts for about 4.5 % of global coffee production, maintained its position as top export and accounts for about one-third of the export earnings, this percentage is gradually declining with increased export sales of gold, cut flowers, textiles, leather products and chat. Over 30% of the foreign exchange, 4% of the GDP and 10% of the total agricultural output is generated from coffee and 25% of the population mainly around 25 million people depend on coffee for their livelihoods (ICA, 1995).Although Ethiopia is the birth place of Arabica coffee and filled with exemplary coffees, it is no surprise that cooperatives in the Ethiopian coffee sector are market leaders in response to the fast growing specialty coffee sector worldwide (Melorose, 2015).

Traditionally, little attention has been paid to the value chains by which agricultural products reach final consumers and to the intrinsic potential of such chains to generate value added and employment opportunities. Though high-income countries add nearly $185 of value by processing one tone of agricultural products, developing countries add approximately $40. Besides, while 98% of agricultural production in high-income countries undergoes industrial

processing, barely 38 Percent is processed in developing countries. According to (UNIDO, 2009) these indicate that well developed agricultural value chains can utilize the full potential of the agricultural sector.

The value chains analysis highlights the need for enterprise development, enhancement of product quality and safety, quantitative measurement of value addition along the chain, promotion of coordinated linkages among producers, processors and retailers, and improvement of the competitive position of individual enterprises in the marketplace. This approach goes beyond looking at agro-industrial production in isolation to scrutinize interactions and synergies with other actors and the business and policy environment. By revealing strengths and weaknesses, value chain analysis helps identify possible corrective measures. Also, this approach brings together the various levels and components of potentially upgrading chain interventions.

Value chain analysis is essential to explain the connection between all the actors in a particular chain of production and distribution and it shows who adds value and where, along the chain. It helps to identify pressure points and make improvements in weaker links where returns are low (Schmitz, 2005). The analysis consists of identifying chain actors at each stage and discerning their functions and relationships; determining the chain governance, or leadership, to facilitate chain formation and strengthening; and identifying value adding activities in the chain and assigning costs and added value to each of those activities. The flows of goods, information and finance through the various stages of the chain are evaluated in order to detect problems or identify opportunities to improve the contribution of specific actors and the overall performance of the chain (UNIDO, 2009).

Coffee production is believed a global value chain, which indicates that by the time a coffee bean has been picked, roasted and sold it has pass through to more than one country although coffee production can be regional and sub national value chain. According to (Bart, 2006) these, regional and sub national value chains obtain the left over coffee which is not of high quality (i.e. producing countries receive the lowest grade coffee and export the best).

Moreover, the role of cooperative in creating efficient and competitive agricultural marketing can be plausible through effective involvement in the marketing system. This enables to reduce the existing excessive trading chain and high transaction costs in the markets which neither benefit the farmer in surplus producing areas nor consumer in the food deficit areas

(Gabre-Madhain, 2002). As cooperative take part in the market, it can allow to add some values to the farmers' output and by creating effective and efficient agricultural marketing system. Cooperative could help the farmers in terms of sales of agricultural products, provide market information, and offer technical services during production, financial assistance, government subsidies and provision of affordable production material.

Due to uncertainty of demand for the commodity which is traded in the global market there is a possibility for fluctuation of prices for the product for various reasons. This is also greatly hurts the economy of participated countries in general especially the developing country in particular. In order to overcome market failures and to cope with changes in the market environment many developing countries, including Ethiopia, are returning to agricultural cooperatives (Anteneh,Muradian,and, and Ruben,2011 as cited in Nicola,2009)

According to (Gemech and Struthers, 2007) the coffee value chain in Ethiopia is composed of a large number of actors. As well our coffee is traded at both domestic and world market. In the local market large amount of coffee is bought and sold between the consumers and traders in the traditional way. Due to this the country took the higher number of domestic consumption than the international market. In addition the newly established commodity exchange market created the way coffee is traded in the world market to international buyers through specialty market channels by coffee cooperative unions. Since 2001, however, cooperatives have been granted permission to by-pass coffee auction opening the way for direct export sales (Dempsey, 2006)

Farmer cooperatives are the actor which enables the farmer to develop their production and processing system via value chain development, such as: access to financial resources; provision of farm input, knowledge, and market information; and networking access. It also improves the value chain through process and product marketing. Therefore, farmer cooperatives can be a central player in order to maintain the coordination system in the coffee value chain development (Pratiwi, 2015).

This research identified the overall "Factors affecting the coffee value chain in case of Torban Anfillo Farmers' Cooperative Union" in the study area. The Union purchasing any types of agriculture commodity, including coffee from its primary cooperative members and supplies to where there is scarcity of products. With regarding coffee, it has a strong link with primary coffee cooperative established in each coffee producing kebeles. It provides training

service on coffee production and quality management, credit service and input supplies to all primary cooperatives working in all kebeles. It directly buys wet and sun dried coffee from the primary cooperative members in bulk, makes value addition practice such as hulling/processing, clearing, sorting and packaging, and takes samples to ECX quality control and quality inspection centres for getting grading and certifying and directly export to international buyers. Therefore, this study was intended to assess value adding activities in the Torban Anfillo Farmers Cooperative Union.

1.2 Statement of the Problem

Cooperatives are expected to play an effective role in supporting coffee farmers by supplying the price information, capital and transportation those small-scale farmers often lack. In addition, a cooperative as a representative of coffee farmers can be a stronger negotiator than an individual farmer in the international market. Coffee cooperatives have become more market-oriented; have provided higher profits to coffee farmers than have private traders and brought benefits to coffee farmers by providing a new marketing channel. So, the dividends are appreciated by farmers and have encouraged farmers to improve the quality of their coffee (Kodama Y. , 2007).

According to Mojo (2003), Ethiopian coffee cooperatives have been addressing the benefits (mainly the socioeconomic benefits) of cooperatives to their members through ensuring fair trade, linking them to the markets, or by improving value chains. A research on market assessment and value chain analysis in Benishangul Gumuz regional State, Ethiopia by Emana (2009) identified that agricultural cooperatives improved members' technical efficiency because of better access to productive inputs and services as compared to non-members. Anteneh.et al (2011), conducted study on coffee farmer's market outlet choice in Sidama zone, and identified that education, proportion of off-farm income to total income, satisfaction on cooperative performance and second payment affected market outlet choice.

A research on effectiveness of cooperatives in coffee value chain: an analysis in Sasiga District of Oromia Region, Ethiopia by M. Karthikeyan (2015) indicated that variables such as trust, technology, market information, training, timely delivery of products, financial supports were found to be critical factors influencing the effectiveness of cooperatives in coffee value chain. According to Karthikeyan (2015), although coffee is an economically important commodity for country and individuals. He identified several problems in coffee

value chain and described that cooperative members have a minimum awareness regarding to coffee value chain and inadequate knowledge and skills on quality coffee production among value chain actors; hence, no attention is given for linking with actors.

Out of Kellem Wollega zone 12 districts, Anfillo district has high level of coffee production produce coffee on average around 4200 tons washed and sun dried coffee per year (ADOoARD 2020) and supply highest coffee output in the zone. Torban Anfillo Farmers Cooperative Union that found in Anfillo district has good potential to market the members output to domestic and international market around 615 tons washed and sun dried coffee per year (ADOoARD 2020) and provides different service to their members. The union involves in the value chain but limited in technology, market infrastructure and finance to do in a better for the value added activity. Coffee is economically and socially crucial cash crop of this district of the total areas of district 156,700 hectares, more than 54,086 hectares of the land was occupied with coffee (ADOoARD, 2015). However, the coffee value chain assessment has not been investigated much in this specific study areas. Therefore, assessment of coffee value chain is an essential requirement to find out the likely reasons that limit the overall performance of coffee value chain and come up with specific workable solutions. The aim of this study was to find factors that affect the coffee value chain and this study make an attempt to answer the following problems by conducting study on factors affecting coffee value chain of farmers' cooperative union in the selected study area.

1.3. Research Questions

➢ What are the socio-economic factors that affect the Coffee value chain in case of Torban Anfillo Cooperative Union?

➢ How does marketing factors affect the coffee value chain in case of Torban Anfillo Cooperative Union?

➢ How does an organizational factors influence the coffee value chain in case of Torban Anfillo Cooperative Union?

➢ How does a financial related factors influence the coffee value chain in case of Torban Anfillo Cooperative Union?

1.4. Objectives of the study

1.4.1. General Objectives

The overall objective of this study was to assess factors affecting coffee value chain in case of Torban Anfillo Farmers' Cooperative Union in Anfillo District, Kellem Wollega Zone.

1.4.2. Specific Objectives

The Specific Objectives of this study were;

- ➢ To identify socio-economic factors affecting Coffee value chain in case of Torban Anfillo Cooperative Union.
- ➢ To examine marketing factors affecting Coffee value chain in case of Torban Anfillo Cooperative Union.
- ➢ To analayze the organizational factors affecting Coffee value chain in case of Torban Anfillo Cooperative Union.
- ➢ To describe the financial factors affecting Coffee value chain in case of Torban Anfillo Cooperative Union.

1.5 Scope of the Study

This study was conducted in Torban Anfillo farmers' cooperative union in Anfillo Woreda which is found in Kellem Wollega zone, and which is located in western direction at 669 kilometres away from the Addis Ababa city. This study was carried out with the sample of 269 members were randomly and purposively selected from three primary cooperatives in Torban Anfillo Union. This is mainly because of limited availability of resources and time to undertake the study on a wider scale. The study was focused on different demographic, socio-economic, marketing, financial and institutional factors that influence coffee value chain in cooperatives union. Hence, materials were useful to get full information and to collect raw data. Related to this, the main sources of collected data are both primary and secondary data sources. To investigate the primary sources, questionnaires and interviews was used as appropriate tools to gather relevant information for the problem under study. On the other hand, secondary data was collected from official documents of the organization; report and different method were implemented.

1.6 Limitations of the Study

The result of the study has limitations to make generalizations and make them applicable to the country as a whole since it is limited to only one district. The study was conducted in limited three sample kebeles (Ashi,Dolla,Shebel) out of twenty one coffee produce kebeles due to time constraints (since the researcher is a full time workers) and financial constraints(since the research has no budget and covered all expenses). Lack of record keeping by cooperatives was a challenge to collect relevant information in the channel. Thus, Secondary sources were not extensively used to complement preliminary information to understand rationality behind factors affecting the status of cooperatives union on coffee value chain. Despite the above limitation the researcher has also faced problem in getting further information.

1.7 Significance of the Study

Pieces of empirical information to be generated by this study were paramount importance. It is useful for the management bodies of the union, coffee farmers, marketing cooperatives under consideration as well as other cooperatives operating under similar conditions in improving their roles through appropriate and relevant measures. The information was provided a good lesson for new cooperatives to be established and avoids problems at the very beginning. This study was a good stepping-ground for other studies on agricultural marketing and marketing cooperatives. In brief, this research was useful to cooperatives societies, researchers, governmental and nongovernmental organizations for decision making, planning and development of agricultural marketing and cooperatives.

1.8 Organization of the study

This research is organized in to five chapters. The first chapter is introductory part, which contains background of the study, statement of the problem, questions and objectives of the study, significant of the study, scope, limitation, and organization of the study. The second chapter deals with literature review, in which critical review of scholars work in the research topic was presented. The third chapter deals with on methodology and research design that is using to undertake the research, in this chapter the researcher tries to design the study, sample size, source and tools of data collection are presenting. Chapter four dealt with the finding of the study, data collection, analysis, results, interpretation, and discussion. The last chapter five is summary, conclusion, recommendations, and appendix.

CHAPTER TWO

REVIEW OF LITERATURE

This chapter deals on reviewing relater literature focusing on theoretical literature, empirical review of studies, Literature gaps, Operational definitions of variables and conceptual framework of the study. Discussing the significance of the study was the existing literature that is what other scholars have written in related to the topic under study; identify the determinants of coffee value chain in farmers 'cooperative union. This chapter would be presented under sub-titles: Definitions and concepts of value chain, Concepts and principles of cooperatives, Distribution of value added, Roles of cooperative in coffee producers performance, Determinants of market outlet choice of coffee producing farmers, overview of the determinants of coffee value chain; the organizational related factors, financial factors and marketing related factors.

2.1 Theoretical Literature

2.1.1 Definitions and concepts of value chain

Value chain can be defined as the full range of activities which are required to bring a product or service from conception, through the different phases of production, delivery to the final consumer and final disposal after use. The study in the value chain sector will improve the attempt to understand the distribution of power and value in the chain and to be able to address the agency of workers and small producers (Miller, 2011)

According to Hartwich (2012), value chains can be an opportunity to link smallholder farmers in developing countries to lucrative markets for consumer goods worldwide. Agricultural value chains are organizational schemes that enable a primary product to get sold and transformed into consumable end-products, adding value at each step of a gradual process of transformation and marketing.

