



**JIMMA UNIVERSITY**  
**COLLEGE OF LAW AND GOVERNANCE**  
**DEPARTMENT OF GOVERNANCE AND DEVELOPMENT STUDIES**

**CHALLENGES AND OPPORTUNITIES OF TECHNOSERVE COFFEE INITIATIVE  
IN IMPROVING THE PRODUCTIVITY OF SMALLHOLDER COFFEE FARMERS IN  
GOMMA WOREDA, JIMMA ZONE**

**BY**

**MERY KAPITO**

**ADVISOR: GAREDEW DINKU**

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Challenges and Opportunities of Technoserve Coffee Initiative in Improving the Productivity of Smallholder Coffee Farmers in Gomma Woreda

By

Mery Kapito

Approval by Board of Examiners

\_\_\_\_\_ Sign \_\_\_\_\_ Date \_\_\_\_\_

Advisor

\_\_\_\_\_ Sign \_\_\_\_\_ Date \_\_\_\_\_

External Examiner

\_\_\_\_\_ Sign \_\_\_\_\_ Date \_\_\_\_\_

Internal Examiner

\_\_\_\_\_ Sign \_\_\_\_\_ Date \_\_\_\_\_

## Declaration

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Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Date of Submission: \_\_\_\_\_

This thesis has been submitted for examination with my approval as a university advisor.

Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

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# 1. Introduction

## 1.1. Background of the Study

Coffee is the world's favorite drink, the most important commercial crop-plant and the second most valuable traded commodity next to oil (Alemseged et al., 2014; ECEA, 2008). However, other studies of Mafusire et al. (2010) and Wegner (2012) elucidate that in terms of both its volume and value, coffee ranked as the fifth most important agricultural commodities traded in international markets after wheat, cotton, maize and rice. Apparently, coffee growing and processing has proven itself to be a lucrative industry. It is cultivated in most parts of tropics, accounting for 80% of the world coffee market.

It is apparent that there are several different kinds of coffee plants in the world; however the two main species of coffee grown for coffee production are Arabica and Robusta. Arabica coffee represents the largest share (65%) of world coffee production. It is also characterized by its good aroma, less body, taste, better quality and higher price. Countries like Brazil, Colombia, Ethiopia, Central America, Mexico, India and Eastern Africa are among the best-known Arabica coffee producers (Alemseged et al., 2014). Robusta, account 35 % of world coffee production and characterized by more resistant to diseases and beans of an inferior taste to Arabica (Hermann et al., 2011; Roldan-Perez et al., 2009).

Coffee production is carried out in more than 70 developing countries which are found mainly in Latin America, Africa and Asia. Coffee is produced and exported from producing countries largely as "green coffee" [unprocessed coffee] and roasting and branding takes place in the consuming countries (Mmari, 2012). Consumption is concentrated in the industrialized countries of North America, Europe, and Asia. To substantiate this, Petit (2007), states that the top five consumers are (in order) the USA, Brazil, Germany, Japan and France, while the Nordic countries have the world's highest coffee consumption per capita.

Even though, it is a labor intensive business and deserves the highest care in growing, harvesting, and processing; it is more profitable industry. ECEA (2008) reported that in the world, over 100 million people are engaged in producing and processing coffee. A vast majority of the world's 25 million coffee producers are smallholder farmers, who are directly or indirectly dependent on

coffee for their livelihoods. African countries account for 13 % of global coffee production. Ethiopia is the largest coffee producing country in Africa (Alemseged et al., 2014). Other major producing African countries where coffee growing is a significant livelihood for smallholders include Uganda, Cote d'Ivoire, Tanzania, Kenya, and Rwanda (Demeke, 2007 and Worako et al., 2008).

Ethiopia is known as the birth place and source of genetic diversity of the Arabica coffee plant. It is believed to have originated in the rain forests of southwestern Ethiopia (Habtamu, 2008; Stellmacher, 2010; Hermann, et al., 2011). In Ethiopia coffee is predominantly produced by small-scale farmers using traditional farming system. Hence, more than 95% of the total volume of coffee produced in Ethiopia is contributed by the smallholders. Moreover, Coffee has a significant impact on the cultural and socio-economic life of the people and plays a vital role in the country's economy. In Ethiopia over 15 million people depend directly or indirectly on coffee. Coffee is also a cornerstone in the export economy of the country; about 25% of the country's foreign exchange earnings are covered by coffee. Beside this, coffee drinking is a deep part of Ethiopian culture and a big part of the identity of the people. As a result, over half of the production ends up on the local market (ICO, 2014 and Ministry of Trade, 2012).

According to Alemseged et al. (2014), even though the country's consumption level is high at local level, Ethiopia is the fifth largest coffee producer in the world and Africa's top producer. Regarding exporting coffee to the global market Ethiopia is also ranks 11<sup>th</sup> in the international exports trade. In terms of market destination Ethiopia has exported to 58 countries which include the ten leading importing countries in European Union and United State of America. Japan and Saudi Arabia are also important destination for Ethiopia's coffee export (Alemseged and ECEA 2012; Alemseged et al., 2014).

Furthermore, Ethiopia is well known not only for being the home of Arabica coffee, but also for its very fine quality coffee acclaimed for its aroma and flavor characteristics. Among the well-known coffee varieties and the coffee types that are distinguished for such unique characteristics are Harar, Wellega, Limu, Sidama and Yirgacheffee take the priority (Anwar, 2010 and EACE, 2008). Especially, Harrar and Yirgachefe coffee is always sold at a premium price both at domestic and

international coffee markets because of its distinctive fine quality and appropriate processing approach (Schmitt et al., 2006).

Even though the country is among international top coffee producer and has selective coffee producing areas which are famous for their best quality, it is not able to be competent in the coffee market. Hence, the largest amount of produced coffee has faced quality problem. Jimma Zone is one of the major coffee producing areas which have been faced major quality problem (Techale et al., 2014). According to Anwar (2010), low quality and poor status of coffee from Jimma was not the result of inferior growing conditions or genetics rather it is only traditional or poor processing practices that have put most of its coffee at the bottom rung of the coffee trade.

Reports of Jenkins and Fries (2013) revealed that cognizant of these challenges, beginning from 2008 Technoserve Coffee Initiative has been launched to improve the productivity of smallholder coffee farmers of Jimma Zone. To get the assistant of Technoserve, smallholder coffee farmers are organized under cooperatives. According to Wegner (2012), in 2008, Technoserve is United States based non-governmental organization which received a four-year \$47 million grant from the Bill and Melinda Gates Foundation with the goal to increase the incomes of 182,000 smallholder coffee farmers in East Africa (in Ethiopia, Kenya, Rwanda, and Tanzania) by increasing the quality and quantity of coffee they produce. Among the major activities undertaken by Technoserve in the zone are, managing the wet mills, provide training and technical assistance to the farmers, monitor and evaluate their progress and create links for farmers to export their coffee directly to buyers than intermediaries (TNSPDOR, 2014). Thus, this study was designed to assess the challenges and opportunities of Technoserve coffee initiative in improving the productivity of smallholder coffee farmers of Jimma Zone mainly in Gomma Woreda.

## **1.2. Statement of the Problem**

Despite Ethiopia is the origin of coffee and gifted with suitable environment for producing large quantities of coffees in Africa and where one of the highest valued coffee in the world called “Mocha” is produced in the country, the coffee sector could not be adequately competent in the international coffee market and earn reasonable price. This is because of the fact that the coffee sector has faced quality problems ECEA (2008).

Among the areas which are criticized by supplying low quality coffee, Jimma Zone is the major one. According to Anwar (2010), the coffee quality of this area has been declining from time to time due to poor agronomic practices, harvesting methods and timing, post harvest processing techniques, grading, packing, storage conditions, and scarcity of finance and limited use of modern inputs and transporting, all contribute to deterioration of coffee quality.

Cognizant of these problems, beginning from 2008, Technoserve Coffee Initiative has been launched its activity to improve the productivity of smallholder coffee farmers in Jimma Zone (Jenkins and Fries, 2013). Yet, the challenges and opportunities that Technoserve Coffee Initiative has been faced in supporting smallholder coffee farmers of Ethiopia and Jimma Zone has not been adequately examined. Thus, this study intended to assess the challenges and opportunities of Technoserve Coffee Initiative in improving the productivity of smallholder coffee farmers.

The researcher studied challenges and opportunities both from the perspectives of Technoserve and smallholder coffee farmers in Jimma zone, Gomma Woreda. This study addresses the following basic questions:

- What are the major services provided by Technoserve coffee Initiatives to smallholder coffee farmers?
- What are the challenges that Technoserve Coffee Initiative faced to support smallholder coffee farmers?
- What are the impediments which hindered smallholder coffee farmers to get access to and use the services provided by Technoserve coffee Initiative?
- What are the opportunities that Technoserve coffee initiative has to help smallholder coffee
- What are the opportunities that Technoserve assistance created to smallholder coffee farmers?

### **1.3. Objectives of the Study**

#### **1.3.1. General Objective**

This study assessed the challenges and opportunities of Technoserve Coffee Initiative in improving the productivity of smallholder coffee farmers in Gomma Woreda.

#### **1.3.2. Specific Objectives**

- To identify the major services provided by Technoserve coffee initiatives to smallholder coffee farmers.
- To assess the challenges that Technoserve coffee initiative faces to support smallholder coffee farmers.
- To assess the impediments which hindered the smallholder coffee farmers to get access to and use the services provided by Technoserve coffee initiative.
- To examine the opportunities that Technoserve has to assist smallholder coffee farmers
- To investigate the opportunities that the assistance of Technoserve created to smallholder coffee farmers

#### **1.4. Significance of the Study**

It is apparent that coffee is the most important sector of Ethiopian economy. Thus, it is with the intention to do all possible efforts to minimize the coffee sector problem and contribute to the overall development strategy of the country that Technoserve is involved in Jimma Zone. In this regard, assessing challenges and opportunities of Technoserve in improving the productivity of smallholder coffee farmers in Gomma Woreda has significant contribution in pin-pointing areas that need attention for future improvement. However, so far no comprehensive research has been done in assessing the challenges and opportunities of Technoserve in improving the productivity of smallholder coffee farmers in the study area in particular. The empirical information generated from this study has literature value in the field.

It fills the gaps in knowledge about Technoserve Coffee Initiative since no research work has been done on the subject to date. Moreover, the finding of this study enable to generate useful information and provide feedback to a number of organizations; Technoserve coffee initiative, Jimma Zone Agricultural and Rural Development Office, smallholder coffee farmers, extension service providers and policy makers to assess their activities and redesign their mode of operations and ultimately influence the design and implementation of policies and strategies. The outcome of the study can be used as baseline or a stepping stone for other researchers who are interested to undertake further study on the issue.

## **1.5. Operational Definitions of Terms**

**Coffee-** An agricultural product and one of the most popular drinks in the world.

**Challenges-** obstacles which hinder Technoserve to do its activities and farmers from using the services of Technoserve.

**Opportunities-** chances or advantages that Technoserve and farmers have for better performance in their respective activities.

**Productivity-** the ability or capacity of farmers in producing coffee having better quality and quantity.

**Smallholder coffee farmers-** farmers owned a small coffee farm land and those who living in Gomma Woreda.

**Technoserve Coffee Initiative-** United States based Non Governmental Organization which is working to improve the income of smallholder coffee farmers by increasing the quantity and quality coffee they produced.

## **1.6 Delimitation of the Study**

This study was conducted in Gomma Woreda found in Jimma zone. It focuses on assessing challenges and opportunities of Technoserve coffee initiative in improving the productivity of smallholder coffee farmers of Gomma Woreda, Jimma Zone, Oromia Region, Ethiopia. The study was assess the challenges and opportunities from the side of Technoserve and smallholder coffee farmers. The study was focused on smallholder coffee farmers who are organized under cooperatives such as *Duromina* (140) and *Hunda-all* (128) to obtain assistance from Technoserves coffee Initiative.

## **1.7 Limitation of the Study**

This study aimed at assessing the challenges and opportunities of Technoserve in improving the productivity of coffee producer farmers in Gomma Woreda. Due to time and financial resource constraints, the study was limited in its depth and coverage to fully address the aforementioned objectives of the study.

## **1.8 Organization of the Thesis**

This thesis was organized into five chapters. The first chapter deals with the background, statement of the problem, objectives, significance of the study, operational definition of term, delimitation of the study and limitations. Chapter two, reviews of related literature. Methodological issues including description of the study area, study design, sample technique, determining Sample Size, methods of data collection, methods of data analysis and ethical consideration are presented in chapter three. The chapter four presented analysis and interpretation of the results of the study. The final chapter five covers conclusion and recommendation.