Value chain actors**:** The chain of actors who directly deal with the products, i.e. produce, process, trade and own them. They are those involved in supplying inputs, producing, processing, marketing, and consuming agricultural products (Haile, 2009). They can be those that directly involved in the value chain (rural and urban farmers, cooperatives, processors, traders, retailers, cafes and consumers) or indirect actors who provide financial or non-financial support services, such as credit agencies, business service and government, researchers and extension agents.

Value chain governance refers to the role of coordination and associated roles of identifying dynamic profitable opportunities and apportioning roles to key players (Kaplinsky, 2000). It ensures that interactions between actors along a value chain reflect organization, rather than randomness. The governance of value chains emanate from the requirement to set product, process, and logistic standards, which then influence upstream or downstream chain actors and results in activities, roles and functions.

Value chains can be classified into two based on the governance structures: buyer-driven value chains, and producer-driven value chains (Kaplinsky, 2000). Buyer-driven chains are usually labor intensive industries, and so more important in international development and agriculture. In such industries, buyers undertake the lead coordination activities and influence product specifications. In producer-driven value chains which are more capital intensive, key producers in the chain, usually controlling key technologies, influence product specifications and play the lead role in coordinating the various links. Some chains may involve both producer and buyer driven governance.

Value chain upgrading refers to the acquisition of technological capabilities and market linkages that enable firms to improve their competitiveness and move into higher-value activities (Kaplinsky, 2000). Upgrading in firms can take place in the form of process upgrading, product upgrading, functional upgrading and chain upgrading. Upgrading entails not only improvements in products, but also investments in people, know how, processes, equipment and favourable work conditions.

Value chain management is about creating the added value at each link in the chain and a Sustainable competitive advantage for the businesses in the chain. How value is actually created is a major concern for most businesses. Kotler (1985) indicates that value can be created by Differentiation along every step of the value chain, through activities resulting in

products and services that lower buyers' costs or raise buyers' performance. It examines the performance of each economic agent at each stage of the chain rather than concentrating on just one level of activity. The analysis helps to determine the competitive advantage of actors in the entire commodity chain. This makes the analysis more systemic and comprehensive by covering the entire chain of activities and the corresponding types of governance involved.

Supply chain is the means logistical and procedural activity involved in producing and delivering a final product or service, from the production area to customer or end users. Market may be defined as a particular group of people, an institution, a mechanism for facilitating exchange (Tilahun, 2002). The market concept has also been linked to the degree of communication among buyers and sellers and the degree of substitutability among goods. The concept of perfect market, for example, is an abstraction used by economists as a benchmark for evaluating the performance of market situations that deviate from its specifications.

Marketing is the performance of business activities that direct the flow of goods and services from producer to consumer or user or the process in a society by which the demand structure for economic goods and services is anticipated (enlarged) and satisfied through the conception, promotion, and physical distribution of such goods and services or the process of planning production, pricing, promotion, and distribution of ideas, goods, and services to create exchanges that satisfy individual and organizational goals cited in (Kotler, 2003).

Marketing channels are sets of interdependent organizations involved in the process of making a product or services available for use or consumption. Marketing channel decisions are among the most critical decisions facing management (Kotler, 2003). The sequence of intermediaries and markets through which goods pass from producer to consumer is known as marketing channel (Kotler, 2003).

Farmers' choice of marketing channels: All farmers must utilize marketing channels, regardless of whether they are production oriented or market-oriented, if they produce goods, which are in excess of their domestic consumption. Marketing margins percentage of final weighted average selling price taken by each stage of marketing chain. Total marketing margin is the difference between what a consumer pays and what a producer receives for the product. In other words it is the difference between retail price and farm gate price (Berhanu, 2012).

2.1.2. Concepts and Principles of Cooperatives

A cooperative is an autonomous association of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly owned and democratically controlled enterprise (International Cooperatives Alliance, 2017).The contribution of the sector was immense for the past economic development of different countries in the world. According to data collected by the International Cooperative Alliance (ICA) indicate that the cooperatives movement brings together over one billion people around the world.

According to Rabirou (2013), cooperative can be defined as a social enterprise or organization created voluntarily by members with the full support and assistance from members in order to cater for the economic needs and interests of the members. The idea was to pull members economic forces together to ease their access to finance and other socio-economic resources. The basis instituting a cooperative organization includes common business interest, location, professional goals and objectives, need for social interaction on common interest, exploitation of common resources through group strategy. (Ijere, 1978) Defined cooperative as a business entity that seeks to maximize profit to ensure growth of the social enterprise, grow members' business and alleviate poverty of member-shareholders

Agricultural cooperatives are agricultural-producer-owned cooperatives whose primary purpose is increase member producers' production and incomes by helping better link with finance, agricultural inputs, information, and output markets). Its purpose is to help farmers by increasing their yields and incomes, by pooling their resources to support collective service provisions and economic empowerment. Given their primary remit to contribute to smallholder farmer production, agricultural cooperatives are seen as critical in achieving the government's development targets in the Growth and Transformation Plan, and focusing on other types of cooperatives requires an alternative framework for analysis. The main categories of agricultural co-operatives fall into mainstream activities of agricultural undertaking including supply of agricultural inputs, joint production and agricultural marketing (Sifa, 1991).

Primary cooperative is a cooperative formed by a minimum of five natural persons whose object is to provide employment or services to its members and to facilitate community development. A primary cooperative society must have at least ten individuals if it is an

auxiliary cooperative and six persons if it is a productive or industrial cooperative. Each of these must have qualified for membership (ICA, 1993).

Secondary cooperative is a co-operative formed by two or more primary cooperatives to provide sectorial services to its members, and may include juristic persons. Principles of Cooperatives according ICA General Assembly held on 23rd September 1995, the following seven basic guiding principles were stated.

First Principle: Voluntary and Open Membership**:** Cooperatives are voluntary organizations open to all persons able to use their services and willing to accept certain responsibilities of membership, without gender, social, racial, political or religious discrimination.

Second Principle: Democratic Member Control**:** Cooperatives are democratic organizations controlled by their members, who actively participate in setting their policies and making decisions. Women and Men, serving as elected representatives, are accountable to the membership. In primary cooperatives, members have equal voting rights (one member one vote) and cooperatives at other levels are also organized in a democratic manner.

Third Principle: Member Economic Participation**:** Members contribute equitably to, and democratically control, the capital of their cooperative. At least part of that capital is usually the common property of the cooperative. Members usually receive limited compensation, if any, on capital subscribed as a condition of membership. Members allocate surpluses for any or all of the following purposes: developing their cooperative, possibly by setting up reserves, part of which at least would be indivisible; benefiting members in proportion to their transactions with the cooperative; and supporting other activities approved by the membership.

Fourth Principle: Autonomy and Independence**:** Cooperatives are autonomous, self-help organizations controlled by their members. If they enter into agreements with other organizations, including governments, or raise capital from external sources, they do so on terms that ensure democratic control by their members and maintain their cooperative autonomy and independence.

Fifth Principle: Education, Training and Information**:** Cooperative provides education and training for their members, elected representatives, managers, and employees, so that they can contribute effectively to the development of their cooperatives. They inform the general

public – particularly young people and opinion leaders – about the nature and benefits of cooperation.

Sixth Principle: Cooperation among Cooperatives**: Cooperatives serve their members most effectively and strengthen the Cooperative Movement by working together through local, national, regional and international structures. These were attained through horizontal and vertical integrations among level of the cooperatives.

Seventh Principle: Concern for the Community**: Cooperatives work for the sustainable development of their communities through policies approved by their members. Cooperative may engage in different social and community development work like construction of roads, school, health centres, electricity, water services etc.

2.2   Empirical Review of study

2.2.1 Distribution of value added

Differences in market power and dependency relationships have a clear impact on the (choice of) governance regime in trade relationships. A powerful party can dictate governance mechanisms. In this respect, small scale producers depend in many cases on downstream parties in the chain, such as intermediaries, transporters or exporters, for input supplies and credits on the one hand and market access on the other (Trienekens, 2011).

Distribution of value added over various actors is strongly related to the governance form of the chain and depends on the power and bargaining position of actors, information asymmetry between chain stages and also the production technology used. Although inclusion in global value chains often brings a larger share of value added to developing country producer's prices in Western markets do not automatically translate into prices for developing country suppliers. As Kaplinsky (2000) showed, increasing differentiation of coffee prices at the retail or specialty shop outlets does not translate into increasing variance in prices paid at the farm gate.

According to Kubischta (2001), value-added agriculture involves the processing of food and non-food raw materials, thus adding value to a food product. It is the transformation of raw agricultural commodities to consumer-ready food products. It includes local processing, packaging, or marketing, which adds value to raw agriculture products. Small farmers often

get involved in value-added processing and marketing as a means to improve farm income and sustain farm operations. They involved in value-added agriculture can make creative combinations of products, by-products, processing, and markets. Farmer to consumer relationships is often face to face, which increase social interactions. This social interaction within the local food system creates trust and norms that increases social capital. Social capital offers information and control benefits, which attract consumers to products that represent a certain set of social and environmental values. Thus, the profit from the value-added business operation can flow to and within the community. Value- added activities often make wise use of local resources and enhance the quality of community life desired by its people.

Saarelainen (2011), studied value chain and various activities involved in the coffee sector and made a clear picture of the role of cooperatives to improve the value chain by providing various input factors as well as market linkages for domestic and international markets

According to Zeuli (2004), people who organize and belong to cooperatives do so for a variety of economic, social, even political reasons. Farmers create farm supply and marketing cooperatives to help them maximize their net profits. This requires both effective marketing of their products for better prices as well as keeping input costs as low as possible. Distribution of benefits on the basis of use, describes the principle of proportionality, another key foundation for cooperatives. Members should share the benefits, costs, and risks of doing business in equal proportion to their patronage. Cooperatives benefits may include better prices for goods and services, improved services, and dependable sources of inputs and markets for outputs. Most cooperatives also realize annual net profits, all or part of which are returned to members in proportion to their patronage.

2.2.2 Roles of cooperative in coffee producers performance

Cooperatives are an alternative way of organizing and carrying out business activities, help to enhance social cohesion and work for the benefit of society (Enterprise & Economics 2008). Over 100 million jobs have been generated by cooperative societies around the world. Agriculture remains the major source of income and employment in rural areas and the majority of the cooperatives are found in the agricultural sector. About 90,000 people in the agricultural sector of Ethiopia are estimated to generate their livelihood from their cooperatives (ILO, 2007).

According to Trienekens (2011))activities such as transport, processing and acquisition of information about market opportunities are performed more efficiently if producers such as coffee farmers, form a group than if each one acts alone. Hence a cooperative is a best way for farmers to capture the profit that exist in selling their produce directly to an international trader, instead of the middlemen. Cooperatives, especially agricultural and multipurpose cooperatives are considered as institutional intervention to increase agricultural production and productivity. These cooperatives are functioning with provisions of agricultural credit, provision of agricultural inputs, facilitating sale of agricultural products, operating a consumer store, inclusion of thrift and saving habits of members (Supply, 2010).

According to Mojo (2003), Ethiopian coffee cooperatives have been addressing the benefits (mainly the socioeconomic benefits) of cooperatives to their members through ensuring fair trade, linking them to the markets, or by improving value chains. In other cases, a research on market assessment and value chain analysis in Benishangul Gumuz regional State, Ethiopia by Emana (2009) identified that agricultural cooperatives improved members' technical efficiency because of better access to productive inputs and services as compared to non-members.

Cooperative development in many countries has shown that farmers who are effectively organized can benefit from aggregated links to markets and services, from accessing centralized services that can help them achieve higher yields and higher incomes, and from speaking with a collective voice to advocate for their needs. In Ethiopia, farmers who are members of cooperatives tend to achieve higher yields, and staple crops that are marketed through cooperatives attain a price premium of around 7-8% (Sifa, 1991).

Muradian (2005), studied the effect of voluntary regulation systems towards the position of the farmers in the coffee chain and its potential benefits in the chain (i) it increases the ability to reap economic rent (upgrading) and (ii) it improves the chances of gaining access to, or remaining in, a particular market.

Saarelainen (2011), Identified the purpose of collective action organization depending on the activities it carries on. The potential action is through vertical coordination (buyer-seller relationship) and horizontal coordination (inter-firm coordination, linkages to service providers and to policy makers). They also identified the role of cooperative in improving value chain by providing training, high-quality input (seeds, fertilizer), soft loans for

participating farmers and also facilitated the market linkages and identified a potential market both for domestic and export market.