## Chapter Two

### 2. Review of Literature

#### 2.1. Coffee Production in the World, Ethiopia and Jimma Zone: An overview

Coffee is one of the world's favorite drink, the most important commercial crop-plant and the second most valuable international commodity after oil (ECEA, 2008 and Yared, 2010). However, other studies of Mafusire et al. (2010) and Wegner (2012) elucidate that in terms of both its volume and value, coffee ranked as the fifth most important agricultural commodities traded in international markets after wheat, cotton, maize and rice.

Coffee is a seasonal crop and has been treated as a homogeneous commodity. However, seasons vary from country to country; starting and finishing at different times throughout the year and so do the different types of green coffee beans. Though there are several different kinds of coffee plants, but almost all commercial coffees come from two types of coffee: Arabica and Robusta. Arabica is grown at altitudes over 1,000 meter originated in the rain forests of southwestern Ethiopia. It is distinguished by its good aroma, taste, better quality and higher price. Brazil, Colombia, Ethiopia, Central America, Mexico, India and Eastern Africa are among the best-known Arabica producing countries (Habtamu, 2008). Generally, coffee Arabica represents 65% of world coffee production. Robusta beans can grow at lower altitudes, are more resistant to diseases, are characterized by beans of an inferior taste to Arabica (usually with a woody and bitter flavor and more caffeine) and account for 35 per cent of world coffee production (Alemseged et al., 2014; Roldan-Perez et al., 2009).

Coffee production is carried out in 70 developing countries which are found mainly in Latin America, Africa and Asia (Mmari, 2012). Coffee production by its nature is more labor-intensive activity. In the world, over 100 million people are engaged in producing and processing coffee. About 25 million of the world coffee producers are smallholder farmers who directly or indirectly dependent on coffee for their livelihoods. It is estimated that over 500 billion cups are consumed every year. Coffee is exported in its raw, roasted, or soluble product forms to more than 165 countries worldwide. About 17 of these countries get 25 % of their foreign exchange earnings from coffee (ECEA, 2008 and Wegner, 2012).

On the other hand, Consumption is concentrated in the industrialized countries of North America, Europe, and Asia. To substantiate this, Petit (2007) states that the top five consumers are (in order) the USA, Brazil, Germany, Japan and France, while the Nordic countries have the world's highest coffee consumption per capita. Coffee is produced and exported from producing countries largely as "green coffee" [unprocessed coffee] and roasting and branding takes place in the consuming countries (Mmari, 2012). In crop year 2012/13, world coffee production reached 145.1 million bags, the largest on record (ICO, 2014).

African countries also supply significant amounts of coffee to world market. African countries account for 13 % of global coffee production (Wegner, 2012). ICO (2014) validated that, in Africa production in crop year 2012/13 is estimated at 16.7 million bags. There are 25 million coffee producers on the African continent. Ethiopia is the largest coffee producing country in Africa, with 95% of coffee produced on smallholder farms. Uganda, Africa's second largest producer of coffee, has more than half a million households that depend on coffee. Other major producing countries where coffee growing is an important livelihood strategy for smallholders include Cote d'Ivoire, Tanzania, Kenya, and Rwanda. While African producers largely export coffee beans, the coffee supply chain benefits many more people in producing countries (Demeke, 2007; Mafusire. et al., 2010 and Worako, et al., 2008).

Ethiopia is the home and source of genetic diversity of the Arabica coffee. It is believed to have discovered from south-western massive highlands of Ethiopia called Kaffa, more specifically from a district called Buno rain forests of southwestern Ethiopia (Alemseged and ECEA 2012; Habtamu, 2008 and Stellmacher et al., 2010). According to Taye (2011), nine different bean varieties are cultivated in the four growing areas of Ethiopia, all with distinctive tastes, sizes, shapes and colors.

In Ethiopia coffee grows under diverse environmental conditions ranging from 550 to 2600 meter above sea level, with annual rainfall from 1000-2000 mm, temperature (minimum and maximum from 8-15<sup>0</sup>C, and 24-31<sup>0</sup>C, respectively) (Anuwar, 2010). All the coffee-growing regions have fertile, favorable, loamy soils. For this reason, aroma and flavor are among the unique characteristics found in Ethiopian coffee. The variability of coffee Arabica character is very wide and dominates the countries coffee exports (Alemsegede et al., 2014). This made possible coffee

planting materials, which are disease-resistant, high-yielding and top quality. Shade, which combines with these ecological factors, is another factor that plays an important role in coffee production potential of the country (ECEA, 2008). In Ethiopia the overall area of land devoted to coffee production is estimated to be about 662,000 hectares, of which 496,000 hectares are estimated to be productive. The average annual production is amounting to about 350,000 ton and productivity of about 0.71 t/ha (Taye, 2011).

In Ethiopia mainly due to varying level of plants associated with coffee, nature of coffee tree regeneration and human intervention in coffee production system, coffee is produced in four production systems, namely forest coffee, semi-forest coffee, garden coffee and plantation coffee in Western, Southern, and Southwestern parts of the country (Anuwar, 2010 ; Fuad, 2010 and Taye, 2012). Furthermore, Ministry of Trade (2012) reported that about 95% of the coffee production from these systems can be considered as organic. Forest Coffee is self-sown and grown naturally wild under full forest coverage mainly in south-western Ethiopia, representing a tenth of total production. Semi-forest Coffee, also grown under forest canopy in the same region has limited human intervention and accounts for a third of total production. Garden Coffee refers to the bulk of Ethiopian coffee (more than 50%). Finally, Plantation Coffee is grown on large state-owned or commercial farms, representing 5% of production. This cultivation system combined with the genetic wealth results in the production of a diversity of coffees, many with the potential to qualify as specialty coffees, by millions of small scale producers. Coffee in other producer countries in contrast, is mainly plantation or estate cultivated, with fewer varieties, and thus more homogenous (USAID, 2010).

Currently, Ethiopia is a leading Arabica coffee producer in Africa, ranking the fifth largest Arabica coffee producer after Brazil, Vietnam, Indonesia and Colombia. It also ranks 11<sup>th</sup> in the global exports trade and standing second in Africa following Uganda (ICO, 2014; ECEA, 2008). In Ethiopia about one million small-scale farmers produce over 95% of coffee on very small plots of land. Farmers in major coffee-producing areas are heavily dependent on coffee income as the main source of their livelihoods (Worako, et al., 2008). Beside this, Coffee has a significant impact on the cultural and socio-economy life of the people and economic development of the country (Anuwar, 2010; ECEA, 2008 and Ministry of Trade, 2012). It has been and still contributes to the

great share in its national economy and leading source of foreign exchange earnings. It has accounted on average for about 5% of gross domestic product (GDP), 10% of total agricultural production, and 25% of total export earnings (Alemseged and ECEA 2012 & Ministry of Trade, 2012). About 15 million people in Ethiopia depend directly or indirectly on the different processes of production and marketing along the coffee value-chain. Furthermore, Ethiopia is also unique in Africa by having a strong domestic coffee consumption culture. Coffee drinking is a long and well-established traditional culture in Ethiopia and a big part of the identity of the people. As a result over half 44% of the production consumed domestically (Anuwar, 2010).

In terms of market destination Ethiopia has exported to 58 countries which include the ten leading importing countries in European Union and United State of America. Japan and Saudi Arabia are also important destination for Ethiopia's coffee export. In 2012/13 the European Union countries continued to be the primary importers of Ethiopia's coffee accounting for about 53 percent of total export volume and 51.5 of total export value (Alemseged et al., 2014). The European Union countries took the lions ( 58% of the exports), East Asia about 7%, Middle East account for 20 %, North America for about 7 %, and others 8 percent in which Sudan accounting for 5.3 % was the biggest market of the rest countries (Alemseged and ECEA 2012).

Ethiopia is well known not only for being the home of Arabica coffee, but also for it is very fine quality coffee acclaimed for its aroma and flavor characteristics. Among the well-known coffee varieties and the coffee types that are distinguished for such unique characteristics include Harar, Wellega, Limu, Sidama and Yergacheffee take the priority (Anwar, 2010; EACE, 2008). According to Anwar (2010); Ministry of Trade (2012) stated that coffee produced in these areas is always sold at a premium price both at domestic and international coffee markets because of its distinctive fine quality and appropriate processing approach.

The first type, Harar is the highest premium coffee in Ethiopia as well in the world. Harar coffee has medium size bean, with a greenish-yellowish color with medium level of acidity and a distinctive mocha flavor. The second well-known variety of Ethiopian coffee is Wollega (Nekempt), which is produced in western Ethiopia. The beans of Wollega has medium-to-bold bean with fruity taste. The third type, Limu is known for its spicy and wine flavor, and good acidity. It is most preferred and popular in Europe and the U.S. Washed Limu is one of Ethiopia's

premium coffees. The fourth type of Ethiopian coffee is Sidamo, which has greenish-grayish color and medium-sized beans. Sidamo accounts for 30 percent of all Ethiopian coffee production. Washed Sidamo, called sweet coffee is known for its balanced taste and good flavor. It has fine acidity and good body. It is always blended for gourmet or specialty coffee. The fifth Ethiopian coffee quality type known with an intense flavor known as flora is Yirgacheffee. It is one of the best highland-grown coffees. The washed coffee is paid a premium. Yirgacheffee has fine acidity and rich body (EACE, 2008).

According to report of JZARDO (2008), Jimma Zone is one of coffee growing zones in the Oromia Regional State, which has a total area of 1,093,268 hectares of land. Currently, the total area of land covered by coffee in the zone is about 105,140 hectares, which includes small-scale farmers' holdings as well as state and private owned plantations. Out of the 40–55 thousand tons of coffee annually produced in the Zone, about 28-35 thousand tons is sent to the central market, while the remaining is locally consumed. Nowadays, Jimma Zone covers a total of 21% of the export share of the country and 43% of the export share of the Oromia Region, of which Gomma Woreda takes the largest share of the region.

Coffee is the major cash crop of the Zone, which is produced in the eight woredas namely, Gomma, Manna, Gera, Limmu Kossa, Limmu Seka, Seka Chokorsa, Kersa and Dedo, which serves as a major means of cash income for the livelihood of coffee farming families (Alemseged et al., 2014; ICO, 2014). According to the report from the same source, 30-45 % of the people in Jimma Zone are directly or indirectly benefited from the coffee industry. Despite the favorable climatic conditions, variety of local coffee types for quality improvement and long history of its production in Jimma Zone, coffee quality is declining from time to time due to several problems mainly associated with poor agronomic practices like uncontrolled shade level, lack of stumping, pruning and weeding; poor harvesting practices, such as stripping and collecting dropped fruits from the ground; improper post harvest processing and handling practices such as drying on bare ground, natural impediment such as prolonged rainy weather, particularly during harvesting and drying season, improper storage and transportation (Anwar, 2010).

Furthermore, TNS (2013) reported that the name Jimma is often used as a catchall for Ethiopia's lowest quality, unwashed coffees. Globally, the "Jimma Grade 5" has been among the lowest

priced types of Arabica coffee in the international market. The low quality and poor reputation of coffee from Jimma was not the result of inferior growing conditions or genetics rather it is only poor processing practices that have put most of its coffee at the bottom rung of the coffee trade. Quite the opposite: to the Jimma is a hotbed for coffee genetic diversity and has some of Ethiopia's best farming land.

## **2.2. Agricultural Policy of Ethiopia and Its Implication in the Coffee Sector**

Coffee is the most significant agricultural produce in the Ethiopian economy in which millions of farmers grow the crop for a living, hundreds of thousands of middlemen are involved in the collection of the crop from farmers and supply to the export and domestic market, and a sizable amount of foreign exchange accounting up to 25% of the total yearly export income is derived from it (Alemseged and ECEA 2012 ; Ministry of Trade, 2012). Thus, it is a very important agricultural commodity with a significant contribution to the growth and functioning of the economy and the social stability of the country as the main source of the income to millions of small-scale farmers, workers and traders (Alemseged and ECEA, 2012).

Policies on coffee in Ethiopia looked at under three different forms of government; imperial government (until 1974), military rule with Marxist ideological orientation from 1974-1991 and a federal government system from 1991 onwards (ICO/CFC, 2000). Under the imperial government, the marketing structure for coffee was free market-based, with the industry been regulated by the National Coffee Board of Ethiopia. During this period, coffee was bought by traders at various stages of the supply chain and exported, with relatively minimal quantities of the crop been auctioned by traders at voluntary auctions in Dire Dawa and Addis Ababa. The role of National Coffee Board of Ethiopia was limited to regulation of the auction process and quality control. The free market-based system lasted until 1974, from whence it was replaced by a system with heavy State involvement (ICO/CFC, 2000).