Wollni (2007), Showed empirical evidence in coffee marketing in Costa Rica. Membership in cooperatives has an adequate effect to the inclusion of the coffee farmer in specialized markets and smallholder farmers are more likely to market their coffee through cooperative channels as opposed to private channels.

According to World Development Report (2008), producer organizations are essential to achieve competitiveness for small-scale producers. Agricultural cooperatives help farmers solve a collective action problem, i.e. how to procure inputs most efficiently and market their outputs on more favourable terms than they could achieve individually.

Moreover, Saarelainen (2011), expanded the purpose of collective action organization depending on the activities it carries on. The organizations are taking on more proactive roles, higher-up or further-down the chain and engaging in value chain integration. The cooperative is able to improve the value chain by providing training, high-quality input (seeds, fertilizer) as well as soft loans for participating farmers. In addition, the cooperative encourages the farmer to adopt the value added processing in three different levels; household level, cottage level, and industry level. The cooperative also facilitated the market linkages and identified a potential market both for domestic and export market.

According to Vincze (2000), performance is controlled by measuring factors such as profitability, sales, market share, shareholder value, employee productivity, and customer satisfaction. Although variables are analysed, managers usually consider a number of standards simultaneously that combine to provide an overall measure of performance. Even though the most common variables that are used to represent an organization's performance are quantitative (e.g., net profit, return on equity), many qualitative measures (e.g., customer satisfaction, attitude change toward the company or its products) are also considered in an overall assessment of performance. Qualitative factors that are more elusive, and hence more subjective, help management gain a better understanding of overall performance. For example, customer satisfaction, product quality (as it is perceived by the customer), and return on investment in advertising can be combined with quantitative factors in measuring performance (Ahmedin, 2008).

2.2.3 Determinants of market outlet choice of coffee producing farmers

Access to market in the form of different market outlet for coffee farmers is crucial to exploiting the potential of coffee production to contribute to increased cash income of rural households. Identifying factors affecting market outlet choice is therefore important. People form cooperatives to do something better than they could do individually or through a non-cooperative form of business. Forming a cooperative will not automatically solve business problems faced by individual households. This is because of cooperatives are subject to the same economic forces, legal restrictions and international relations that other business face (Medeksa, 2014).

Jari (2009) provided an insight into the institutional and technical factors that influence agricultural marketing channel choices among smallholder and emerging farmers in Kat River Valley. The institutional factors that influence agricultural marketing channel choices include transaction costs, market information flow and the institutional environment which encompasses formal and/or informal rules, the use of grades and standards, organization in the markets and the legal environment. An appropriate institutional environment reduces transaction costs for traders. Rao (2010), Found that educational level of the operator, off-farm employment, access to transportation facility and age of operator had positive effect whereas the household size was negatively associated with supper marketing channel choices (Abera, 2015).

Geoffrey (2015), Conducted study on the factors affecting the choice of marketing outlets among small-scale pineapple farmers in Kericho country. The result of multinomial logistic regression revealed that gender, group marketing, pineapple produce, price information and vehicle ownership significantly influenced the choice of pineapple marketing outlets. The result confirmed that price information had a positive influence on the choice of local market outlet while vehicle ownership positively and significantly influenced the choice of both local and urban market outlets.

Riziki (2015), employed multinomial logistic regression to identify determinants of choice of marketing outlets for African Indigenous Vegetables (AIV) among the agro-pastoral, Maasai of two countries of Kenya and Tanzania. The result of their study revealed that quantity of AIVs sold, distance to the agricultural market, sex of the household head, education level, family size, levels of value addition, farming experience in agro-pastoralist, off-farm income

and marketing costs influenced the choice of marketing outlet of the sampled agro-pastoral Maasai.

Agarwal (1992),identified factors related to price, production scale and size, farm household characteristic, behavioural aspects such as (trust, risk, and experience), and market context (distance and purchase condition) affect producer market outlet choice. Furthermore, Zuniga-Arias (2007), found out that factors such as price attributes, production system, farm household characteristic, and market context could affect market outlet decision of farmers in mango supply chain in Costarica (Anteneh.etal, 2011).

According to Mujawamariya (2013), apart from the difficulty to attract new members, leakage of sales outside the cooperative is a major challenge for the coffee cooperatives in Rwanda. Local (independent) traders still constitute a major market for coffee producers. Yet, cooperatives also accept the produce from non-members and pay them the same price.

Anteneh.et al (2011), conducted study on coffee farmer's market outlet choice in Sidama zone, and identified that education, proportion of off-farm income to total income, satisfaction on cooperative performance and second payment affected market outlet choice.

Although, cooperatives have been playing significant socioeconomic roles by reducing transaction costs and improving the bargaining power of individuals in all sectors including agriculture (Staatz, 1986) and agricultural cooperatives in particular are recognized as major tools to fight poverty especially in rural areas. However, some studies showed poor performance of agricultural cooperatives in developing countries (Nkhoma, 2011).

Accordingly, the majority of members have sold their coffee to private traders, which may affect the economic impact of cooperatives on their members. Moreover, (Anteneh.etal, 2011)reported that only 42% of members sell their coffee to their respective cooperatives due to no unique economic benefits of cooperatives to their members. However, as long as Ethiopian cooperatives are guided by International Cooperative Alliance (ICA) principles, they should be economically viable and profitable, socially equitable and environmentally sustainable, while benefiting members who own and control them (Mojo, 2003).

2.3 Literature gaps

In general, the above reviewed articles and research papers have the following major gaps; Failure to study by combining Socio economic, Financial, Marketing and Organizational related factors that affect the coffee value chain of the coffee cooperatives. There is a need for better understanding and identification of the coffee subsector value chain constraints to analayze the improvements and enhance its future performance. Failure to make specific conclusion regarding coffee value chain in cooperative union.

2.4 Operational Definitions of Determinants of coffee value chain

Different variables can affect the Coffee value chain in the selected area. However, thorough validation of literature review the most determinant factors affect Coffee value chain are identified and used for analysis in this study.

2.4.1 Organizational related factors

Good governance character of transparency, responsibility, accountability, participation, responsiveness to members' needs, and respect for rule of law are features of the cooperative organization management system. Tefera (2016), showed cooperatives in Ethiopia face over dependence on government, weak internal governance, problems of leadership and low economic viability. Similarly, (Bernard, 2010), shown lack of loyalty in following cooperative principles, and unavailability of powerful managers among members has significant correlation between management factors and degree of cooperative success. Moreover (Ahmedin, 2008), shown positive significant association between cooperative members' mutual trust and factors influencing success of cooperatives as well as good governance and factors influencing success of cooperatives.

2.4.2 Financial factors

The financial variable includes any range of values measured in money terms such as credit for the cooperative, price, and wages levels, cost, incomes, and investments of a cooperative. Externally, cooperative faces lack of working capital, which leads to delayed payment and reduced member commitment, and a high state interference in the strategic decisions. Financial problems of cooperatives are among the main reasons for weakness of cooperatives and their inactivity (Medeksa, 2014)).Almost all cooperatives in Ethiopia do not have access to long term credit service for investment purposes (Emana, Cooperatives: a path to economic

and social empowerment in Ethiopia: ILO Working Paper No.9, 2009). The study by (Kodama Y. , 2007) shown actual volume of purchase by cooperatives is limited due to financial constraints putting their sustainability under question. Also, he shows income and current investment significantly explain the variations in success of cooperative.

2.4.3 Marketing Related factors

Kotler (2003), Marketing management is the art and science of choosing target markets, getting, keeping, and increasing customers through creating, delivering, and communicating superior customer value. It is coordinated planning, implementation, and control of marketing efforts. (Ahmedin, 2008).

In agricultural marketing cooperative, farmers join together to market part, or all, of the produce of their holdings. The theoretical basis for such cooperation is related to three major factors. Bargaining power: increasing farmers' bargaining strength, which is weak and disorganized in relation to buyers. Marketing economies: reducing the cost of marketing by improving the efficiency of existing services, or achieving scale of economies in certain operations. Market investment: providing an additional investment opportunity in marketing of a commodity or commodities covered by the cooperative is considered as an additional enterprise to those already carried out by the farmer (Ahmedin, 2008).

2.4.4 Socio-economic factors

The socio economic factors contains about education, income, labour, land, input, physical resource, any social and economic issue that directly or indirectly influence the coffee value chain activities. Coffee production is labor intensive with minimal use of purchased inputs. This makes labor the most important input. Human resource is the most essential factor for the achievements of activities. The availability of skilled man power in the day to day operation of the union would strength the internal as well as the external work motive of the staffs. In today's competitive environment if organizations need to survive in the business they have to focus on their human power.

2.5   Conceptual Frame work of the study

According to Guba (1994), a conceptual framework is an analytical tool with several variations and contexts. It is used to make conceptual distinctions and organize ideas. It analysis offers a procedure of theorization for building conceptual frameworks based on grounded theory method. It serves as a network, or a plane, of interlinked concepts that together provide a comprehensive understanding of phenomena. The concepts that constitute a conceptual framework support one another, articulate their respective phenomena, and establish a framework-specific philosophy. The application of the conceptual framework in current study is mainly focusing on factors affecting coffee value chain in cooperative union. As it pictured in the following figure, several factors such as socio-economic, financial, marketing infrastructure and information, organization and institutional factors influences the value chain in the study area.   In addition, the framework provides the knowledge to understand the actors involved in the coffee value chain and the marketing system in the chain. Various activities from on farm activities and off-farm activities (post-handling and processing activities) take place along the value chain. Value added product, income share and profit margin are the primary driving force for producers to fulfil domestic market demand. The existence of agents which provides assistance in term of intensification, improved production and upgrading processing activities may help the farmers to have a direct access to the broader market. From this point of view the researcher develop the following conceptual frame work diagram.

```
┌─────────────────────────────┐
│   Independent variables     │
└─────────────────────────────┘
              │
              ▼
┌──────────────────────────────────────────┐
│ ┌──────────────────────────────────────┐ │
│ │ Socio economic related factors       │ │
│ │                                      │ │
│ │   ✓ Quantity&quality of coffee produced│ │
│ │   ✓ Land allotted to coffee          │ │
│ │   ✓ Total livestock holding          │ │
│ │   ✓ Non/off farming income           │ │
│ └──────────────────────────────────────┘ │
│ ┌──────────────────────────────────────┐ │
│ │ Marketing related factors            │ │
│ │   • Price                            │ │
│ │   • Time of sale                     │ │
│ │   • Access to market information     │ │
│ │   •  Access to marketing service     │ │
│ │   • Nearest to the market            │ │
│ └──────────────────────────────────────┘ │
│ ┌──────────────────────────────────────┐ │
│ │ Organizational related issues        │ │
│ │   • Management body of cooperative   │ │
│ │   • Membership of cooperative union  │ │
│ └──────────────────────────────────────┘ │
│ ┌──────────────────────────────────────┐ │
│ │ Financial related factors            │ │
│ │   ✓ Access to credit                 │ │
│ │   ✓ Long term credit                 │ │
│ │   ✓ Short term credit                │ │
│ └──────────────────────────────────────┘ │
└──────────────────────────────────────────┘
```