After the revolution in 1974, the former National Coffee Board of Ethiopia was replaced by the Ministry of Coffee and Tea Development (MCTD), and coffee production and marketing became heavily controlled by the state. In as much as private traders were still given permit to engage in purchases of the crop, much purchase was handled by the state-owned Ethiopian Coffee Marketing

Corporation (ECMC), established in 1977. Activities of private traders were constrained by licensing requirements, fees and taxes. The ECMC, was reportedly responsible for handling 90% of supplies (ICO/CFC, 2000), and producers had limited flexibility in terms of the time and price for selling their produce (as prices were fixed). Under this regime, Ethiopian agricultural policy was centrally planned and controlled by a system of quotas and price fixing. All coffee, handled either by the ECMC or private traders had to go to auction where the price fixing and quota system apportioned ECMC with all the washed coffee, and the largest quota for unwashed coffee, thereby limiting competition between private and public buyers. During this period, grower prices were set by the MCTD, with the difference between the grower price and export price less marketing costs taken by the government. With the less competitive marketing environment of the country and decline in world prices (during this period) following the collapse of the International Coffee Agreement quotas, a drastic decline in production and exports from the country was experienced. In spite of the dark image portrayed about this regime, it did place much emphasis on quality of Ethiopian coffee exports than the preceding regime precisely because both washed and unwashed coffees were subject to a number of inspections and quality controls throughout the marketing chain. Control of the State over coffee production and marketing was once again minimized through partial liberalization of internal marketing in 1993. Since 1991, there has been a transformation from a centrally planned economy to a market-oriented economy. This was a result of the replacement of the military government (Dirge regime) by a reformist regime, thereby bringing all Marxist economic policies and ideas to a halt. After the fall of the socialist regime, the new government has launched a large-scale agricultural modernization campaign, known as Agricultural Development Led Industrialization (ADLI) abolishing the planning system and liberalizing agricultural production and markets. ADLI is an economy and society wide strategy in which agriculture has a central role. It envisages an economically transformed society within which agriculture will grow rapidly (Bastin and Matteucci, 2007; PIF, 2010).

The Ministry of Coffee and Tea Development (MCTD) was abolished in 1995 and replaced by the Coffee and Tea Authority (CTA) which is independent of the ministry of agriculture and operates under the Administrative Board of the Coffee and Tea Authority which is assigned by the prime minister's office. The CTA is responsible for making recommendations about coffee policy to the administrative Board of Coffee and Tea (ICO/CFC, 2000). Following beginning of the reform in

1991, the ECMC was split into two public enterprises namely the Ethiopian Coffee Purchase and Sales Enterprise (ECPSE) and the Ethiopian Coffee Export Enterprise (ECEE). The ECPSE purchases coffee internally and delivers it to the auction, and the ECEE purchases coffee from the auction and exports it. As a means of enhancing competitiveness of the subsector, licensing fees have been lowered, the quota system at the auctions has been abolished, private traders are allowed to trade in washed coffees, and wholesalers (*akrabies*) and exporters are allowed to sell coffee domestically at market prices. In addition, Cooperative Unions have been given permit to engage in direct sales and export since the year 2001. As of the year 2012, more than 120 Ethiopian coffee exporters participated in processing and export of coffee to various destinations. Of these export companies, 95% were private companies, 5 coffee growing farmers' cooperative unions and government enterprises (Ministry of Trade, 2012).

## **2.3 Opportunities and Challenges of Coffee in Ethiopia**

### **2.3.1 Opportunities in Ethiopia's Coffee Industry**

According to Alemseged et al. (2014) the opportunities for the coffee sector in Ethiopia are government's commitment and favorable policy environment, diverse agro-ecology and climatic conditions or unique distinct characters of coffee quality and genetic biodiversity, well established brand-positive image of the country as birthplace of coffee and a strong local coffee culture, volume/quality variant-high volumes of coffee in the country, and modern and effective domestic marketing system -ECX.

#### **2.3.1.1 Government's Commitment and Favorable Policy Environment**

In Ethiopia, the current government support for the production and export of market-oriented quality coffees, among others, contributed a lot to benefit from the encouraging premium coffee prices. This is largely to improve the livelihood of the rural communities at the original birthplace of coffee Arabica. The nationally projected GTP targets in the coffee sub-sector demand, empowering small scale coffee farmers and supporting private investors through dissemination of information and skills regarding improved production and processing technologies, together with adequate supply of inputs, including coffee seeds and fertilizers. It is thus high time for the

meaningful transfer of the available improved technologies and best practices in managing the already existing coffee stands, on top of supporting the emerging commercial coffee plantations in the identified and potential coffee growth corridors in the country (Taye et al., 2011).

### **2.3.1.2 Divers Agro-ecology and Climatic Conditions**

It is also related with unique distinct characters of coffee quality and genetic biodiversity. Ethiopia has a good potential of coffee production which endowed with suitable elevation, temperature, maximum biodiversity, soil fertility, environmental sustainability and ecological services (Abu and Teddy, 2014). Ethiopia has a natural abundance of indigenous coffee varieties, numbering in the thousands and about 24 formal varieties of Arabica coffee found in the country (Alemseged et al., 2014). Furthermore, Ethiopian coffee is known for its unique characteristics, aroma and flavor. It can be said that Ethiopia is endowed with a specialty advantage. More importantly, estimates of the potential to increase the volume of specialty coffee suggest that up to two-thirds of Ethiopian coffee can be qualified as specialty (USAID, 2010). Overall the growth of specialty coffees and their importance in coffee markets has led to important opportunities for producers to diversify into value-added markets with foundations resting upon specific quality characteristics (Erin Sue, 2010).

### **2.3.1.3 Well Established Brand**

Here, it is related to positive image of the country as birthplace of coffee and a strong local coffee culture. In Ethiopia, coffee grows in several places at various altitudes ranging from 550 -2750 meters above sea level. More than any other country, Ethiopia has a broad genetic diversity among its coffee varieties. It is the center of origin and source of genetic diversity of the Arabica coffee plant for the world. Nine different bean varieties are cultivated in the four growing areas of Ethiopia, all with distinctive tastes, sizes, shapes and colors. All the coffee-growing regions have fertile, favorable and loamy soils. For this reason, aroma and flavor are among the unique characteristics found in Ethiopian coffee. All these things made Ethiopian coffee as it has a high demand in the international market. These factors give Ethiopia a comparative advantage in the international specialty coffee market (Abu and Teddy, 2014). Moreover, coffee has cultural and social implication to the country. It ranked one of the largest coffee drinking countries in the world

(ICO, 2014). It is mainly consumed during social events such as family gatherings, religious celebrations, and at times of sorrow (Abu and Teddy, 2014).

#### **2.3.1.4 Volume/Quality Variant**

Ethiopia remains the largest producer of coffee in Africa and is the fifth largest coffee producer in the world next to Brazil, Vietnam, Colombia, and Indonesia, contributing with a total coffee production of 6.6 million bags of 60 kilos in the year 2013. According to Alemseged et al. (2014) the export volume registered for the year 2013 was a record volume in the history of the nation's coffee export with over 3.3 million bags of 60 kilos. This shows that there is very high coffee production and export potential in Ethiopia and earn premium prices.

#### **2.3.1.5 Modern and Effective Domestic Marketing System – ECX**

In the beginning, ECX was designed to stabilize prices and production, get better prices for farmers, and help the agriculture sector function more efficiently for commodities like wheat, maize and haricot beans (Alemseged et al., 2014). Since 2008, coffee was added as one of the crops under the umbrella of the ECX aiming to eliminate the huge number of middlemen involved in coffee distribution and to enable coffee farmers to benefit from prevailing market prices. According to a new law (Proclamation 702/2008) all supply coffee, with the exception of grower direct exports, has the option of selling through ECX or direct to a foreign buyer (Abu and Teddy, 2014). Moreover, Ethiopia Commodity Exchange (ECX), a modern trading system based on standard coffee contracts establishes standard parameters for coffee grades, transaction size, payment and delivery, and trading order matching, while, at the same time, preserving the origins and types of coffee as distinct. Unlike the existing auction trading system, quality control is undertaken in liquoring and inspection units located in the major coffee producing areas and the coffee is then weighed and inventoried in ECX operated warehouses (USAID, 2010).

#### **2.3.2 Challenges of Ethiopian Coffee Industry**

Even though Ethiopia is the origin of coffee and gifted with suitable maximum biodiversity, environmental sustainability and ecological services for producing large quantities of coffees and

being a country that produces high quality coffee with a distinct flavor, and where one of the highest valued coffees in the world called “Mocha” is produced in the country and also the leading exporter of the Arabica coffee. The coffee sector has not developed fast and the export volume has not shown a rapid growth. The coffee industry has been suffering from various constraints on production, processing and marketing (Alemseged and ECEA 2012; Ministry of Trade, 2012). ECEA (2008) reported that an estimated 50 - 60 % of production potentially at risk on the problems relates to low productivity, quality in consistency, lack of competitiveness and long supply chain from grower to exporters.

### **2.3.2.1 Low productivity**

Despite the wealth of ecological and coffee diversities, the national average coffee yield level is low by the world standard. This could be attributed to several factors including environmental degradation, insufficient credit and poor organization of farmers, the high incidence of Coffee Berry Disease (CBD), predominant use of unimproved local coffee landraces, as well as conventional husbandry and processing practices, which in turn seriously hindered the overall national coffee production and productivity of the smallholder coffee farmer in the country (Ministry of Trade, 2012).

### **2.3.2.2 Problem Related with Quality**

The supply of Ethiopian coffee to local and international market faces some basic quality problems. The major quality problems that have observed on Ethiopia coffee include problems related to: handling during harvesting and storing, processing and warehousing, inability to take care of the coffee plantation properly, inability to control the moisture content of the coffee, contamination with other products or mixing high quality coffee with low quality, or coffee of one origin with or coffee with relatively better quality (ECEA, 2008; Musebe et al., 2007 and USAID, 2010). These problems put forth a negative influence on quality of coffee and made the Ethiopian coffee unable to adequately compete and earn desirable prices in both local and international markets. According to Taye (2013) stated that the main sources of these problems among others include: inadequate capacity and awareness of coffee producers and processors on quality due to lack of technical support for coffee producers and processors; lack of sufficient standard coffee

processing machine in the major coffee producing areas due to lack of capacity and awareness, or sometimes improper installation of coffee processing machine, lack of proper place for coffee processing, inadequate inspection and supervision of responsible bodies in the assembling, processing or preparation of coffee during harvesting, lack of proper regulatory and controlling system on coffee harvesting, assembling, storing, transporting and processing activities and also lack of proper storage with adequate facilities.

### **2.3.2.3 Lack of Competitiveness**

Ethiopian coffee lacks competitiveness (low yields and productivity due to lack of advanced technology). The annual coffee production in Ethiopia currently exceeds 225, 000 tons generating about \$525 million which makes the country to be the first and 5<sup>th</sup> largest coffee producer in Africa and the world respectively. Nevertheless, Ethiopia's share in the world coffee market does not go beyond 3.75 %. This is a case in the event that over 60% of Ethiopian coffee is exported to the international market. This is due to mainly, poor access to market and long supply chain. The main problems in this respect are lack of market standardization, fairness, transparency and efficiency (ECEC, 2012).

### **2.3.2.4 Long Supply Chain from Farm to Port of Discharge**

The Ethiopian coffee commodity chain faces its own complex set of problems. In this channel, numerous participants engage in different capacities. In the first place, this traditional market comprises large number of smallholder coffee farmers. Also, they are illiterate, poorly connected to one another and with market systems. Moreover, they lack information and bargaining power which deny them the required level of benefits from the high consumer price of their produces. Participants in the long supply chain are a primary collector, local suppliers, farmers' cooperatives, local and central brokers, wholesalers, few investors, state farms, processors, retailers, consumers, exporters, various government institutions and etc. These instances have been causing different problems including but not limited to excessive transaction costs which include search costs, negotiation costs and enforcement costs. This has forced the country to get little out of the plenty potential it has in the sector which is paradoxical situation of scarcity amidst abundance (Alemseged and ECEA 2012; ECEC, 2012).

## **2.4. Why Smallholder Coffee Farmers Remain with Poverty**

Ethiopian coffee is predominantly produced by small-scale farmers using traditional farming system. Hence, more than 95% of the total volume of coffee produced in Ethiopia is contributed by the smallholders whose average holding size is less than one hectare with low average productivity ranging from 200 to 250 kg /ha (Habtamu, 2008).