Dependent variable

Coffee value chain
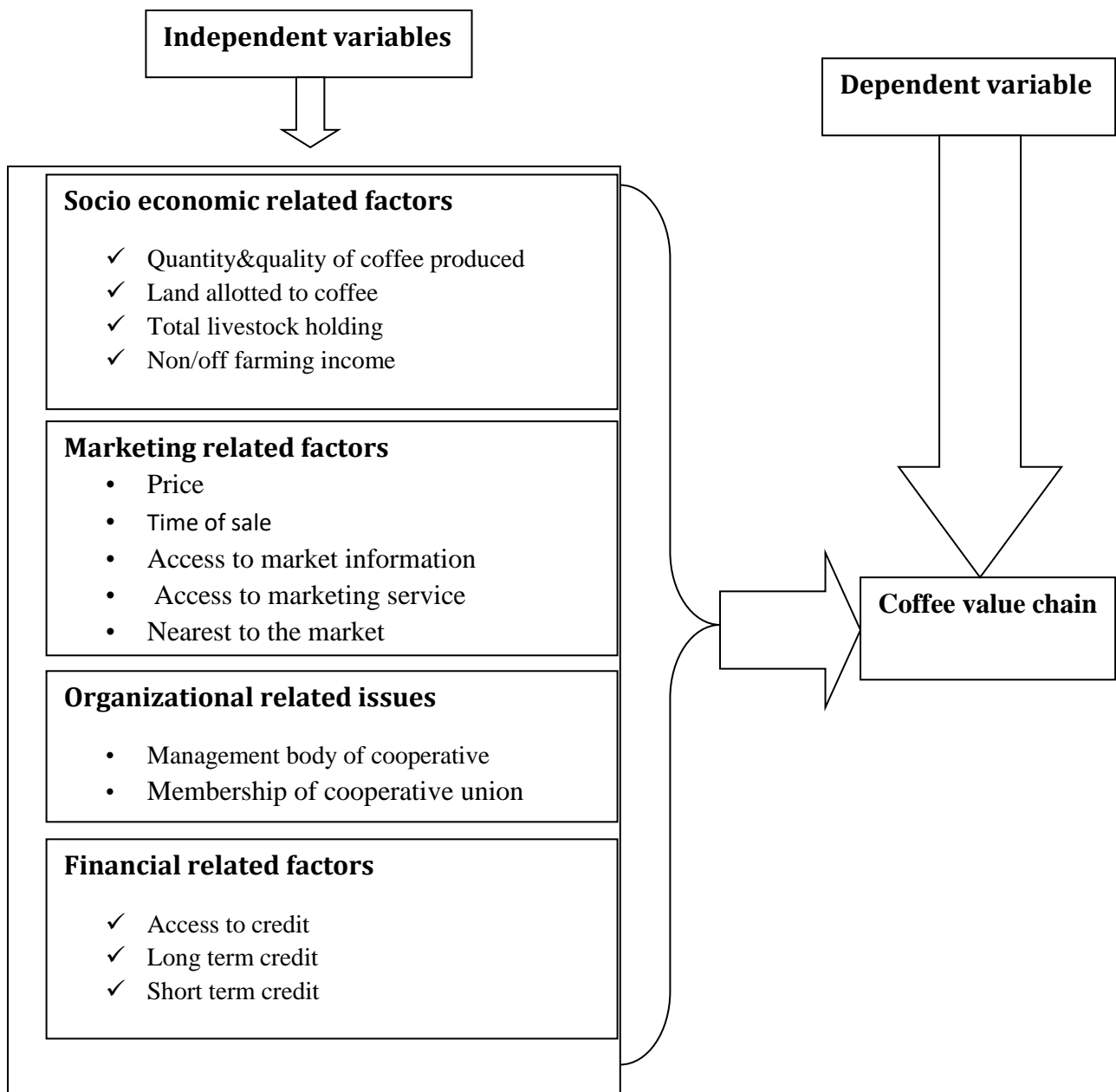
Figure 1: Conceptual frame work of the study; source: From reviewed literature

CHAPTER THREE

RESEARCH   METHODOLOGY

3.1 Research Methodology

The research methodology used in the study including description of the study area, research design, sources and type of data, sampling technique, tools and methods of data collection ,methods of data analysis, reliability and validity test, ethical consideration.

3.2   Research Design

The study is descriptive and explanatory as it was intended to describe and analayze the factors affecting coffee value chain in Torban Anfillo Farmers Cooperative Union. The research design of the study was descriptive survey design as data was gathered from sample farmers' primary cooperative members. According to Mugenda (2003), descriptive survey design helps a researcher to gather, summarize, present and interpret information for the purpose of clarification. Explanatory research method with quantitative approach has been used to show correlation of dependent and independent variables. The finding and the conclusion of the study would be depending on the full utilization of the statistical data collected. Statistical instrument used for the research analysis mainly inferential statistics, specifically correlation and multiple regression analysis. The researcher also used multiple linear regression model to provide solutions to the research problems. The approach of the study was mixed research approach both quantitative and qualitative methods were employed. In this study, a mixed method was employed to get detail and diverse information. The study employed quantitative analysis for the purpose of having a breadth of information through questioner and secondary data**.**

3.3 Description of the Study area

This study was undertaken in Torban Anfillo Farmers Cooperative Union; Anfillo district, Oromia Regional State, Western Ethiopia. Torban Anfillo Farmers Cooperatives Union was established in 2006. Now it has 23 primary cooperatives with 8,083 members and more than

90,000,000 birr (ETB) (TAFCU, 2020). TAFCU is located in Anfillo district which is known in Coffee production. Anfillo district is one of the twelve district found in Kellem Wollega Zone of Oromia Regional State, Ethiopia. The district is composed of 23 rural *kebeles* and 2 urban *kebeles*. Mugi is the capital town of the district. It is located about 669 km western of Addis Ababa and 35 km northwest of Dambi Dollo town, the capital town of the Zone. It is bordered on the southwest by the Gambela Region, on the north by Jimma Horro and Gidami district, on the north east by YemalogiWelel district, and on the east by Sayo district.

The total population of the district is 77,156, of whom 39,486 were men and 37,670 were women and 7,853 or 10.18% of the population were urban dwellers. The majority of the inhabitants were Protestants, with 63.74%, while Orthodox 26.52% and Islam 8.84% (CSA, 2007). The landscape of the district is highly characterized by low and high altitude. The major rainy seasons in the district includes spring (April to May), summer (June to August) and autumn (September to November). Average annual rainfall of the district is about 1500mm to 3335mm. The district's agro climatic zones are Dega (35%), WoinaDega (45%) and Kola (20%) (ADOoARD, 2020).

3.4   Population of the study

The population of this study was farmer's members of primary cooperatives. According to Anfillo district cooperative office there are 23 primary cooperatives under Torban Anfillo farmers' cooperative Union.

3.5 Sampling Techniques and sample size

For this study, three stage sampling technique was employed to select primary cooperatives (coffee producer households) for the study. In the first stage, since out of 23 rural *kebeles* in the district, only 21 *kebeles* produce coffee and cooperatives members are evenly distributed in all *kebeles*, then the sample frame is limited to those 21 *kebeles* and these *kebeles* were further classified in to 3 strata (High coffee producing *Kebeles* (9), Medium coffee producing *kebeles* (7) and low Coffee producing *kebeles* (5). In the second stage, depending on the strata three *Kebeles* (1 from high, 1 from medium, and 1 from low*)* were randomly selected. In the third stage, households that were members of cooperative were identified and selected by using (yemane, 1970) at 95% confidence, then probability proportional to size (PPS) was used (yemane, 1970).

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

$$\frac{825}{1+825(0.05)^2}$$

=269, Members of cooperatives samples

Where:

- **n** is the sample size,
- **N** is the population size, and
- **e** is the level of precision (5%).

In general, using the above sample size and the total number of members of cooperative of coffee producers from selected kebeles, the number of sample households from three kebeles (primary Cooperatives) is summarized according to the following table.

Table 1: Sample distributions of Primary Cooperatives (coffee producers) in selected study area

L.No	Name of kebeles (Primary Cooperatives)	Total Cooperatives Members	Sample Size (Proportion of)	Percentage (%)
1	Ashi	247	(247×269)÷825=80	33
2	Dolla	208	(208×269)÷825=68	33
3	Shebel	370	(370×269)÷825=121	34
4	Total	825	269	100

Source: Own computation from Anfillo district Cooperative data, 2020

3.6 Source and Type of Data

To achieve the intended objectives of this research both primary and secondary sources of data were employed. Moreover, in this study both qualitative and quantitative data were used to describe and analayze factors affecting the coffee value chain in the Torban Anfillo Farmers' Cooperative Union. Primary data was collected from randomly selected farmer's cooperatives members about socio economic issue, financial, marketing, organizational and coffee value chain activity using questionnaires and key informant Interview were conducted

with the committee members of selected primary cooperatives, Union managers and the district Cooperative Agency workers using checklist. In addition qualitative data about the whole situation in the study areas were gathered informally through direct observation of the study areas. In other ways, Secondary data about value and volume of coffee export in Torban Anfillo Farmers' Cooperative Union between 2015-2019 years were collected from Kellem Wollega Zonal Cooperative Office, Torban Anfillo Cooperative Union, Anfillo district agricultural Office and Anfillo district cooperative office reports and documents.

3.7   Methods and Tools of data collection

Different tools used to gather data were structured questionnaires, semi structured interview, observation and document analysis. Accordingly, structured questionnaire was used for sampled primary cooperatives members and semi structured interview for key informant. Key informant interview (purposely selected for interview to gather data) was conducted with, committee members of selected primary cooperatives, Union managers and the district Cooperative Agency workers so as to attain dual objective; that is, minimizing the limitations of questionnaire methods and to obtain supplementary information through cleared stated check list. . With respect to this, Cress well (2003) stated that employing multiple data collection instruments help the researcher to combine, strengthen and amend some of the inadequacies and for triangulation of the data. Accordingly, questionnaires were used as the main data gathering instruments whereas semi structure interview, observation and document analysis were used to enrich the data obtained through questionnaires.

Close ended questionnaire in a 5 point likert scales was used to collect data from the sample respondents. The questionnaire has 5 rating scales ranging from 1- strongly dis agree to 5-srtrongly agree. Experienced enumerators who have expertise in the field of cooperatives and agricultural economics and who were capable of speaking, reading and writing in local language "Afan Oromo" was hired to collect the required data. Explanation was given to enumerators concerning how to conduct proper questioning, data recording and deep explanations about each question subject matter to create clear idea about the questionnaire. Furthermore, during data collection period the researcher was did proper follow-up and observations to end with reliable data by traveling to each peasant association with enumerators.

3.8 Methods of Data Analysis

Prior to analysis, the collected data was checked for consistency and completeness. Next, the data was coded and entered in to Statistical Package for Social Science version 20 (SPSS) computer software in order to make the data ready to the analysis and summarize the data collected on socio economic issue, market issues, organizational issues, financial issues and coffee value chain. In this study, descriptive statistics like percentages, mean, standard deviations, frequency, graphs and tables were employed to describe data descriptively and Inferential statistics was used to analayze the data that was collected through the survey questionnaire. Correlation analysis conducted to measure the strength of the association between independent and dependent variable. Also, Multiple Regression analysis was used to test the aggregate effect of each independent variable on dependent variable (coffee value chain) in cooperative union.

3.8.1 Model Specification

The form of the research model is multiple linear regression model

The multiple linear regression model can be extended to include multiple explanatory variables by simply adding additional variables to the equation. The form of the model is the same as with a single response variable (Y), but this time Y is predicted by multiple explanatory variables (X_1 to Xn).

$$Y_i = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 \ldots\ldots\ldots\ldots\ldots \beta_n X_n \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots 1$$

Where, Yi= the outcome variable as defined above

∂ = constant term

β i=coefficient terms: β1, β2, β3 … βn are coefficient terms.

Xi   = independent variables: x1, x2, x3…xn independent variables

The summation from the results of variables found in five point likert scale question of the survey tool is used for analysis. The model specified takes the following specific form:

$$CVC = a_0 + \sum b(OF) + \sum c(FF) + \sum d(MF) + \sum e(SEF) + \varepsilon i \ldots\ldots\ldots\ldots..2$$

Where:-

- ➢ CVC: is coffee value chain
- ➢ OF: is organizational factors
- ➢ FF**:** is financial factors

- MF**:** is Marketing factor
- SEF: is Socio-economic factor
- The a_0 is the constant values
- The coefficients *b, c, d, and e* are estimated values of each factors
- εi : is the stochastic error of the study

3.9 Reliability and Validity Test

3.9.1 Validity Test

Validity is the extent to which the instrument measures what it appears to measure according to the researcher's subjective assessment (Nachmas, 1958).A research instrument was valid depending on how the data collect was related in terms of how effective the items have been sample significant aspects of the purpose of the study. This test is important to know the questionnaire was constructing using valid wordings with logical sequencing of questions to ensure logical flow of information and thought process of respondents.

Content validity involves the degree to which the study is measuring what it is supposed to measure. More simply, it focuses on the accuracy of the measurement (John et.al, 2007). All measures used to construct the instruments have shown acceptable level of construct and content validity in previous studies and are used in this study with slight modification.

Additionally, several measures were employed to ensure that the results are free from material errors and the design of the questionnaire. Such measures are clarity of instructions, clarity of the questions, the layout of the questionnaire and other comments.

3.9.2 Reliability Test

Reliability analysis used to measure the consistency of a questionnaire. There are different methods of reliability test, for this study Cronbach"s alpha is considered to be suitable. Cronbach"s alpha is the most common measure of reliability.Cronbachs alpha is a coefficient of reliability testing was used to test the appropriateness of questionnaire that would be employing in the study. Koul (2003) sates that the reliability test refers to the ability of that test to consistently provide the same results when repeated measurements are taken of the same individual under the same environment.

The Cronbach's alpha value was computed to test the reliability of the measures used in the study with following results.

Table 2: Item total statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Deptv1	16.9743	1.929	.803	.949
Indeptv1	17.1528	2.052	.771	.953
Indeptv2	16.9806	1.919	.945	.925
Indeptv3	17.0437	1.892	.954	.923
Indeptv4	17.1171	1.788	.868	.939

Source: Output of the data collected, 2020

Cronbach's alpha was 0.953 for socio-economic factors, 0.925 for market related factors, 0.923 for Organizational related issues and it was 0.939 for financing factor respectively. According to Lombard (2010), Coefficients of .90 or greater are nearly always acceptable, .80 or greater is acceptable in most situations, and .70 may be appropriate in some exploratory studies for some indices. By tracing this literature the researcher tested the reliability of the items which were developed for respondents. Therefore, as shown in table 2 the reliability of the whole items is greater than 0.9, means the whole items were reliable and acceptable because as Lombard stated coefficients of 0.9 or greater are nearly always acceptable.

3.10 Ethical consideration

Ethical issues are very essential to accomplish researches. Ethics are the rules of conduct in research where the value of honesty, frankness and personal integrity, as well as ethical responsibility to the subject of research such as consent, confidentiality and curtsey, is measured. The study was directed after permission is obtained from Jimma University and gain permission from concerned bodies and the respondent to give their willingness after the objective of the study explained to them. The research formats were accepted by advisor as well as the confidentiality of the respondents were keeping. The respondents properly filled the questionnaires and data were collected in ethical manner by data collectors.

CHAPTER FOUR

4. DATA ANALYSIS, DISCUSSION AND INTERPRETATION

This chapter concerned about the data analysis,discussion,interpretation and findings from the questionnaires completed by the respondents, so the purpose of the study is to assess the factors affecting Coffee Value Chain in case Torban Anfillo Farmer Cooperatives union. A total of 269 questionnaires were distributed to the respondents or for the members of the Cooperative union to rate the extent of each factors variables or activity. The totals of 269 distributed questionnaires were returned. Moreover, those returned questionnaires is used for data analysis.

Added to this, the questionnaire has two sections, one about demographic information of the respondents and the other part includes questions for addressing the purpose of the study.

These questionnaires were categorized under five elements/constructs are related to socio-economic factors, Marketing factors, organizational issue, Financial factors and Coffee value chain. Using questionnaire intended to describe the determinant factors of coffee value chain and analayze their effect on the coffee value chain performance. In addition to the questionnaires, secondary data or documents that are related to coffee export of the union were used in the presentation and analysis.

4.1 Respondents Background Information

In the following table, the demographic information of respondents is presented. These include the respondent's sex, age, education, marital status of respondent and household family size of respondents.

Table 3 Demographic information of respondents

Sex of respondents		
	Frequency	**Percent**
Male	199	74
Female	70	26
Total	269	100
Age of respondents		
18-30	69	25.7
31-40	89	33.1
41-50	63	23.4
Above 50	48	17.8
Total	269	100
Marital Status of respondents		
Never Married	26	9.7
Married	226	84
Divorced	11	4.1
Widowed	6	2.2
Total	269	100
Educational level of respondents		
Illiterate	83	30.9
(1-8)grade	106	39.4
(9-12)grade	24	8.3
Certificate	40	14.9
Diploma	8	3
Above diploma	8	3
Total	269	100
Respondents family Size		
1-3	112	41.6
4-6	127	47.2
Above 6	30	11.2
Total	269	100

Source: Survey result,2020

As depicted from the above table majority (74%) of the respondents were male. Whereas around 26% were females, this indicates that almost two-three-D(2/3) of the union members are male. Therefore, in Torban Anfillo Farmers Cooperative union enhancing female's participation to cooperative members is critical issue.

Regarding the age group of the respondents 25.7% of Torban Anfillo Farmer Cooperatives union members are having age between 18 to 30, 33.1% are age between 31 to 40, 23.4% are age between 41 to 50, whereas the only 17.8% of the union members are have age above 50 years. In other way, around 82.2% of the farmer cooperatives union members are exist in productive age groups. This indicated that majority of the Torban Anfillo Farmers Cooperative Union members can be able to accomplish activity of the cooperative union.

The respondent marital status shows that 9.7% of the cooperative union members are unmarried, 84% of the union members are married, where as 4.1% and 2.2% of them are divorced and widowed respectively. This indicated that majority of cooperative union members were married. Therefore, they carry out different activities responsibly.

The respondents educational background indicates that majority of respondents (39.4%) have within a 1 to 8 grade representing 106 respondents, 30.9% of the respondents are illiterate having no education/grade representing 83 respondents, 14.9% of the respondents have certificate representing 40 respondents, about 8.9% of the respondents have learn 9 to 12 grades representing 24 respondents, and 6% of the respondents have diploma and above representing 16 respondents. This reveals that, around 69.1% farmer's respondents of the Torban Anfillo cooperative union were literate. Thus, they can easily understand and communicate with the principles and values of the cooperatives.

As showed from the above table majority (47.2%) of the respondents have between 4 to 6 family representing 127 respondents, 41.6% have between 1 to 3 family representing 112 respondents, where as 11.2% which representing 30 respondents have above 6 families.

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4.2 Analysis and Discussion of Factors Affecting Coffee Value Chain

4.2.1 From the Side of the Respondents

This section presents the main body of the questionnaire to answer the basic research questions. The questionnaire part contains 36 questions categorized under five categories, socio-economic related factors, marketing related factors, organizational related factors, financial related factors and the coffee value chain. The questionnaire were distributed to the respondents to rate the level of factors affecting the coffee value chain in farmers' cooperative union.

Moreover, mean for individual question and overall mean for each four predictor and one response variable is calculated to analayze the level of factors affecting the coffee value chain in cooperative union. For easier interpretation of the results of the study, researcher used:-As per Zaidation and Baghari(2009) suggest the determination of mean score value less than 3.39 considered as low,3.40 to 3.79 considered as moderate, and the mean score value greater than 3.8 considered as high.

Table 4:   Mean Score Values for each four predictor and one response variable

	N	Mean	Std. Deviation
Socio Economic Related issues	269	4.22	.41437
Farmers learn about coffee cultivation	269	4.34	.863
Coffee production inputs (seedlings, fertilizer, pesticides, ... etc) are Sufficient available	269	4.48	.683
Currently Coffee Picking practices are mechanized(supported by tools	269	2.96	.8917
Farmers produce Coffee efficiently (with low cost)	269	3.041	.700
Coffee types/varieties are available	269	4.46	.876
The current Coffee productivity (yield) is sufficient to sustain in the market	269	4.38	.814
There is enough production Capacity of Coffee	269	4.43	.848
Coffee production is in its increasing rate in the past five years	269	4.27	.814
The quality standard implemented reflects the actual quality of Coffee	269	2.98	.994
The amount of income obtain from coffee production and sales are high	269	3.02	.906

Farmers have any other job rather than coffee farming activities	269	4.46	.838
Market Related Factors	269	4.19	.39863
Coffee is sold with price that benefits all actors	269	2.85	1.042
Farmers get market information at the right time	269	2.79	.810
Price information of Coffee disseminated is accessible and Reliable	269	4.48	.683
Farmers updated with the prices of coffee	269	3.03	.891
Farmers sale their coffee to cooperatives union	269	4.49	.700
Farmers choose cooperative market outlet choice	269	4.46	.721
The best criteria that makes farmers to select the channel is price	269	4.47	.682
Farmers have an access to marketing infrastructure	269	2.99	.700
Distance of farmers residence from the nearest market centre is far	269	4.49	.721
Organizational Related Factors	269	4.29	.816
Cooperatives leaders are elected by members vote	269	3.85	.672
Board members are transparent and accountable	269	4.42	.822
Cooperative union leader ships are effective	269	4.48	.683
Cooperatives members participate in approving annual plan and budget	269	4.03	.873
There is lack of awareness about duties and			.888

responsibilities of Cooperatives members	269	4.49	
There is favourable rule & regulation of cooperatives union in place that improves market efficiency	269	4.38	.697
Coffee growing areas have support from cooperative union	269	4.37	.655
Financing Related Factor	269	4.16	.48106
Financial institutions encourage modern farming of Coffee by providing the necessary loan and subsidy	269	2.88	1.042
Cooperative members have the experience of using credit	269	4.42	.810
Farmers have credit access for coffee production and marketing	269	4.48	.683
The timing of the credit for Cooperative members is just on time	269	2.97	.891
Financial institutions like Banks and Credit and Saving Institutions provide credit to run the business	269	4.49	.700
Coffee value chain performance	269	4.3225	.46817
Coffee value chain is fully integrated and performing well due to support Provided by cooperative union**.**	269	4.03	.891
Farmers, primary cooperatives, cooperatives union , processors and exporters of Coffee are introduced to Innovative farming, distribution and marketing of coffee	269	4.49	.700
The current proclamation of Coffee value addition fully accommodates its potential	269	4.38	.721
Volume and value of annual coffee export is increasing in the past five years	269	4.39	.663

The finding of the study indicates that, the total mean values of socio-economic related issues which represent 4.22.Based on the finding the socio-economic related issues have high role on enhancing the coffee value chain of Torban Anfillo Cooperative union. The finding of the

study also reveals that, the union supports the community to supply coffee production inputs like seedlings, fertilizer, pesticides, etc at sufficient and available condition with mean score values of 4.48 which is above the average. In this regard, Saarelainen (2011), studied value chain and various activities involved in the coffee sector and made a clear picture of the role of cooperatives to improve the value chain by providing training, high-quality input (seeds, fertilizer), soft loans for participating farmers and also facilitated the market linkages and identified a potential market both for domestic and export market.

In addition, the finding of the study tells us, except coffee picking practices, quality of coffee implementation ,Farmers produce Coffee efficiently with low cost and income obtained from coffee production with mean score values of 2.96, 2.98,3.04 & 3.02 respectively, other related issues of socio-economic factors was having high roles which is above the average. In addition data obtained from the key informant interview indicated that limitations in the environmental aspects are some hindering factors to engage in the coffee value chain. From this finding one conclude that socio economic issue affect the coffee value chain development.

There are many reasons that may confront cooperatives to carry out coffee value adding activities along the chain. It's found that the most serious impediments are lack of market, government policy, lack of finance, absence of competition, lack of human and physical resources, etc.

According to the study, some of the items scored below the average score. The price of the coffee sold to benefits all actors, Farmers get market information at the right time, access to marketing infrastructure, price change with change in coffee market price, are not performing well that representing the mean score values of 2.85,2.79, 2.99 and 3.03 respectively. The finding also shows that, even though the farmers' sales their coffee to their cooperative union, effectiveness of quality grading is heavily dependent on the effectiveness of the sampling process. This indicates that the existence of marketing used only to promotes the availability of quality coffee supply. In addition, based on the result of finding the distance of farmer's residence from the nearest market centres is far. If the distance to the nearest market increases, the transportation cost will also increase. Riziki et al., (2015), confirmed that distance to the market is significant determinant of choice of marketing outlet. The data obtained from key informant interview support the respondent's idea on the issue.

A study by Margaret Njeri Gathura, (2013) in Githunguri District, Kenya suggested that marketing is one factor that affect the coffee production. Therefore based on this finding one can conclude that market is one of the factors that affect the effective achievement of the actor's roles in the coffee value chain.

According to different study, the researcher explain under chapter two of this study governance and coordination are two main elements in the value chain, (Kaplinsky, 2000)stated that governance determines the interaction between actors in the value chain. On the other hand, coordination is needed because of the mutual dependencies (or interdependencies between different activities and different transactions in the value chain (Bijman, 2014)

Like ways, the finding of this study shows that the total mean score values of organizational related roles have high impact on enhancing the development of coffee value chain which representing 4.29 score values. The finding of the study also indicates that mean score value of organizational related role such as, Cooperatives leaders are elected by members vote ,board members are transparent and accountable, cooperative union effectiveness, lack of awareness about cooperative members duties and responsibility, favourable rule & regulation of cooperatives union in place that improves market efficiency, attention of cooperative union on supporting development of the coffee value chain have greater role on increasing the coffee value chain of the union with their mean values of 3.85, 4.42, 4.48, 4.49 ,4.38 and 4.37 respectively. Key informant interview with the officials of primary cooperatives and executes of union confirmed that cooperatives improve understanding of members about market and strengthen the relationship among the members. According to Berhanu (2012), membership to cooperative positively and significantly affected accessing cooperative milk market outlet as compared with accessing individual consumer milk market outlet. Ojiagu (2015), suggest that membership of cooperative society has significantly improved members' total income and increased the success of farming for members. Therefore, cooperative membership is expected to have positive impact on Coffee value chain development.

In other way, the chain structure from farmers to local and regional trader, the complexity of the information is low, thus the information exchange between the actors are relatively easy. Price is the main coordination mechanism; therefore, marketing arrangement is based on the mutual benefit received by both parties. Informal cooperation is common in this case, where the mutual dependence is built by trust, good relationships, and reputation of the respective

farmers and trader. In some cases, such cooperation exists due to the preference of the farmer to sell their coffee to well-known agents.