Even though the greatest amount of the country's coffee had been and still produced by smallholder coffee farmers, they could not be benefited from the coffee they produced. According to Anwar (2010) authenticated, one of the major reasons behind this problem is highly connected with the deteriorating quality of coffee produced by farmers. Moreover, factors that determine coffee quality are poor agronomic practices, harvesting methods and timing, post harvest processing techniques, grading, packing, storage conditions, and scarcity of finance and limited use of modern inputs and transporting, all contribute either exaltation or deterioration of coffee.

Moreover, Bastin and Matteucci (2007) indicated that, small coffee farmers are concentrated in remote rural areas, where complementary production services, infrastructure and market information typically lack, originating inefficiencies in terms of production, logistic and transaction costs. Finally, the small land available and the mono-production cause the farmers' wealth to be maximally vulnerable to price shocks: in fact, they need to sell the cash crop at whatever price condition, in order to acquire subsistence goods.

Farmers in major coffee-producing areas are heavily dependent on coffee income as the main source of their livelihoods. In slack seasons when farmers lack cash income, coffee trees serve as collateral to obtain credit from informal moneylenders. In addition, a large proportion of coffee farmers are food deficit and depend on purchased food grains for family consumption. In years with good prices, farmers are able to purchase enough food for family consumption, pay their agricultural credit and government taxes, and meet other obligations from coffee sales. Good prices also have positive spill-over effects when it comes to input use, consumption of manufactured goods, and access to education and healthcare. Conversely, when coffee income fails to cover cash requirements, farmers sell off their assets such as oxen, land, property, etc. and/or leave their homes in search of work in other places, which in turn aggravates the status of

household food security. Despite its economic and social importance for the Ethiopian economy, the performance of the coffee sub-sector has remained unsatisfactory. No significant change in mode of production and processing has occurred for several decades (Mafusire, et al., 2010; Worako, et al., 2008).

The major challenges that coffee producers in Ethiopia faced included: poor infrastructure, old coffee trees, reliance on traditional cultural practices, scarcity of finance and limited use of modern inputs, all of which contributed to low-quality coffee production problems including pests and diseases, especially coffee wilt disease affects both yield and quality and requires ongoing research and improved management practices (Adekunle, et al., 2012).

To improve production/productivity and consistent coffee quality, Ministry of Trade (2012 ) suggested that using appropriate technologies, and improved post harvest technologies, traceability and transparency along the value chain, better international promotion of Ethiopian coffee, price risk management access to capital both for coffee purchase (working capital) and long term investment and also provision of special support to commercial coffee farmers is very essentials to enhance productivity.

## **2.5 Development of cooperatives in Ethiopia and its Role: An historical overview**

The first cooperative organizations were established in Ethiopia in the 1950s with the objective of improving the living conditions, providing social services and offering all the citizens on equal opportunity of contributing to the economic and social progress of the country. Unfortunately, as cooperatives were subjected to state control, they did not register significant performance in terms of demographic management and autonomous power. In 1960s, during imperial regime, two cooperative acts were adopted. These are the decree No.44 of the 1960, in 1960, called the “farm work cooperative and the 1966s cooperative society proclamation No241/66 (Bezabih, 2009; Tadess, 2011).

Different types of cooperatives were created during the socialist government regime, i.e., from 1974 to 1991, as a result of proclamation No. 138/1978, which greatly contributed to the creation

of different types of cooperative societies throughout the country. However, those cooperatives were managed in accordance with the socialist style. The majority of the multipurpose agricultural co-operatives, especially producers cooperative survived without being profitable as their existence were maintained to government subsidiaries. In general, as several studies indicated that the factor contributed to the failure of the socialist economy oriented cooperative development include: involuntary membership, the cooperative leadership was appointed, unfair regulated output price offer and quota basis, and service provision was not directed from individual members of the cooperatives (Tadess ,2011).

However, currently, the enhancement of agricultural cooperatives society proclamation of the 1994 and 1998 created a fertile ground for restructuring and strengthening all types of cooperative. The introduction of these proclamations has raised self-interest of cooperative members. Indeed, they improve the participation of society to operate efficiently in forming viable organization. Agricultural cooperatives played an important role in value creation by paving the way for products of small-scale producers to terminal market. Cooperative unions are dealing with export trade in coffee, oil, seeds, fruits and vegetables. Agricultural credit services are also the most important activities undertaken by cooperatives, which are geared to the well defined needs of their members (Bezabih, 2009).

Cooperative activities could play an effective role in supporting coffee farmers by supplying the price information, capital, and transportation that 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 (Kodama, 2007).

Furthermore, Cooperatives provide marketing options for the members and non-members, though the members receive higher prices for their produce. Cooperative unions are involved in export and domestic marketing activities, financial transactions and social capital development. The economic role of cooperatives is significant in terms of foreign currency earning for Ethiopia. Unions provide multiple services to their members (Bezabih, 2011).

### **2.5.1 Coffee Farmers Cooperative Unions**

In 1998, the activities of farmers' cooperatives were formally revitalized by the Cooperative Societies Proclamation No. 147/1998(7). The proclamation permitted the formation of higher level cooperatives (unions and eventually federation and a cooperative league). Using this opportunity for the first time, primary cooperatives societies were allowed to group together to increase their market power on both the input and products sales (Tadess and Yalem, 2014; Kodama, 2007).

Following the issue of Proclamation No. 147/1998, six coffee farmers cooperative unions such as, Oromiya Coffee Farmers Cooperative (OCFCU) (1999), Sidama Coffee Farmers Cooperative (SCFCU) (2001), Yirgacheffe Coffee Farmers Cooperative (YCFCU) (2002), Kafa Forest Coffee Farmers Cooperative (KFCFCU) (2004), Tepi Coffee Farmers Union and Bench Maji Forest Coffee Producers Farmers cooperative Union were established (Kodama,2007).

### **2.5.2 The Role of Oromia Coffee Farmers' Cooperative Union (OCFCU)**

The first coffee cooperative union, the Oromia coffee farmers' cooperative union (OCFCU) had been established in 1999 by 34 coffee producer primary cooperatives in Oromia Region. Following the government policy that allowed coffee producer to export directly by passing central auction market, OCFCU seized the opportunity and managed to penetrate the international coffee market and become owner of Fair trade and organic certifications and ongoing certification of Utz kapen and Forest Alliance. Its member primary cooperative grew from the initial 34 to 197 to date total beneficiary as well increases (Tadess and Yalem, 2014; Kodama, 2007).

The Union established primarily to make lives of the poor coffee growing community incrementally better, competitive and exponentially better through cooperative acts. The establishment of OCFCU was necessitated to support farmers produce in small-scale on small patches of land, with no access to agricultural equipment. These small scale farmers typically do not have access to transportation facilities to get their coffee processed or auctioned. The union was therefore established as a means to provide protection, to serve as resources and receive increased coffee revenue Moreover one of the overriding reasons to established Oromia Coffee

Farmers Cooperative Union was to save coffee farmers from mischieving of local merchants through null cheque fraud and improved farmer's income from coffee exporting (Tadesse, 2011).

It has also the aim of enhancing the self reliance of members by increasing production and productivity of farm enterprises. Also the members are benefited from the union; by credit service for coffee purchase, supply of technologies related to coffee, trainings, extension services, maintaining different certifications, dividends from profit generated and construct of different social infrastructures like school, health centre, bridges. Moreover the bargaining power of coffee farmers through union is maintained (Tadess and Yalem, 2014).

## **2.6 The Genesis and Development of Technoserve Coffee Initiatives**

The origin of Technoserve traces back to the village of Adidome, Ghana in 1968 by American businessman Ed Bullard with the mission to provide the hardworking rural poor of the developing world with the technologies they need to improve their productivity. He affirmed that people struggle because they lack knowledge, skills and tools needed to lift themselves out of poverty. Hence, the name Technoserve means “technology in the service of mankind” (Huba, 2013). Ed Bullard believed that private enterprise has the power to transform people's lives, and that a hand up is better than a handout. Built on that philosophy, Technoserve empowers people in the developing world to build businesses that break the cycle of poverty (Technoserve Partnership Grant Report [TPGR], 1987; Franson, 2012).

Since Technoserve was founded in 1968 as a nonprofit and voluntary agency, Technoserve has pursued one single goal: the improvement of social and economic well being of low income people in the developing countries through the medium of self help enterprise development. Technoserve has focused on the promotion of community based enterprises out of firmly held conviction that agriculture is the main source behind national development (TPGR, 1987).

As an organization, Technoserve's vision is to be the most effective catalyst and partner for transformative, on the ground solutions to poverty. Technoserve works with agricultural cooperatives, agro-processing companies, credit and loans associations, and technical and commercial service enterprises. It attempt to improve the economic and social well being of low

income people in development, focused on productivity improvement and increased jobs and income. Its programs are supported by contributions, and by fees earned from project management service. Currently, Technoserve is working in poor communities in more than 40 countries across Africa, Latin America and Asia, assisting thousands of businesses and transforming an estimated 10 million lives. It is working in different sector such as coffee, mango, sorghum, cocoa and cotton (Baldwin, 2010).

### **2.6.1. Global Experience of Technoserve in the Coffee Sector and Poverty Reduction**

In the developing world, millions of enterprising people remain trapped in poverty because they lack access to information, skills, or capital. But with the right support, these men and women can harness the power of private enterprise to increase their incomes and improve their lives. This is where Technoserve comes in (Franson, 2012). Since its foundation in 1968, Technoserve focuses on developing entrepreneurs, building businesses and industries, and improving the business environment. It identifies and capitalizes on good business opportunities that help to transform the lives of the rural poor by generating jobs and creating markets for their products and services (Kennedy, 2011).

According to Franson (2012), Technoserve focuses its efforts in the major three areas. First, develop capacity: Technoserve helps individuals and communities acquire skills, share knowledge, and apply the technologies needed to build successful farms and businesses. Second, strengthen market connections: Technoserve coordinates among industry players and connects emerging businesses and farms to capital, networks, and suppliers. Third, improve the business environment: Technoserve encourages self-sustaining economic activity by addressing the policies, information, and incentives that help markets function better.

Technoserve helps build competitive farms, businesses, and industries in dozens of the world's poorest countries. As an international non-profit, it promote business solutions to poverty by linking enterprising men and women of poor areas of the developing world to build thriving, sustainable businesses that provide jobs, income, opportunity and economic growth for their families, their communities and their countries and enabling them to improve their lives and secure

a better future for their families working across industries with everyone from smallholder farmers to multinational corporations, they work to impart the knowledge and skills that help people create prosperity for their communities (Huba, 2013).

Since 1986, the first five years plan partnerships grant agreement launched Technoserve planned to work toward achieving “critical mass” levels of activity and impact at rural community institutional area in select primary countries. The primary countries which had defined under the partnership grant were Ghana, Costa Rica and Panama (TPGR, 1987).

For Technoserve Africa’s division the first year was distinguished by several key development, a major step toward the achievement of the critical mass and geographic expansion, Technoserve are striving to attain over the five years period included: the introduction of innovation enterprise promotion and investment model, the initiation of extended project activity based on in depth commodity sector survey, new country investigation and professional staff in all countries. The effort to redefine and sharpen Technoserve program focus on specific commodity sector and expand its service and test new project model are broadly characteristic of the entire African dynamic. Key developments in the African division during the grant period July 1986/1987 were in Kenya and Ghana. Later on, it was expanded to other countries like Kenya, Zaire, Rwanda, Uganda, Tanzania, Somalia and Mali (TPGR, 1987).

Technoserve long term plan in Latin America division focus on improved ways to lift rural community enterprises about the struggle for survival and help them toward a dynamic, self-sustained profitable level of operation; forging strong, operational skills with local institutions which allow Technoserve to extend its reach beyond the relatively small number of enterprises it can assist directly formation and orientation of local support groups of prestigious people in each Technoserve country. Technoserve called these groups “Amigos de Technoserve”. These above key elements were central to Technoserve’s activity in Peru, a “secondary country”. Similar arrangements have been formalized in both Peru and El-Salvador (TPGR, 1987). Throughout the world Technoserve works to develop the skills and resources that entrepreneurs need to launch or expand businesses. It does so by sponsoring business plan competitions and entrepreneur training, while also working to foster a culture of entrepreneurship. Every year, Technoserve assists

thousands of small businesses, generating ripple effects in terms of employment, sales, and income generation in low-income countries (Kennedy, 2011).