The findings of the study indicates that except, financial institutions that encourage modern farming of coffee by providing the necessary loan and the timing of the credit for cooperative members, the other elements of financial related role of cooperative members having experience for using credit, credit access for coffee production and marketing and the financial institutions support for credit and saving having mean score values of 4.42, 4.48 and 4.49 respectively. The data gathered by interview from key informant indicated that financial constraints are some hindering factors for farmers to engage in the coffee value chain.

Finance is one of essential resources for the value adding process of coffee. Findings of Bezabih, (2012) indicated that lack of finance is one of the constraints cooperatives faced such as lack of finance lending policy of the commercial banks is not suitable for cooperatives, one cooperative bank which is limited by region and capacity and low saving by the members (poverty and awareness of benefits and confidence). Thus one can conclude that the financial issue is one of factors in enhancing coffee value chain.

The finding shows that the mean score of all items captured under coffee value chain performance related issue were 4.30. According to this response, coffee value chain is fully integrated and performing well due to support provided by cooperative union, it supports at high way with mean score values of 4.03. The finding of the study also indicates that 'farmers, primary cooperatives, cooperative union, processors and exporters of coffee are introduced to innovate farming, distribution system and on finding of coffee marketing' in a great commitment that shows a mean score values of 4.49. Volume and value of annual coffee export is increasing in the past five years with mean value of 4.39. In supporting the survey the key informant interview result with both officials support the respondents.

4.3. Coffee Value Chain

This study show, the current main actors involved in the coffee value chain in the study area include input suppliers, coffee producers (farmers), collectors (agents), primary cooperatives, cooperative union and international market. Below figure shows the current coffee value chain channel in the study area.

Figure 2: Cooperative union coffee value chain channel

| Input suppliers | coffee producers (Farmers) | Collectors (Agents) | Primary Cooperatives | Cooperative Union | International Market |
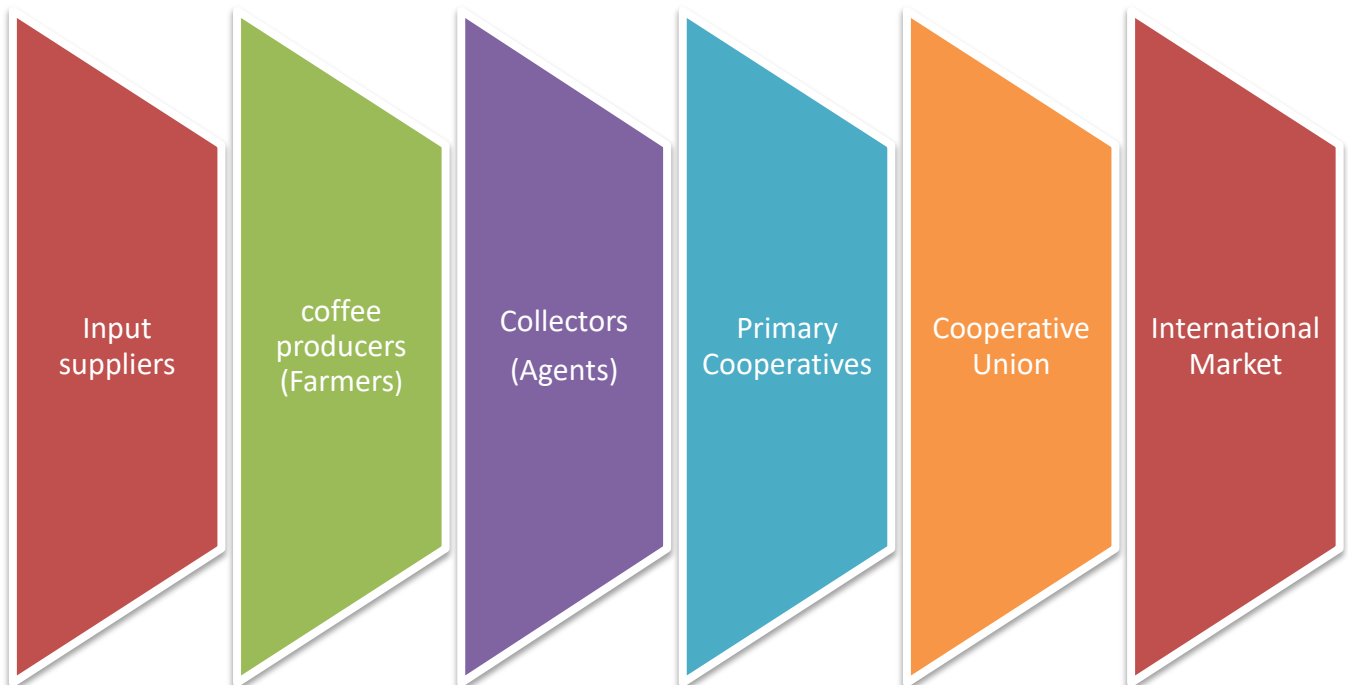
Source: TAFCU, 2020

4.3.1 Actors and their functions in the chain

Input suppliers

In study areas, input dealers for coffee are a government organization such as district agriculture office (DAO), district cooperative office and research centre which provide the coffee farmers with some sorts of agricultural inputs. Currently, primary cooperative and

cooperative union supplies to the producers all agricultural input such as seedlings, fertilizers, pesticides and packaging material.

Coffee producers (Farmers)

Farmers are main actors in the value chain who carry out most of the value chain activities. Farmers in the study area add value to their coffee by engaging in activities like preparing the coffee land, harvesting, drying their coffee beans, sorting the cherries, cleaning and storing.

Collectors (Agents)

They are an actor who purchases coffee from farmers' cooperative members in their village. They represent the cooperatives in the market. They have no warehouses of their own and therefore they immediately transfer the coffee to the warehouse of primary cooperatives. They buy coffee from the members of the cooperatives with price advantage. Therefore, they operate as legal agents for cooperatives on a commission basis.

Primary Farmers cooperatives

They are organized and controlled by district cooperative promotion office. The main function of primary cooperative is to collect member's coffee together as well as purchase coffee in village town as a group and supply to a Torban Anfillo Farmers cooperative union. They involve in value addition activities like drying and storing. The coffee collected and supplied by them is a high quality coffee when compared to all other collectors because they collect coffee produced, harvested and dried by using good agricultural practice only.

Cooperative Union (TAFCU)

Torban Anfillo farmers' Cooperative union is recently established cooperative union by the zonal cooperative promotion office. It is located in Anfillo district for representing all kebeles of Anfillo district. It is a fully licensed organization for purchasing any types of agriculture commodity, including coffee from its primary cooperative members and supplies to where there is scarcity of products. With regarding coffee, it has a strong link with primary coffee cooperative established in each coffee producing kebeles. It provides training service on coffee production and quality management, credit service and input supplies to all primary cooperatives working in all kebeles. It directly buys wet and sun dried coffee from the primary cooperative members in bulk, makes value addition practice such as hulling/processing, clearing, sorting and packaging, and takes samples to ECX quality control and quality inspection centres for getting grading and certifying.

Cooperative has responsibility for maintaining and improving quality of coffee. Therefore, they mostly focus on purchasing high-quality coffee prepared by using all good agricultural practices. However, in the Anfillo district, quantity of coffee supplied by primary cooperative-to-cooperative union is only 10 % of total coffee supplied by district. This shows since most farmers are not members of the cooperative still most coffee sell to local collectors and traders working in the district. This can deteriorate the quality of products since most farmers; local collector and traders are not great care for quality instead they give the attention quantity.

International Market

The coffee supplied by cooperative union is not sold to domestic exporter through ECX traction/auction centres because it has its own link with international buyers with guarantee to supply quality products. Directly export to international buyers currently working in France, USA and Mexico. After coffee reach in hand of international wholesalers, some value addition practices such as roasting, grinding and repacking were conducted and finally distributed to various retailers.

4.4. Results of Correlations

Table 5: Correlations results

Correlations		CVC	SER	MRF	ORF	FRF
Coffee Value Chain	Pearson Correlation	1	.788**	.827**	.379**	.344**
	Sig.		.000	.000	.000	.000
	N	269	269	269	269	269
Socio Economic Related issues	Pearson Correlation	.788**	1	.708**	.258**	.261**
	Sig.	.000		.000	.000	.000
	N	269	269	269	269	269
Market Related Factors	Pearson Correlation	.827**	.708**	1	.388**	.525**
	Sig.	.000	.000		.000	.000
	N	269	269	269	269	269
Organizational Related Factors	Pearson Correlation	.379**	.258**	.388**	1	.210**
	Sig.	.000	.000	.000		.000
	N	269	269	269	269	269
Financing Related Factor	Pearson Correlation	.344**	.261**	.525**	.210**	1
	Sig.	.000	.000	.000	.000	
	N	269	269	269	269	269
**. Correlation is significant at the 0.01 level (1-tailed).						

According to above table, Correlation result analysis, Independent variables Socio economic related issues and Marketing related factors they have strong correlation with dependent variable Coffee value chain analysis with .788 and .827 respectively is positive and, this indicates that as Socio economic related issues and marketing related factors increases with Coffee value chain. In other ways organizational and Financing related factors have moderate correlation with coffee value chain with .379 and .344 respectively. Therefore, the correlation result analysis indicated positive relationship between each independent and dependent variable.

4.5 Regression Analysis

Regression analysis is a way of predicting an outcome variable from the one predictor variable (simple regression) and several predictor variables (multiple regressions).In this study regression analysis conducted to predict an outcome variable from several predictor variables.

4.5.1 Regression Assumption Test

When the assumptions of regression are met, the model that we get for a sample can be accurately applied to the population of interest (the coefficients and parameters of the regression equation are said to be unbiased).The assumption test conducted in this study has been presented in the following ways.

4.5.1.1 Normality of Residual Test

The below figure indicated, normally distributed the residuals which is not greater deviation from the bell-shaped curve.
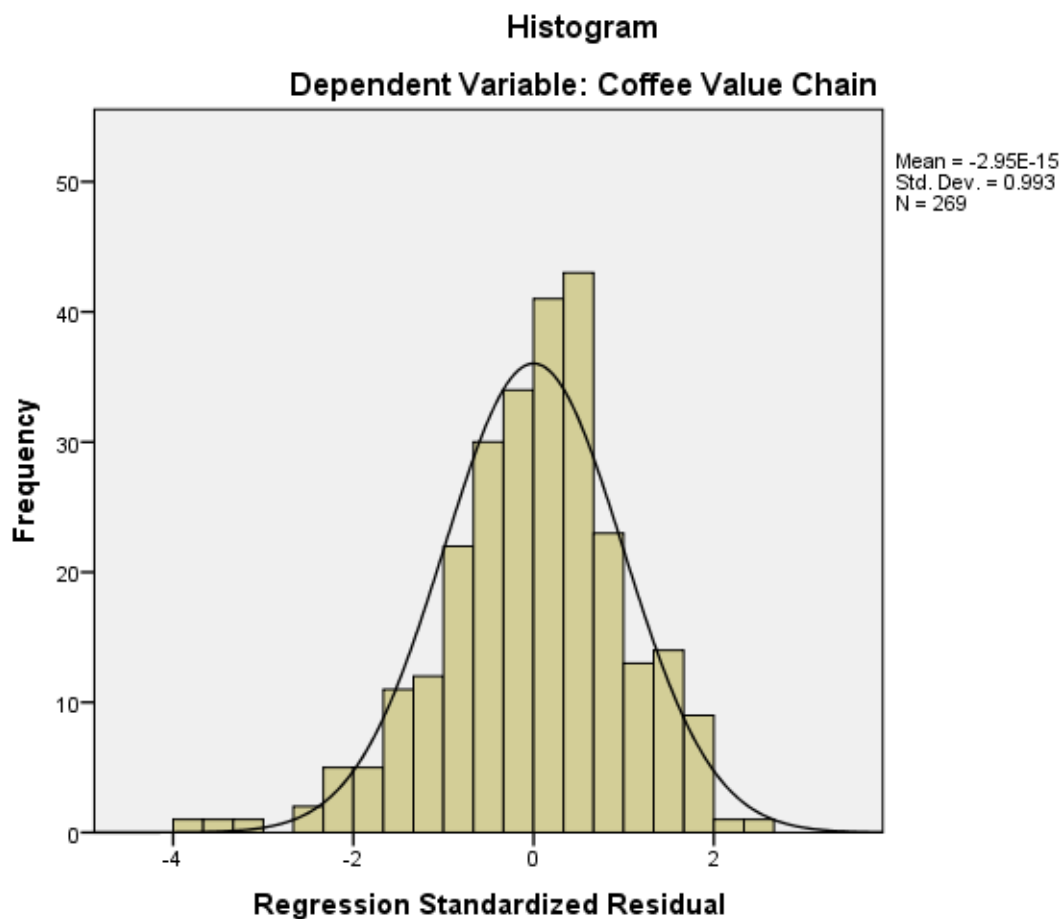
Figure 3 Histogram of normally distributed residuals