Technoserve promotes business solutions to poverty by linking enterprising people to information, capital, and markets. They help entrepreneurs build thriving, sustainable businesses that provide jobs, income, and economic opportunities for poor people. Their programs are designed to develop capacity for individuals and businesses, strengthen market connections, and improve the business environment. This work creates sustainable economic growth that helps poor people improve their lives and secure a better future for their families (Franson, 2012; Huba, 2013).

### **2.6.2 Technoserve Coffee Initiative in East African**

Approximately 75% of the three million Arabica coffee farmers in East Africa live under the international poverty line of \$1.25 a day. East Africa possesses the favorable topography and ideal agro-climatic conditions to produce high-quality, washed “specialty coffee” capable of commanding premium prices in the marketplace. Yet coffee yields in East Africa are among the lowest in the world, and most coffee produced is unwashed and low quality. To overcome this problem and to increase farmers coffee income, Technoserve coffee initiative focuses its efforts on building wet mill businesses, improving farmer yields and growing the coffee sector (Wegner, 2012).

As one branch, Technoserve’s East Africa Coffee Initiative, operating in Rwanda, Kenya, Tanzania, and Ethiopia, was started in 2008 with funding of \$47 million from the Bill and Melinda Gates foundation (Huba, 2013; Sabates, 2013). The Coffee Initiative is a small part of Gates overall development programs in East Africa, but it is a significant boost to the East African coffee sector. The major objective of the coffee initiative is to improve the income of smallholder farmers by improving coffee quality and production (Mefthe and Cervone, 2012).

The project was designed to increase the incomes of 180,000 smallholder coffee farmers and enable them to participate in the specialty coffee value chain, through two interventions: a Wet-mill program and an Agronomy program. Phase I of the project, called “Doubling Coffee Incomes for 1million East African Smallholder Farmers Project”, came to an end in December 2011. The

second phase of the project, called the “Increasing Coffee Incomes for East African Smallholder Farmers Project”, is currently ongoing and targets an expansion of project activities in Ethiopia and a consolidation of results in Rwanda, Kenya and Tanzania (Sabates, 2013).

Technoserve works to help coffee producer farmers on three key issues. One, improving farmer yields, Technoserve teach farmers’ best agronomy practices such as coffee nutrition, integrated pest and disease management, rejuvenation and pruning, composting and erosion control. Trainings are led by local farmer trainers. Two, building wet mill businesses, the specialty coffee market demands quality, washed coffee processed through a wet mill. Technoserve assist farmer cooperatives to procure and install wet mills or improve operations at existing wet mills. it help them develop business plans, establish relationships with banks to secure necessary capital, implement best management practices and track expenses through better accounting practices. Three, growing the coffee sector, Technoserve support stakeholders throughout the coffee industry. It connects roasters and retailers to project farmers and encourage private sector players, like exporters, to assist coffee cooperatives with financing and marketing needs. It works with governments to create an enabling policy environment (Baldwin, 2010).

The Technoserve approach is premised on a philosophic ideal of empowering rural smallholder farmers with the skills and knowledge they need to determine their own destiny. The adoption of new technologies to improve farm income is not relying on the forceful introduction of concepts or donation of infrastructure. Instead, by working with Technoserve, smallholder farmers further develop or acquire the skills and knowledge needed to assess business opportunities. Ultimately, smallholder farmers themselves make the decision to invest in those business opportunities (Sabates, 2013).

Overall East African countries Technoserve coffee initiative advisors mainly focus their efforts on four key areas: first, agronomy and training, a crucial area where traditional farming and lack of knowledge about pruning and fertilizers typically produce yields about half that of more well-informed farmers; second, installing wet mills that produce washed coffee (nearly all specialty coffees are washed) and training the operators in the new procedures, teaching them to cup coffees so they can recognize the improvements; third, training in business management, including finances, and good governance of farmer cooperative and fourth, helping growers find market

linkages with exporters or roasters to realize the economic benefits of their accomplishments (Sabates, 2013 ; TNS, 2013)

Technoserve empowers smallholder farmers to improve their incomes and standards of living by helping them organize and operate as business groups, strengthen their agronomic and business skills, and connect with buyers or with even large companies that buy from them enable the organization to target its work for maximum impact. With companies input and feedback, Technoserve can ensure that smallholders have just the skill, resources, and connections they need to supply the right product in the right volumes at the right levels of quality, and to become productive and reliable parts of the value chain (Jenkins and Fries, 2013).

### 2.6.3. The Role of Technoserve in the Coffee Sector in Ethiopia

Since 2009, when the Coffee Initiative began its activity in Ethiopia, the project had focused in the area which has high potential of coffee production. Jimma zone has the first place where Technoserve began its activity later expanded its project area all over coffee growing areas of oromia region namely, Illubabor, Kelem Wellega, West Wellega, Borena, Guji, Bale, West and East Hararghe Zones thanks to the areas' suitable altitude, ample rainfall, optimum temperatures, appropriate planting materials and fertile soil, Furthermore, the areas where coffee Arabica highly produced. currently, the project also working in the southern part of coffee growing areas of the country such as kaffa zone, Walayita, Sidama and Gedio zone (TNSPDOR, 2014).

Table.2.1. Intervention Areas of Technoserve Ethiopia, Oromia Region

S.N	Zone	District /Woreda	Name of cooperatives
1	Jimma	Gera	Nano Chala, Yukro
		Kersa	Busa Bachane
		Dedo	Hunda Gemechu
		Seka Chokorssa	Alega Sakala, Ilike Tinjo, Waqitu Madalu
		Shebe Sombo	Nano Buna Sebeka, Lalissa Halo, Bikltu Anja, Angecha.
		Manna	Doyo

		Gomma	Duromina, Hunda Oli, Biftu Gudina, Yachi kachisse
		Limmu Kossa	Shegole, Kecho Tirtira, Jimate, Harewa Gatira, Debello, Walensu, Mito Gundib, Chime, Cherki, Chefe Iifeta Techono.
		Limmu Seka	Koma, Andobe, Bufeta Gibe, Jato Seka, Gudina Waini Kultu Cheba, Dego Gecha
		Chora Botor	Mecha Dire
		Gumay	Cocola, Jawi, Haro Sana, Hawissa, Biftu Bore
2	Illubabor	Dedessa	Sinesso, Demibi Zuria, Chello
		Gachi	Camp, Gole
		Bedelle	Sota, Hana Bosoke
		Chora	Hawayimber
		Yayo	Achebo, Wutate, Getchi, Geri, Yayo Zuria
		Hurumu	Loko Saya, Baro
		Bilo Nopha	Dizi, Kitaber, Karo Mariam
		Alle/Gore	Dika Gabe, Kundi Gagi
3	W/Wolega	Gimbi	Walo Iyesus
		Haru	Lalissa Bule Chala
		Homa	Homa Siba, Burka bondeo
		Lalo Assabi	Lalissa Lalo, Lalissa Buko
		Gulisso	Burka Gudina Galalo
		Boji Chokorssa	Figa Kobera, Boji Mukiami, Lalissa Ebicha
		Kiltu Karra	Lalisa Gudi. Lalissa Wandu
		Manasibu	Haro Nado
4	Kelleml Wollega	Dalle Wabera	Kara Mora, Kuni Bosona
		Seyo	Rohobot Mata, Walin Gudena
		Anfillo	Lalissa Hara, Gerecho, Shebel Fana, Dolla Yeli
5	W/Arsi	Nansabo	Bulga, Korema
		Abaya	Guangua, Homa

6	Borena	Galana	Jirme Wachu
Total	6 zones	33 Districts	87 Cooperatives

**Source: TNSPDOR, 2014**

Since 2009 Technoserve is highly working in Jimma Zone. Its activities in the zone are mainly, to help the cooperatives make effective use of the wet milling process to produce higher value-added coffee. In Ethiopia, the coffee initiative have supported 107 wet mills (63 new) and benefiting over 75,000 farmers (Mefthe and Cervone, 2012). Technoserve provides technical assistance in operating and managing the wet mills, as well as close collaboration in the business development, formation and governance of the cooperatives. For instance, it provides their leaders and farmers with training and technical support, and creates linkages with other players along the coffee value chain (Wegner, 2012).

One Technoserve business advisor works closely with two to three cooperatives at a time, and coordinates local specialists that can provide additional training and agronomy services. According to Sabates (2013), most of business advisors are locals who are being trained to assist farmers. It is they, rather than the expatriates, who are delivering the services day to day. By investing in the training of locals as business advisors trained cuppers and agronomic advisors Technoserve are building the capacity of the local industries, creating a sustainable industry on a foundation of one of the region's traditional crops.

To implement the project there were two groups of farmer Advisors: one focused on coffee quality advising, the other on agronomy advising. They work directly with smallholder coffee farmers to help them deepen or acquire the skills and knowledge needed to improve the quality and quantity of coffee produced. Farmer Advisors is provide day-to-day assistance to organize groups of farmers and work with them in developing business plans, installing or improving processing facilities (e.g. washing stations), and training farmers and managers in processing operations, quality control and marketing. They are also help farmer groups to develop service relationships with banks, cooperative unions, the private sector and other actors. The overall goal of their work is to help farmers increase quality and the price they receive for their coffee. Farmer Advisors are also work with farmers to promote agronomic best practices such as pruning, soil management and diseases control TNSPDOR (2014).

Furthermore, Technoserve works to strengthen farmers' agricultural and business skills and helps them organize into business groups to access inputs and finance; facilitate transactions with buyers, and improve their bargaining power. It also connects farmers with companies offering quality inputs and credit and with buyers in markets. To develop sustainable models for delivering credit, marketing and other fee-based services to farmers' cooperative, Technoserve is working with institutions, both local and international; those could provide needed credit for investment and working capital and facilitate market access for smallholder farmers that reward high-quality coffee with price premiums (Huba,2013; TNSPDOR, 2014)

### **2.6.3.1. Financial and marketing services**

Coffee value chains can work effectively for smallholders when three elements are in place: financing support (*i.e.*, working capital to cooperatives), operational support (*i.e.*, cooperative management and quality control) and marketing support (*i.e.*, dry milling and export sales). Coffee cooperatives require large sums of money early in the season to purchase supplies hire labor and offer advance payments to local farmers who deliver cherry coffee to the wet mills. The scale of the wet mill program in Ethiopia required more than \$10 million of working capital and capital investment loans annually (TNS, 2013).

Beside this, in Ethiopia, farmers' access to credit is further obstructed by several regulatory constraints, such as strict lending policies and government-mandated collateral requirements. For instance, Ethiopian banks generally require collateral valued at a minimum of 100% of the value of the loan plus interest, which is prohibitive for almost every farmer cooperative. And farmers cannot use their land as collateral. Additionally, the Coffee Service Provider model not work in Ethiopia because of laws prohibiting foreign capital in the banking sector. Private Banks are currently not permitted to access foreign currency credit lines (TNS, 2013). It was not possible for the project itself to provide financial backing for the large volumes of credit required by cooperatives in Ethiopia. Amid these constraints, the Coffee Initiative led an initiative in 2010 to unlock substantial amounts of capital for clients by helping to establish a new relationship between the International Finance Corporation (IFC) and Nib International Bank, one of Ethiopia's largest private commercial Banks (Wegner, 2012). The program is designed such that cooperatives should be able to repay within one year entirely through the sales of their coffee. IFC agreed to cover up

to 75% of any credit losses that Nib incurs. This marked the first time that IFC provided a guarantee for the benefit of smallholder farmers in East Africa; as opposed to the larger entities they typically finance (Wegner, 2012).

In 2011, the Coffee Initiative brokered a similar risk-sharing agreement between the Cooperative Bank of Oromia and Netherlands-based Rabo Bank, which provided \$2 million in working capital loans to client cooperatives. These risk-sharing facilities successfully demonstrate innovative approaches to structuring loan products to mitigate lender risk. Over time, the Coffee Initiative seeks to continue to improve the commercial banking industry's understanding of the risks and opportunities present in the specialty coffee sector, and work with multilateral and domestic lending providers to help smallholder coffee farmers gain much-needed access to credit (TNS, 2013).

In addition to adjusting loan to farmers' cooperatives, Technoserve support smallholder coffee farmers on searching better market for their coffee. It also help farmers on the promoting their coffee in different website, contact, invite and negotiate with buyers on the price farmers are willing to sell their coffee (Huba, 2013). To export farmers' coffee, Technoserve linked farmers' cooperatives with Oromia Coffee Farmers Cooperative Union (OCFCU). According to TNSPDOR (2014) most of farmers cooperative which are under the assistance of Technoserve, supply their coffee to international market through Oromia coffee farmers cooperative union.