In the below figure, the normal probability plots also shows normality distributed residuals. The straight line in this plot represents a normal distribution, and the points represent the observed residuals. Therefore, in this case normally distributed residuals all points lie on the line.
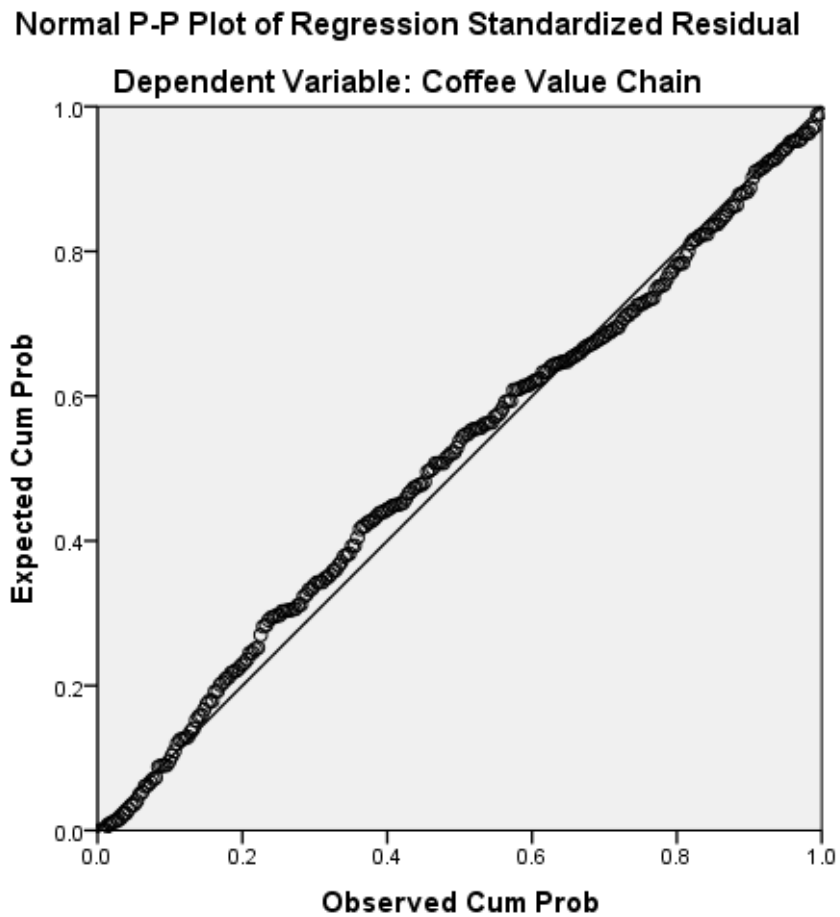
Figure 4: Normal probability plots of normally distributed residuals

4.5.1.2 Multicollinearity Test

Table 6 Multi collinearity Tests

Model	Collinearity Statistics	
	Tolerance	**VIF**
Socio Economic Related issues	.467	2.143
Market Related Factors	.25	4.253
Organizational Related Factors	.15	6.775
Financing Related Factor	.116	8.654

In order to conduct multiple regression tests, a multicollinearity test was checked as shown in the above table. Can be checked using tolerance level, and VIF. Variance Inflation Factor (VIF): a measure of multicollinearity. The VIF indicates whether a predictor has a strong linear relationship with the other predictor(s). Dhakal (2016) suggest that if the largest VIF is greater than 10, there is multicollinearity problem. Tolerance: it is a measure of multicollinearity and is simply the reciprocal of the variance inflation factor (1/VIF or 1 divided by the VIF).Values below 0.1 indicates serious problems. Multi collinearity problem does not exist in the model as VIF value for all variables is lower than 10 and tolerance value is greater than 0.1. Therefore, since the collinearity assumption is fulfilled, it is possible to run a multiple regression test.

4.5.2 Multiple Regression Analysis

The aggregate effect of marketing related factors, organizational related factors, financing related factors, and socio-economic related issue to the coffee value chain performance has been presented in the following table.

Table.7 Model summery

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.898[a]	.807	.804	.20743

Source: Output of the data collected, 2020

R: can be considered to be one measure of quality of the prediction of the dependent variable: in this case coffee value chain. A value of 0.898 in the table indicates a good level of prediction.

R square: is the proportion of variance in the dependent variable that can be explained by the independent variables. From above table value of 0.807 that independent variables explain 80.7% of the variability of dependent variable, coffee value chain and 19.3%(100-80.7) of the variation is caused by factors other than the predictors included in this model.

Adjusted R square: A value of 0.804 from the table indicates true 80.4% of variation in the outcome variable is explained by the predictors which are to keep in the model. That means the coffee value chain was explained about 80.4% of the time by the role of marketing factors, the function of organizational related variables, role of financing, and the role of socio-economic related issue. This indicated that 19.6% of determinants of coffee value chain can be explained by other variables.

Standard Error: is shows how wrong one could be if he/she used the regression model to make predictions or to estimate the dependent variable. On average, our estimates of coffee value chain with this model will be wrong by 0.20743 which is small.

Table: 8 Analysis of Variance (ANOVA)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	47.383	4	11.846	275.304	.000[b]
	Residual	11.359	264	.043		
	Total	58.742	268			

a. Dependent Variable: Coffee Value Chain

b. Predictors: (Constant), Financing Related Factor, Socio Economic Related issues, Market Related Factors, Organizational Related Factor

Statistical significance of the model:-The above table shows that the independent variables statistically significantly predict the dependent variables P- value under sig column .000<0.05 (i.e. the regression model is a good fit of the data)

Table: 9 Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
	(Constant)	.358	.150		2.390	.018
	Socio Economic Related issues	.540	.045	.478	12.070	.000
	Market Related Factors	1.679	.202	1.430	8.325	.000
	Organizational Related Factors	1.041	.266	.872	3.915	.000
	Financing Related Factor	1.097	.077	.100	1.250	.012

Statistical significance of the independent variables:-The usefulness of these tests of significance are to investigate if each explanatory variable needs to be in the model, given that the others are already there. The above table tell us that socio economic related issue p (.000<0.05), market related factors p(.000<0.05), organizational related factors p(.000<0.05),and financial related factors p(.012<0.05) are significant. This means that all variables in the model are useful. In other words, Socio` economic, marketing, organizational and financial factors are significantly contributed to explaining coffee value chain.

Estimated model coefficients:-The general form of the equation to predict coffee value chain from socio economic, marketing, organizational and financial factors, is:-predicted coffee value chain=0.358+0.540(socio economic) +1.67(marketing) +1.041(organizational) +1.097(financial).

Constant:-According to above table constant 0.358 is the predicted value for the dependent variable which is coffee value chain.

Unstandardized coefficients:-indicates how much the dependent variable varies with an independent variable when all other independent variable held constant. The regression coefficient provides the expected change in the dependent variable (here: coffee value chain) for one unit increase in the independent variable. In the above table the unstandardized coefficient for socio economic is 0.540.This means for every unit increase in socio economic there is 0.540 increases in coffee value chain.

Standardized coefficients: - standardized coefficients are called beta weights, in the beta column. The beta weight measure how much the outcome variable increases (in standard deviations) when the predictor variable is increased by one standard deviation assuming other variables in the model are held constant. These are useful measure to rank the predictor variables based on their contribution(irrespective of sign) in explaining the outcome variable.In this case, marketing, organizational, socioeconomic and financial predictors,(1.430),(0.872),(0.478),(0.100) respectively explain coffee value chain. From this result marketing is the highest contributing predictor to explain coffee value chain. The higher the beta value, the greater the impact of the predictor variable on the dependent variable.

4.6   Analysis of Secondary Sources of Data

 This section is quantitative analysis of secondary source of data related to value and volume of coffee export in Torban Anfillo Farmers' Cooperative Union between 2015-2019 years. This secondary data regarding coffee export gathered from the reports and documents of Kellem Wollega Zonal Cooperative Office, Torban Anfillo Farmers' Cooperative Union, and Anfillo district agricultural Office and Anfillo district cooperative office.

4.6.1   TAFCU Export Coffee in Volume and Value beginning 2015-2019

4.6.1.1 Export Coffee in Volume

TAFCU were directly export coffee to international buyers beginning from year 2015.As indicated from the following graph the export volume of coffee increased in year 2015,2016,2017,2018 to 120 ton,184.2 ton,566.4 ton,584.64 ton, respectively. The export volume of coffee more increased in year 2018 to 584.64 ton because of enough productivity of coffee in the district and members of cooperative more supply their coffee to the cooperative union. But in the year 2019 the export volume of coffee decreased to 430.5 ton because of political instability in the district the farmers unable to collect their coffee properly and same coffee supplied to the illegal traders. From this we can conclude that except in year 2019 export coffee of TAFCU increased in volume.
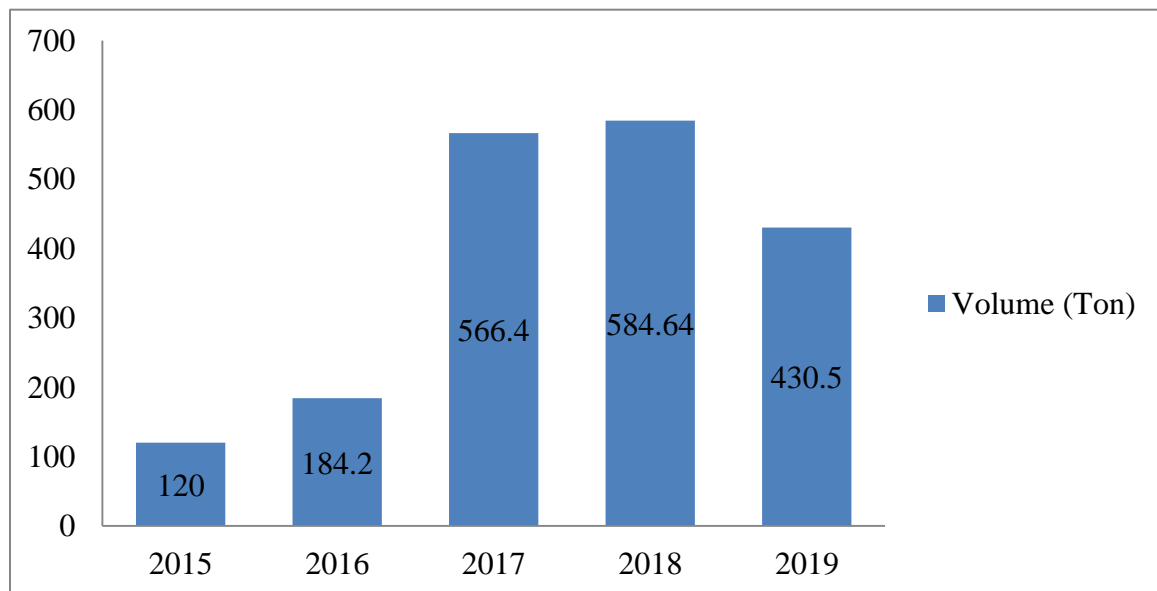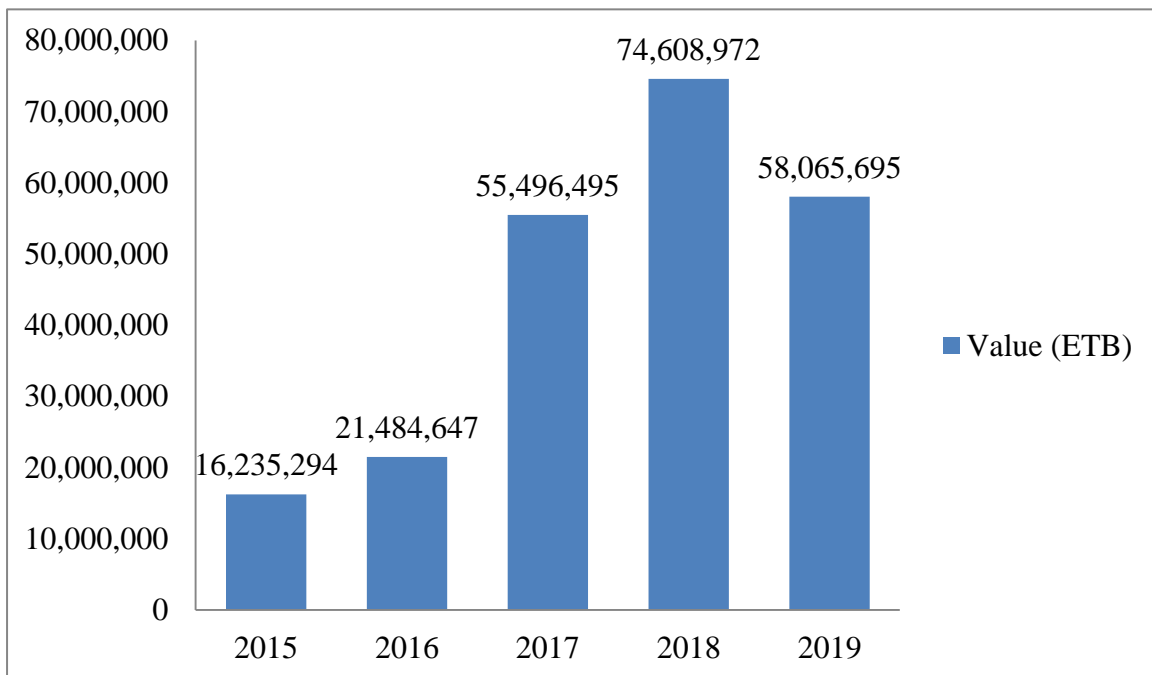

Figure 5 Export coffees in volume (Source TAFCU office)

4.6.1.2 Export Coffee in Value

The below graph showed the export value of coffee increased in year 2015,2016,2017,2018 to 16,235,294 21,484,647 55,496,495 74,608,972 respectively. In other ways, in year 2019 the export value of coffee decreased to 58,065,695 as result of political instability in the area. Therefore the TAFCU exported coffee in to international market increased in value except in year 2019.