## **Chapter Three**

### **3. Description of the Study Area and Methodology**

#### **3.1. Description of the Study Area**

This study was conducted in Gomma Woreda which is found in Jimma Zone, Oromia Region and southwestern part of Ethiopia. It is located at 397 km Southwest of Addis Ababa and about 50 km west of Jimma town. The annual rainfall of the area is between 800-2000 mm, while the mean minimum and maximum annual temperatures of the woreda vary between 7°C-12°C and 25°C-30°C, respectively. Altitudinal range of the woreda is between 1387-2870 meter above sea level. Agro-ecologically, this woreda is divided into 8% highland (Dega), 88%, intermediate high land (Weyina Dega) and 4% low land (Kolla) (JZARDO, 2008).

#### **3.1.2. Socioeconomic Characteristics of the Study Area**

Gomma Woreda is organized into 36 rural and 4 town kebeles. According to Central Statistical Agency Census (2007), the total number of Gomma Woreda population was estimated at 213,023. It is the second most densely populated district in the zone at 193km<sup>2</sup>. 62% of the district area is considered arable (49% under cultivation), with 10% for grazing and 5% for forest. Maize, teff, sorghum, enset, horse bean, wheat, barley and field pea are the predominant crops cultivated. Chat is also cultivated. Coffee is the major cash crop and one of the villages' (i.e. choche) is considered as one of the original coffee producing area in the country. The general farming activities are traditional coffee cultivation, with various annual crops (maize, sorghum, tef, wheat, barley, some pulses and oil crops), and livestock grazing on grazing land and fallow lands. Multi-purpose trees such as Albizia, Cordia, Croton and Podocarpus are found near homesteads and in coffee farmlands (to provide shade) (Petty, et al., 2004).

## **3.2 Research Methodology**

### **3.2.1 Study Design**

This study is descriptive in its nature since it attempts to assess the challenges and opportunities of Technoserve coffee initiative in improving the productivity of coffee farmers in Gomma Woreda. The study employs mixed methods approach for the reason that it is useful to get detail and diverse information on the same issue. Use of mixed methods also helps to triangulate the reliability of the information which was gathered. It is usual for researchers to employ mixed method designs to investigate different aspects of the same phenomenon (Sarantakos, 1998). The importance of using qualitative method is to get more elaborated divers and detailed information on the same issue from participates. In turn, researchers have the opportunity to respond immediately to what participants say by tailoring subsequent questions to information the participant has provided.

In addition, using quantitative methods is helps the researcher to ask all participants identical questions in the same order. Apparently, the advantage of using this method is that it allows for meaningful comparison of responses across participants and study sites. So as to collect primary qualitative and quantitative data from the study sample size, closed and open ended questionnaire was employed. Semi-structured interview and observation were also used to gather the required data. Both the quantitative and qualitative data collected and analyzed simultaneously.

### **3.2.2 Sampling Techniques**

Since the study assessed the challenges and opportunities from the perspectives of both Technoserve and smallholder coffee farmers, sample size was determined from both smallholder coffee farmers of Gomma Woreda and Technoserve workers of Jimma office.

The study area, Gomma Woreda was purposively selected out of 18 woredas found in Jimma Zone. Since the study area is the earliest woredas in which Technoserve began its intervention. Beside, the Woreda takes the largest share of coffee production found in the zone and Oromia region. Four farmers' cooperatives which are under the assistance of Technoserve coffee initiative are found in the Gomma Woreda. They are *Duromina, Yachi Kachisa , Hunda-oll and Biftu*

*Gudina* Cooperatives. For the reason that all of the cooperative are obtaining similar assistance from Technoserve, has relatively proximate number of members (i.e. *Duromina* (140), *Yachi Kachisa* (128), *Hunda-oll* (128) and *Biftu Gudina* (126) ) and for time and cost effectiveness to be effective, two farmers' cooperatives such as *Duromina* and *Hunda-oll* Cooperatives were selected by using Simple Random Sampling technique. From cooperative member households in each of the two targets cooperatives sample size were determined. Accordingly, *Duromina* coffee Cooperative has 140 farmers. The second target cooperative is *Hunda-oll* cooperative. It has 128 cooperative members. Thus, the total population of the study the two sample cooperatives was 268 household heads. Among the total population of the study (268), 81 household heads were selected from two cooperative using Simple Random Probability (proportionate to size) Sampling techniques.

### **3.2.2.1. Determining Sample Size**

Since there is no information required by the statistical procedures (i.e. the degree of variations in the population), the sample size is determined based on the conventional approach (rule of thumb). This method gives sample size close to those of the statistical method. As discussed by Neuman (2007) the conventional method are not arbitrary but based on past experiences with sample that have met the statistical method.

According to the rule of the thumb for small populations (under 1,000) a researcher needs a large sampling ratio (about 30%). For example, a samples size of about 300 is required for a high degree of accuracy. A moderately large population (10,000) requires a smaller sampling ratio (about 10%) is needed to be equally accurate sample (i.e., one with a high probability of yielding the same results as the entire population). For large populations (over 150,000), smaller sampling ratios (1%) are possible, and samples of about 1,500 can be very accurate (Neuman, 2007).

Based on the above rationality, 30% (81) of the household heads was selected from the total of 268 member households in the two target cooperatives. To keep the sizes of the samples from each cooperative proportional to the size of member households in each cooperative, proportional allocation method was used.

According to Kothari (2009) in the proportional allocation method, the number of element selected from each cooperative was determined by  $(n \cdot P_i)$ , where  $P_i$ -represents the proportion of population included in stratum  $i$ ,  $n$ -represents the total sample size.

By adopting the proportional allocation method, the sample size to be selected from the two target cooperatives is summarized in the below table.

Table 3.1 the population size and proportional sample size of each cooperative

No	Name of cooperative	Members Household	Proportional allocation methods
1	Duromina	140	$81(140/268)=42$
2	Hunda-oll	128	$81(128/268)=39$
	<i>Total</i>	268	81

In addition to farmer household, other study populations were Technoserve coffee initiative workers of Jimma office. Since the numbers of those workers are very small in number (only 20) the researcher decided to include all of them in the study. Generally, data was collected from 81smallholder coffee farmers and 20 Technoserve coffee initiative workers using questionnaire. Therefore, the total sample size of the study was 101 informants.

Furthermore, the researcher involved key informant interview, personal observation and document analysis as method of data collection to triangulate data from each method including survey questionnaire.

### 3.2.3 Methods of Data Collection

The required data is collected from both primary and secondary sources. Both quantitative and qualitative data collection methods (i.e. questionnaire, semi-structured interview and personal observation) are employed based on the statement of the problem and the objectives of the study. Primary data collected from Technoserve workers, farmers of the two cooperatives and from different key informants which were directly or indirectly related with the study. Secondary data also collected from various documents which were found in various offices.

### **3.2.3.1 Primary Data Collection Methods**

#### **3.2.3.1.1 Questionnaire**

Different questionnaires was developed by a researcher and employed for both categories of respondents to collect data from all Technoserve workers and sample farmers about services provided by Technoserve coffee initiative to smallholder coffee farmers, the challenges that both Technoserve and smallholder coffee farmers are faced to provide and use the service, about the opportunities that Technoserve has to provided its assistance and also the opportunities created to smallholder coffee farmers as a result of Technoserve assistance. This method used to get diverse and detailed information from respondents by giving a chance to complete the questionnaires at their own convenience, answer questions out of order and also to be effective in line with time and cost.

Since farmers in the study area speak *Afan Oromo*, the questionnaires and interview questions, which were originally prepared in English language, were translated to *Afan Oromo* by bilingual professionals (teachers) so as to avoid language constraint. After that, because of most of farmers household had difficulty in reading, understanding the questions that appeared in the questionnaire and filling the question, the questionnaire was administered in a face-to-face manner with the help of two individuals who were trained on the procedure of the questionnaire.

#### **3.2.3.1.2. Key Informant Interview**

In addition to data collected from both Technoserve workers and sample farmers respondents, key informant interview was conducted with those who had considerable knowledge about each theme of the study. Such key informants were selected purposively from Technoserve field workers, farmers' cooperative committee representative, workers of Gomma Woreda Agricultural and Rural Development office and cooperative promotion agency. Therefore, out of 4 Technoserve field workers in the study area only 2 were selected based on their experience of working by providing advisory service to farmers. The farmers' cooperative committees were selected from both *Duromina* and *Hunda-oll* sampled study cooperatives. Out of 12 committee representatives of the two cooperatives only 4 were selected based on their direct responsibility, detail knowledge and long term membership. 3 key informants from GWARD office and GWFCPA office (i.e.1 from

WARD and 2 from GWFCPA) were selected based on their direct responsibility and detail knowledge about the activity of Technoserve in the Woreda. Generally, data was collected from 9 key informants. In order to collect this primary data, semi-structured interview was used because it allows the researcher to go beyond systematically prepared questions. Moreover, the way respondents act and answer may lead the researcher to ask in different ways, so these types of interview were more appropriate. By using semi-structured interview, data was gathered about various services provided by Technoserve coffee initiative to farmers smallholder coffee, factors affecting the performances of both Technoserve and smallholder coffee initiatives, and the opportunities of Technoserve to assist smallholder coffee farmers and the better circumstance created to farmers because of the assistance of Technoserve. The data obtained through key informant interviewing was recorded using audio recording tape with the use of field notes.

### **3.2.3.1.3 Direct Observation (overt Participation)**

Direct personal observations were also employed by the researcher in order to fully understand about services provided by Technoserve to farmers smallholder coffee farmers. Particularly, direct personal observation encompassed visit of training provided by Technoserve field workers to cooperative members, agronomy and wet mill services provided by Technoserve. To facilitate the observation process, a checklist (i.e. a list of specific questions or a list of topics to be asked or discussed) was prepared before the field work. Thus the researcher's opinion based on visit of the study area was included in the analysis.

### **3.2.3.2 Collection of Secondary Data**

Secondary data were collected from various sources including from documents such as official reports, memos, archival documents and etc. those data were collected from various offices such as Technoserve Coffee Initiative Office at Jimma Town, Jimma Zone Agricultural and Development Office, Agricultural and Rural Development Office of the Gomma woreda, Cooperative promotion agency of Gomma Woreda and from cooperatives of selected sample *kebeles*.

### **3.2.4 Method of Data Analysis**

The researcher used both quantitative and qualitative methods of data analysis. To analyze quantitative data obtained from close ended questions, simple descriptive statistics (i.e. frequency and percentage) were used. For that, the researcher used Statistical Package for Social Science (SPSS) version 20. Simple Descriptive statistics (i.e. frequency and percentage) were used. On the other hand, the qualitative data obtained in the open ended questions, from key informant interviews and through personal observation were analyzed through narrative description.

### **3.2.5 Ethical Consideration**

Approval letter to conduct the study was obtained from Jimma University, department of Governance and Development Studies. Then, the researcher gave the letter to the Manager of Technoserve Coffee Initiatives office in Jimma town. The process of conducting research was begun after the permission was obtained from the manager. Respondents were asked whether they are willing to participate in the study after being fully briefed about the objectives of the study. Those who consented were required completing and signing an approved written consent before completing the questionnaires and conducting the interviews. In addition, the researcher also assured that any one of participant's identity would not be disclosed in the report of the study -it would be kept anonymous and confidential. They were also informed that the study causes no harm or danger on them.

## Chapter Four

### 4. Result and Discussion

#### 4.1. Demographic Characteristics of Respondents

In this section, the demographic characteristic of the participant is presented. The demographic characteristics analysis included the sex, age, marital status and family size, level of education, work experience and working position. Table 4.1 below summarizes demographic characteristics of Technoserve workers. Similarly, table 4.2 also summarized demographic characteristics of farmers selected for the study. The demographic characteristic of farmers' respondents analyzed sex, age, marital status and family size and educational status.

Table.4.1. Demographic Characteristics of Technoserve Workers

Respondent's Profile		Frequency	Percentage
Sex	Male	17	85
	Female	3	15
Age	18-35	10	50
	36-50	7	35
	>50	3	15
Level of education	Diploma	1	5
	Degree	13	65
	Masters degree	6	30
Work experience (years)	1-5	13	65
	>5	7	35
Workers position in Technoserve	Project Manager	1	5
	Program Manager	1	5
	Senior business advisor	5	25
	Supportive staff	13	65

**Data Source: Field Survey, 2014**

The demographic parameters were collected to know their pattern of distribution in the study area. As shown in table 4.1, out of a total of 20 Technoserve workers, the majority of workers were male 85 % while the remaining 15 % were female. The survey result also showed that the majority 50% of Technoserve workers were in the age group of between 18-35, about 35% of workers were in the age group of between 36 –50 and about 15% workers were in the age of above 50 years old. In addition, the study also indicated that majority of workers were 65% first degree holders while the remaining 30% had masters degree and there was only 5% diploma. Figures in table 4.1, show that majority of Technoserve worker were in productive age, educated, good composition and experienced. Thus, it enables Technoserve to be effective in supporting smallholder coffee farmers.

Table. 4.2. Demographic Characteristics of Farmers

Respondent's Profile		Frequency	Percentage
Sex	Male	76	93.8
	Female	5	6.2
Age	18-35	11	13.6
	36-50	44	54.3
	>50	26	32.1
Marital status	Single	12	14.8
	Married	57	70.4
	Divorced	7	8.6
	Widowed	5	6.2
Family size	2-5 (small)	35	43.2
	>6 (large)	46	56.8
Educational status	Illiterate	51	63
	Basic Education	21	25.9
	Primary Education	9	11.1

**Data Source: Field Survey, 2014**

As indicated in table 4.2, from a total of 81 respondents, the majority 93.8% of farmers household were male whereas the remaining 6.2% were female. This result confirmed the prior expectation that male headed households have more access to organize and use the assistance of Technoserve. With regard to age structure, about 13.6% of the respondents were found in the age category of 18-

35 years; about 54.3% of respondents were in the age category of greater than 36 and less than 50 years, while the remaining 32.1% were above 51 years. Here, the majority of the respondents 54.3% were found in the age category between 35 and 50 years. This age is very active for work.

Concerning marital status of respondents, single respondents account for 14.8%, married respondents account for 70.4%, and divorced respondents account for 8.6% and widowed respondent also account 6.2%. The result of study shows that the highest percent of the respondents were married followed by single and divorced. The very small proportion of the respondents are reported to be number widowed. In terms of family size, the majority of sample farmers 56.6% have more than six family members, while 43.4% have less than five family members. In terms of educational status, the above table revealed that the majority (63%) of household were illiterates and about 25.9% attended basic education and also about 21.1% of farmers were up to primary school. Accordingly, the data result shows that the greater part of sample households were uneducated.

Table.4.3. Joining Year and Position of Households in Their Cooperatives

N o.	Joining year	Cooperative				Total
		Duromina		Hunda oll		
		Frequency	%	Frequency	%	
1	2010	36	90	-	-	36
2	2011	4	10	-	-	4
3	2012	-	-	32	78	32
4	2013	-	-	9	22	9
	Total	40	100	41	100	81
	Position of Households in their Cooperatives	Cooperative				Total
		Duromina		Hunda-oll		
		Frequency	%	Frequency	%	
1	Cooperative mē Members	36	44.4	35	43.2	71
2	Cooperative co: Committee	6	7.4	4	4.9	10
	Total	42	100	39	100	81

**Data source: Field survey, 2014**

In the study area, cooperatives have their own criteria to register smallholder coffee farmers as their members. The data obtained through open ended questionnaire and key informants interview showed that the criterion used by cooperatives to register smallholder farmers as their member consist of having at least half and above hectares of coffee, interest and to be volunteer to pay five hundred (500) birr to the cooperative. As shown in table 4.3, about 90% and 10% of farmers joined *Duromina* in 2010 and 2011 respectively. Whereas, 78% and 22% of farmers become member of *Hunda-oll* cooperative in 2012 and 2013 respectively. From 42 sample households of *Duromina* cooperative, 44.4% were cooperative members and 7.4% were worked as a committee in the cooperative. With regard to *Hunda-oll* cooperative, from 39 sample households, 43.2% were cooperative members and about 4.9% committee in their cooperative position respectively.

## **4.2. The Services Provided by Technoserve**

Technoserve has rendered different services to coffee producer farmers in the study area. Thus, table 4.4 below shows the responses of Technoserve workers about the service provided by Technoserve to coffee producer farmers.

Table.4.4. Response of Technoserve Workers on the Service Provided by Technoserve (N=20)

No	Items	Yes		No	
		Frequency	%	Frequency	%
1	Technoserve support farmers to improve their productivity	20	100	-	-
2	Technoserve help farmers in improving their coffee production capacity	19	95	1	5
3	Technoserve assist farmers in improving their coffee quality	20	100	-	-
4	Technoserve support farmers while they supply their coffee to market	19	95	1	5

**Data Source: Field Survey, 2014**

As indicated on table 4.4, 100% of Technoserve workers replied that Technoserve has been assisting smallholder coffee farmers' mainly to improve their productivity in the study area.

Regarding the support of Technoserve, the majority 95% of workers indicated that, farmers' capacity building is one of the major assistance of Technoserve to increase the amount of coffee produced by farmers while 5% of respondent replied that Technoserve did not work to build the capacity of coffee farmers.

Moreover, Technoserve workers revealed that the support of Technoserve on farmers capacity building mainly intended to enhance farmers coffee yield, coffee quality and their profitability through different technical assistance such as arranging continuous training to farmers on how to produce large amount of qualified coffee, how to manage their coffee tree, how to harvest and how to process, budget allocation in farming level, decision making on coffee income and agricultural practice like composting and weeding. Corresponding to this, Huba (2013) and Jenkins, et al (2013) substantiate that Technoserve technical assistance mainly focused up on building the capacity of coffee farmers by strengthening their agronomic and business skills, share knowledge and apply the technologies needed to build successful farms and businesses.

As shown on table 4.4, 100% of Technoserve workers responded that Technoserve is working to improve farmers' skill to produce quality coffee in the study area. Moreover the finding elucidated that Technoserve has been providing training on coffee processing, sustainability, how to harvest, select and collect red cherry; made continuous follow up through its professional business advisors and its coffee quality team cupped and gives feed back to the processed coffee of farmers.

Similarly, as indicated on table 4.4, the majority 95% of the respondents revealed that Technoserve help farmers while they supply their coffee to market and only 5% respondent replied otherwise. Furthermore, they revealed that the assistance of Tehnoserve in marketing farmers coffee include promoting farmers' coffee at international coffee conference (work shop), meeting, on different website and embassies, and connect them with international buyers and invite international buyers to visit how farmers produce and process their coffee.

In general, from table 4.4, one can infer that majority of Technoserve workers revealed that Technoserve provide different kinds of technical assistance mainly to improve farmers production and productivity through farmers capacity building, working to improve farmers coffee quality and supporting farmers while they supply their coffee to market.

### 4.2.1. Responses of Smallholder Farmers on the Service Provided by Technoseve

Technoserve provide different service to coffee producer farmers in the study area. Hence, table 4.5 below presented the responses of coffee farmers on the service given by Technoserve to the coffee producer farmers.

Table.4.5. Responses of Smallholder Coffee Farmers on the Service Provided by Technoseve (N=81)

No	Items	1		2		3		4		5	
		Highly disagree		Disagree		undecided		Agree		Highly agree	
		Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%
1	Organize and register farmers under cooperatives	77	95.1	4	4.9	-	-	-	-	-	-
2	Technical assistance in-operating and managing wet mill	-	-	3	3.7	-	-	51	63	27	33.3
3	Strengthen farmers-agricultural and business skill	-	-	5	6.2	-	-	44	54.3	32	39.5
4	Coordinates local specialists-that can provide additional training and agronomy service	-	-	7	8.6	-	-	47	58	27	33.4
5	Provides cooperative leaders and farmers with training and technical support	1	1.2	10	12.3	-	-	25	30.9	45	55.6
6	Provide advisory service to the cooperatives	2	2.5	4	4.9	-	-	36	44.5	39	48.1
7	Connects farmers with-companies offering quality inputs and credit	-	-	-	-	-	-	53	65.4	28	34.6
8	Create links for farmers to export their coffee directly to buyers than intermediaries	-	-	-	-	-	-	58	71.6	23	28.4

Source: field survey, 2014

As indicated on table 4.5, 96% of respondents replied that Technoserve provide technical assistance in operating and managing the wet mills while only 4% of respondents indicated that Technoserve did not provide technical assistance to the coffee producer farmers. About 93.8% of respondents indicated that Technoserve work on strengthening farmers agricultural and business skills. On the other hand, 6.2% of the respondents replied that Technoserve doesn't support them on this issue. 91.4% of respondents indicated that Technoserve provide training and agronomy service to them by coordinating local specialist while 8.6% of respondents replied the opposite. Likewise, 86.5% of respondents indicated that Technoserve provides cooperative leaders and farmers with training and technical support while 13.5% of respondent replied that Technoserve did not provide cooperative leaders and farmers with training and technical support. 92.6% of respondents indicated that Technoserve provide advisory service to the cooperative while only 7.4% of respondents replied that Technoserve did not provide to this service to them. Moreover, all of the respondents 100% replied that Technoserve connect farmers with companies offering quality inputs and credit and also create links for farmers to export their coffee directly to international market.

In general, the finding from the respondents signified that technical assistance in operating and managing the wet mills, strengthen farmers' agricultural and business skills, coordinates local specialists that can provide additional training, provides cooperative leaders and farmers with training and technical support, provide advisory service to the cooperatives, connects farmers with companies offering credit and create links for farmers to export their coffee directly to buyers than intermediaries and improve farmers bargaining power were the services highly provide by Technoserve. Therefore, the result of the field survey showed that Technoserve is working towards improving the productivity of smallholder coffee farmers in the study area by providing the above services. However, all of the respondents 100% revealed that Technoserve coffee initiative do not provide the service of organizing and registering farmers under cooperative. According to the interview conducted with key informants of Technoserve field workers and Gomma Woreda Cooperative Promotion Agency, Technoserve is not involved in the organization and registration

of farmers under cooperatives the role usually carried by Gomma Woreda Cooperative Promotion Agency.

Table.4.6.The Responses of smallholder coffee farmers about Technoserve Assistance on the improving their Capacity in Coffee Production, Coffee Quality, loan arrangement and Marketing issue (N=80)

No	Items	Yes		No	
		Frequency	%	Frequency	%
1	Technoserve assistance in coffee production	70	86.4	11	13.6
2	Technoserve assistant in coffee quality	76	93.8	5	6.2
3	Technoserve assistant in coffee supply for market	74	91.4	7	8.6
4	Technoserve provide financial and material support	--	--	81	100
5	Tecnoserve arranging loan	76	93.8	5	6.2
6	Technoserve provide training	72	88.9	9	11.1
7	Does the service improved productivity	60	74.1	21	25.9

**Data Source: Field Survey, 2014**

As indicated in the table.4.6, the majority 86.4% of household respondents revealed that Technoserve is assisting them to enhance their coffee production whereas 13.6% of the respondents replied that Technoserve is not supporting them to enhance their coffee production. In terms of Technoserve assistance towards improving coffee quality, 93.8% of the respondents indicated that Technoserve is working to improve farmers coffee quality while 6.2% of the respondents replied otherwise. Those respondents who agreed on Techonserve’s role in improving their coffee quality stated that Technoserve is providing technical assistance in operating and managing the wet mills so as to improve the quality of coffee in the study area.

Similarly, the information obtained through personal observation and interview with farmers cooperative committee members confirmed that as a result of Technoserve effort to maintain coffee quality in the study area, smallholder farmers cooperatives coffee was awarded at international level and the farmers had earned high profit. In line with this, report of Technoserve

(TNS, 2013) stated that as a result of Technoserve assistance, *Duromina* Cooperative coffee was voted as the best coffee in Africa by International Panel of Professional Judges with the score of 91.92 out of 100 on 18 February, 2012. Moreover, in the competition of East Africa coffee quality and test held in Addis Ababa in 2012, *Duromina* Cooperative coffee was selected as the best coffee with the score of 88.38 out of 100 and USAID quality assurance certified the cooperative as number one ambassador of East African coffee quality.

Regarding to the assistance of Technoserve for farmers to supply their coffee to market, 91.4% of farmers responded that Technoserve is working to connect farmers' cooperatives with buyers while 8.6% replied the reverse. On the open ended question, respondents elucidated that Technoserve has been highly endeavored in promoting cooperatives coffee and searching international buyers who could pay better price for them. Pertinent to this, key informants interview with farmers cooperative committee stated that Technoserve created conducive environment for farmers cooperative to sell their coffee with fair payment without the interference of intermediaries. They also explained that Technoserve promotes farmers coffee through its website. As shown in the table 4.6, all of the respondents (100%) replied that they received no financial and material support from Technoserve. In the open ended question, respondents elucidated that Technoserve does not provide any financial and material support for farmers' cooperatives rather it adjust loans for the cooperatives from different financial institution. Concerning the role of Technoserve in arranging loan for cooperatives, 93.8% of the respondents revealed that Technoserve has arranged loan for their cooperative and the remaining 6.2% expressed they received no such assistance. Moreover, the respondents affirmed that their cooperative used loan to buy machine and materials, construct coffee store house and coffee drying bed and to buy coffee from their members and other farmers. Furthermore, respondents made it clear that at the commencement of its work in the study area, Technoserve arranged loan for farmers cooperative from Nib International Bank which later shifted to Cooperative Bank of Oromia.