Figure 6 Export coffees in value (Source TAFCU office)

CHAPTER FIVE

SUMMARY OF THE FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Summary of Findings

The primary aim of this study was to assess factors that affect the coffee value chain in case of Torban Anfillo farmers' Cooperative Union. The specific objectives of the study include identify socio economic factors, examine marketing factors, analysing the organizational issues and assess the financial factors that affect coffee value chain in the study area. To achieve this objective data were collected from both primary and secondary sources. The primary data were generated from farmers using questionaires.The primary data for this study were collected from 269 randomly selected from three kebeles of primary cooperative farmers(Ashi,Dolla,Shebel) in Anfillo district. Key informant interviewed and secondary data were used. Descriptive statistics, Correlation and regression analysis were used for analysing the data. The analysis was prepared with the help of employing SPSS software and excel sheet.

In the findings of this study the role of Socio economic issue, marketing factors, organizational related issue and financial factors positively affects coffee value chain performance with mean scores value of 4.22,4.19,4.29 ,4.16 respectively. The result of correlation analysis of Socio economic related issues, marketing factors, Organizational related issues, and financial factors on coffee value chain performance were found to be 0.788, 0.827, 0.379, and 0.344 respectively. Thus, these shows that value chain performance dimensions (Socio economic related issue, marketing factors, organizational related issue and financial factors) are positively and significantly correlated with coffee value chain performance. The result of the study also reveals that the related factors of socio-economy, marketing, organizational and financial roles are significantly affecting the coffee value chain of the cooperative union with coefficient of determination of .804 or 80.4%.

5.2 Conclusions

Concerning socio economic related issue one can conclude that Socio-economic factors positively affect the coffee value chain of the union. Based on the respondents and interview result availability of coffee production inputs such as fertilizers, pesticides, and availability of coffee seedlings that meet customer demand improves coffee value chain performance in

Torban Anfillo farmers' cooperative Union. Efficiency in production of coffee is still a problem to coffee value chain actors especially to farmers due to a high production factor costs like labor and investment costs that restrict farmers' cooperative union members coffee production from reaching its maximum potential yield. Coffee production in Anfillo is currently rain fed and labour intensive. There is a huge capacity to increase yield by increasing inputs and by replacing old coffee trees with new plantations and improved seedling coffee varieties.

Regarding financial related factors one conclude that financial factors positively affect coffee value chain of the union. According to respondent response and key informant interview result financial institutions in cooperative union play a positive role in coffee value chain performance by providing financial support in coffee trade related activities, value addition and their accessibility to coffee value chain. In other ways financial institutions that encourage modern farming of coffee by providing the necessary loan and the timing of the credit for cooperative members are one of the problems in the coffee value chain in line with replied responses.

Concerning organizations related issue organizational factors positively affect coffee value chain performance in Torban Anfillo Farmers' Cooperative Union. From the respondents response it is possible to conclude that there is favourable rule and regulation for coffee value chain development in the union. In relation to giving awareness about duties and responsibilities of cooperative members is one of the problems in the union.

In addition marketing factors positively affect coffee value chain in the Union. Based on the replied response of respondents and key informant interview one can conclude that farmers sell their coffee to cooperative union, farmers get accessibility and reliability of market information. In other ways, from the respondents replied responses and the key informant interview results one can conclude that the price of the coffee sold to benefits all actors, access to marketing infrastructure, Farmers get market information at the right time, price change with change in coffee market price are one of the problems in the coffee value chain. The finding also shows that, even though the farmers' sales their coffee to their cooperative union, effectiveness of quality grading is heavily dependent on the effectiveness of the sampling process.

In general, the study concluded that socio economic factors, marketing factors, organizational and financial factors positively and significantly affect coffee value chain in Torban Anfillo Farmers Cooperative Union.

5.3 Recommendations

From the finding and conclusion given above the major factors that affect the coffee value chain were identified. Therefore, based on the major findings of the study the following recommendations were drawn as short and long term strategy.

All stakeholders that directly and indirectly participate along the coffee value chain are responsible for the integrated activities. The fast flow of information and knowledge between actors in the chain facilitates the day to day value adding activities therefore all actors have to usually exchange information and knowledge. The role of each actor along the value chain is essential for effective achievements of the chain activities. All actors should take an active role in managing all aspects of their performance of coffee value chain activities.

Therefore, the coffee value chain must be promoted by providing adequate trainings on continuous basis to farmers on Pre-harvest, harvesting and post-harvest management practice. These will further increase the quality; there by increase the price because good quality coffee gets good grades that earn high price as a result, increases volume of export coffee. This facilitates to benefit all actors in the value chain. Also the cooperatives have to hire experts in order to increase the quality of coffee beginning from production. This decreased the cost of final out put before it reaches to the final consumers. Due to this the cooperatives can minimize unnecessary costs which incurred during the production time. This may improve the living and welfare of their members.

Cooperative union should create awareness about marketing and developing storage infrastructure and coordinating fragmented producers in cooperatives; and educating, training and creating awareness for farmers about the benefits of the cooperatives in marketing as the best option of market choice.

The union should provide adequate modern processing machines that increase efficiency of productivity. This may improve the value adding process of coffee as a result increase income of their members.

The cooperative and other actors should accessible the market information, and increases the near place market centres for free flow of differentiated coffee products and participated farmers along the chain. Especially the primary coffee marketing cooperatives are expected to provide different means of transportation for the members to actively participate in the market Government is also should improve the infrastructure facilities.

In addition Cooperative should facilitate adequate financial services (Credit services) for their members for modern coffee farming and marketing. Furthermore, strengthening financial and

market capacity of the cooperatives in the study area would increase farmers' choice towards cooperative outlet by increasing the number of cooperative unions the coffee sector can be more strength and give benefits to cooperative farmers.

Finally, there are different constraints and opportunities across the coffee value chain. These factors constrained the performance of cooperative union on coffee value chain in general and actors in particular which need to be taken under a series consideration by concerned body for those opportunities need to be enhanced and promoted for further benefits. Moreover, governmental and nongovernmental organizations' support in provision of finance, education, training and consultancy service for the cooperatives union, primary cooperatives and management members and employees of the cooperatives at each primary and secondary level are important to further enhance the performance of Torban Anfillo cooperative union in coffee value chain.

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APPENDIX: A

Dear respondent:

The objectives of this study is to collect information for the partial fulfilment of Masters of Business Administration on the title "factors affecting the Coffee Value Chain: In the case of Torban Anfillo farmers' cooperative union" with special reference to members of multipurpose cooperatives found in Anfillo district.

Hence, your cooperation in replaying genuine response is a greater importance to the success of this study. It's so important that without the accomplishment of the whole lot of the research would be impossible. To this effect, you are kindly requested to forward your response to the item pertaining to the issue here under.

Note: Your response will be kept strictly confidential, and it will be used for the academic purpose only. You don't need to write your name or tell to the data collector if any.

Thanks in advance for your cooperation!!!

Survey questionnaire for farmers

Part one: General Information of study participants

Instruction 1: Please make a"√" mark in the boxes provided in front of each questions.

  I.   Sex of the respondent   ☐ Male   ☐ Female

 II.   Age of the respondent ☐18-30   ☐ 31-40   ☐ 41-50   ☐above 50

III.   Marital status of respondent   ☐Never married☐married☐ divorced   ☐ Widowed

IV.   Education Level   ☐illiterate ☐ Grade 1-8 ☐ 9-12 ☐certificate ☐ Diploma ☐ above

 V.   How many household family size you have? ☐ 1-3   ☐ 4-6☐above 6

Part two: Questionnaire for respondents

Instraction2: Please check (√) and rate honestly based on what you actually given the statements using the following scales.

5 – StronglyAgree   4 – Agree   3 – Neutral   2 – Disagree   1- Strongly Disagree

A	Socio economic related issues	5	4	3	2	1
1	*Farmers learn about coffee cultivation*					
2	*Coffee production inputs (seedlings, fertilizer, pesticides, labor, etc) are sufficiently available*					

		5	4	3	2	1
3	*Currently Coffee Picking practices are mechanized(supported by tools and machines, etc)*					
4	*Farmers produce Coffee efficiently (low cost of producing)*					
5	*Coffee types/varieties are available*					
6	The current Coffee productivity (yield) is sufficient to sustain in the market					
7	There is enough production capacity of Coffee					
8	Coffee production is in its increasing rate in the past five years					
9	The quality standard implemented reflects the actual quality of Coffee					
10	The amount of income obtain from coffee production and sales are high					
11	Farmers have any other job rather than coffee farming activities					
B	Market related factors	5	4	3	2	1
1	Coffee is sold with price that benefits all actors					
2	Farmers get market information at the right time					
3	Price information of Coffee disseminated is accessible and reliable					
4	Farmers updated with the prices of coffee					
5	Farmers sale their coffee to cooperatives union					
6	Farmers choose cooperative market outlet choice					
7	The best criteria that makes farmers to select the channel is price					
8	Farmers have an access to marketing infrastructure					
9	Distance of farmers residence from the nearest market centre is far					
C	Organizational related issues	5	4	3	2	1
1	Cooperatives leaders are elected by members vote					
2	Board members are transparent and accountable					

3	Cooperative union leader ships are effective					
4	Cooperatives members participate in approving annual plan and budget					
5	There is lack of awareness about duties and responsibilities of Cooperatives members					
6	There is favorable rule & regulation of cooperatives union in place that improves market efficiency					
7	Coffee growing areas have support from cooperative union					
D	**Financing related factors**	5	4	3	2	1
1	Financial institutions encourage modern farming of Coffee by providing the necessary loan and subsidy					
2	Cooperative members have the experience of using credit					
3	Farmers have credit access for coffee production and marketing					
4	The timing of the credit for Cooperative members is just on time					
5	Financial institutions like Banks and Credit and Saving Institution s provide credit to run the business					
E	**Coffee Value Chain**	5	4	3	2	1
1	Coffee value chain is fully integrated and performing well due to support Provided by cooperative union					
2	Farmers, primary cooperatives, cooperatives union , processors and exporters of Coffee are introduced to Innovative farming, distribution and marketing of coffee					
3	The current proclamation of Coffee value addition fully accommodates its potential					
4	Volume&value of annual Coffee export is increasing in the past five					

APPENDIX: B

Interview Questions

II. Interview with officials of cooperatives and unions

1. How is the coffee production and marketing in the area?

2. What is the problem faced by the farmers according to your opinion?

(1) Problem in supplying the coffee seeds, (2) marketing, (3) quality of the products, (4) price

(5) infrastructure (6) lack of information (7) others (Specify) _____

3. How does the Farmers' Cooperative work in general?

A) Organizational structure

B) Rules and regulation

C) Other organizational issue

4. What are the rules (also the term formal/informal contract) and how does the coordination mechanism in FC?

5. Do governmental requirements/policies exist and influence the system of FC? (1) Yes (0r) No

a) If Yes how

b) Do they support or hinder the system of FC in general?

6. Is there any conflict in general? (Between cooperative members, with the intermediaries, or government)

7. Do you have any suggestions in order to improve the coffee value chain in FC?