As indicated on table 4.6, 88.9 % of sample respondents revealed that Technoserve provide training to them, while the remaining 11.1 % replied otherwise. Here, majority of the respondents stated that continuous training given by Technoserve enables them to improve their capacity,

produce quality coffee, made them competent in the coffee market and get better profit; Technoserve provides their leaders and farmers with training and technical support. On the overall improvement of farmers' productivity through Technoserve's service, 74.1% of the sample respondents indicated that Technoserve service improved their productivity and the remaining 25.9% replied the reverse. Furthermore, the respondents substantiate that the technical assistance offered by professional business advisor of Technoserve has been improving their capacity, enhance their coffee yield and also increased coffee quality. Similar to this, Wegner (2012) and Sabates (2013) substantiated that Technoserve business advisor works closely with at least two or three cooperatives at a time, and coordinates local specialists that can provide additional training and agronomy services.

As the overall result of table 4.6 shows that except financial and material support, Technoserve provide assistance in coffee production, assist in maintaining coffee quality, assist in coffee supply for market, arrange loan and provide training for smallholder coffee farmers to improve their productivity in the study area. Regarding financial and material support, the data collected from Technoserve worker sample respondent and the interview conducted with key informant of Technoserve field workers revealed that the main goal of Technoserve is to strengthen farmers' capacity through different kinds of technical assistance. Pertinent to this, Sabates (2013) stated that its approach of Technoserve is premised on a philosophic ideal of empowering rural smallholder farmers with the skills and knowledge they need to determine their own destiny.

Generally, as discussed above the data collected from both smallholder coffee farmers and Technoserve workers with regard to service provided by Technoserve portrayed similar result. Hence, respondents revealed that Technoserve provide continuous training of capacity building, adjusting loan, get rid of intermediaries, improve farmers bargaining power and works to improve the coffee quality of smallholder farmers in the study area. However, the sample farmers replied that Technoserve is not providing financial and material support to them and it is not working to organize and register them legally under cooperatives.

### **4.3. Challenges Technoserve Faced in Supporting Smallholder Coffee Farmers**

Regarding the difficulties that Technoserve coffee initiative faced in carry out its activity, majority (95%) of the respondents revealed that Technoserve has faced a number of impediments on its activity in the study area and only 5% stated that Technoserve has not faced any challenges. Moreover, they mentioned different challenges that sapped Technoserve to provide its service for smallholder coffee farmers.

First, Farmers hesitate the project due to the past bad experience with that challenged the activities of Technoserve. They portrayed that there had been farmers' cooperative starting from the era of the Derg regime which were not profitable and acquired less benefit to members as a result of bad governance and corrupt leadership of cooperatives. This makes smallholder coffee farmers to have less trust on cooperatives and Technoserve. Second, weak stakeholder participation at all level is another major challenge that Technoserve faced to carry out its activity effectively in the study area. Respondents stated that to achieve its mission Technoserve's approach requires close collaboration with a wide range of stakeholder groups. However, the support and participation of concerned bodies from zonal and woreda level is very low. Third, weak governance of farmer cooperatives is also another challenge of Technoserve to achieve its goal of improving the productivity of smallholder coffee farmers. Some cooperative leaders are corrupt, lacked transparency and accountability, and lacked good approach with cooperative members. The data obtained from interview conducted with key informant of Gomma Woreda Cooperative Promotion Agency attested that since some cooperative leaders are lacked transparency and reluctant to inspire other farmers to be member of the cooperative, the number of cooperative members could not be sufficiently increased as expected. Fourth, the study areas where Technoserve operate are underdeveloped in terms of various infrastructures, including poor road networks, insufficient farm supply and absence of communication facilities. Likewise, basic infrastructures such as electricity, telephone, banks and credit sources are not adequately developed. Moreover, low access of loan and shortage of working capital to farmers cooperative from bank due to the volatile policy of national bank of Ethiopia and the absence of better alternative coffee farmers' cooperative union are elucidated by respondents as adversely affecting the activities of Technoserve in the study area.

#### 4.4. Impediments of Smallholder Coffee Farmers to Use the Support of Technoserve

As explained in the forgoing discussion, Technoserve provided different services to coffee producer farmers to improve their productivity. However, smallholder coffee farmers has faced challenges to use the support of Technoserve.

Table.4.7. Assessing the Challenges of Smallholder Farmers to Use Support of Technoserve (N=81)

No	Items	1		2		3		4		5	
		Highly disagree		Disagree		undecided		Agree		Highly agree	
		Frequency	%	Frequency	%	frequency	%	Frequency	%	Frequency	%
1	Low trust on Technoserve	-	-	22	27.1	-	-	17	21	42	51.9
2	Low trust on the cooperative	-	-	20	24.7	-	-	25	30.9	36	44.4
3	Low access and Rigorous-bureaucracy to get loan	-	-	11	13.6	-	-	32	39.5	38	46.9
4	High interest rate of loan	3	3.7	52	64.2	-	-	26	32.1	-	-
5	Lack of accountability and transparency among cooperative leaders	10	12.4	12	14.8	-	-	39	48.1	20	24.7
6	Technoserve failed to consider indigenous knowledge of farmers	44	54.3	34	42	-	-	3	3.7	-	-
7	Lack of appropriate professional skill among Technoserve field workers	49	60.5	27	33.3	-	-	2	2.5	3	3.7
8	Weak linkage between Technoserve and cooperatives members	42	51.9	34	42	-	-	5	6.2	-	-
9	Price fluctuation	3	3.7	10	12.3	-	-	42	51.9	26	32.1
10	Poor infrastructure	22	27.2	18	22.2	-	-	19	23.5	22	27.2
11	Low communication among cooperative members	39	48.1	36	44.4	-	-	6	7.5	-	-

Source: field survey, 2014

As shown on Table 4.7, majority of respondents 72.9% replied that low trust in Tehnoserve was one of challenges to use the services provided by Technoserve while the remaining 27.1% of the respondents indicated that it is not a challenged them. Regarding to low trust on the cooperatives, 75.3% respondents indicated that low trust in cooperatives is also the hindrance they faced and the remaining 24.7% of respondents replied it is not a problem they faced. Similar to this, interview conducted with farmers cooperative committee members substantiate that the low trust of farmers on both Technoserve and cooperatives is created due to farmer's previous experience about cooperative. Before the commencement of Technoserve's operation in the study area, there were farmer cooperatives from which members were not beneficiaries. Due to this fact farmers could trust neither Technoserve nor the cooperative. Correspondingly, 86.4% of respondents stated that low access and rigorous bureaucracy to get loan is another impediment that farmers were facing while the remains 13.6% said it is not challenged them. Pertinent to this, interview conducted with farmers' cooperative committee and Technoserve field workers portrayed that low access and rigorous bureaucracy to get loan is one of the major challenge which hindered farmers to use the support of Technoserve. Moreover, they stated that farmers need working capital to carry out different activities such as to buy equipment and machine, to build coffee storing house and mainly to buy coffee from cooperative members and other coffee farmers. However, farmers are facing a problem to access loan and have sufficient working capital, because most of governmental and privet banks are unwillingness to give enough loan to farmers cooperative and even the banks have rigorous bureaucracy to give loan. Similar to this, TNS (2010) reported that in Ethiopia, farmers' access to credit is further obstructed by several regulatory constraints, such as strict lending policies and government-mandated collateral requirements. For instance, Ethiopian banks generally require collateral valued at a minimum of 100% of the value of the loan plus interest, which is prohibitive for almost every farmer cooperative. And farmers cannot use their land as collateral. In addition, laws prohibit foreign capital in the banking sector and also private banks are currently not permitted to access foreign currency credit lines. Regarding the problem of accountability and transparency of cooperative leaders, 72.8% of respondents replied that lack of accountability and transparency among cooperative leaders is the challenge that farmer cooperatives are facing. In contrast 27.2% replied the negative. Furthermore, 84% respondents replied that price fluctuation is another problem that faced farmers' cooperative and the rest 16%

affirmed it is not problem to them. Congruent to this, interview with farmers' cooperative committee elucidated that even though farmer cooperatives produced and supplied quality coffee, price instability happen at international level sometimes made them disadvantageous.

Moreover, the data generated from open ended question and key informant interview conducted with farmers' cooperative committee explicated that the delay of Oromia Coffee Farmers Cooperative Union (OCFCU) to sell farmer's coffee and return back their money on time is also another major challenge that hinders farmers'. This in turn adversely affects them to pay their loan on the agreed period of payment which led them to pay un necessary loan interest rate and faced them for critical financial scarcity which used to buy coffee and other important materials.

Generally, as shown in table 4.7, low trust on Technoserve 72.9%, low trust on cooperative 75.3%, low access and rigorous bureaucracy to get loan 86.4%, Lack of accountability and transparency among cooperative leaders 72.8%, and price fluctuation 84% are indicated as the major impediments which smallholder coffee farmers are faced to use the support of Technoserve. As opposed to this, respondents replied that high interest rate of loan 67.9%, Technoserve failed to consider indigenious knowledge of farmers 96.3%, lack of appropriate professional skill among Technoserve field workers 93.9%, weak linkage between Technoserve and cooperatives members 93.9%, and low communication among cooperative members 92.5% are not challenges that obstruct smallholder coffee farmers to use the support of Technoserve. However, almost half of the respondent 50.6% said that poor infrastructure is an impediment to use the service provided by Technoserve and the remains 49.4% replied that poor infrastructure is not hindered them. So, poor infrastructure is found to be at average level.

#### **4.5. Opportunities of Technoserve to Help Smallholder Coffee Farmers**

The opportunities that Technoserve has to provide services to smallholder coffee farmers were assessed. Thus, table 4.8 below presented the opportunities of Technoserve to help smallholder coffee farmers.

Table.4.8. the Opportunities of Technoserve to Help Smallholder Coffee Farmers (N=20)

No	Items	1		2		3		4		5	
		Highly disagree		Disagree		Undecided		Agree		Highly agree	
		Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%
1	Favorable policy environment	-	-	3	15	-	-	7	35	10	50
2	Divers agro-ecology & climatic conditions	-	-	-	-	-	-	8	40	12	60
3	Existence of genetic biodiversity of coffee	-	-	-	-	-	-	2	10	18	90
4	Well established coffee brand	14	70	3	15	-	-	3	15	-	-
5	High volume coffee potential.	-	-	-	-	-	-	5	6.2	76	93.8

**Source: field survey, 2014**

As shown in table 4.8, most of respondents 85% pointed out that favorable policy environment of the country is the opportunity that Technoserve has to support coffee producer farmers while only 15% replied not. Moreover, all of the respondents 100% replied that divers agro-ecology and climatic conditions, existence of genetic biodiversity of coffee and high volumes of coffee potential are the opportunities that Technoserve has to support coffee producer farmers in the study area. Similar to this, previous studies of Anwar (2010) and JZARDO (2008) indicated that Jimma Zone is one of the largest coffee producing areas of the country with divers agro-ecology and genetic biodiversity.

However, majority of respondents 85% indicated that well established coffee brand is not the opportunity for Technoserve to provide service for smallholder coffee farmers in the study area and while only 15% of respondent replied the opposite. Concerning to this, interview with Technoserve field workers indicated that in Jimma Zone there is no coffee producing area which has coffee brand. Generally, from table 4.8 one can conclude that favorable policy environment,

divers agro-ecology and climatic conditions, existence of genetic biodiversity of coffee and high volumes of coffee potential are the opportunities that Technoserve has to support smallholder coffee farmers in the study area.

#### **4.6. The Opportunities Created to Farmers as a Result of Technoserve Assistance**

Regarding the opportunities that the assistance of Technoserve created to smallholder coffee farmers, majority 93.8% of the respondents replied that the assistance of Technoserve has created opportunities and only 6.2% the respondents indicated the assistance of Technoserve has not created opportunities to coffee producer farmers. Moreover they indicated that smallholder coffee farmers have got several opportunities as a result of Technoserve intervention in the coffee sector in the study area. First, Technoserve support has been increased their awareness about coffee production and improved their productivity. This was a result of Technoserve's continuous advice through its professional business advisors, experience sharing and training on how to produce large amount of qualified coffee, management of coffee tree, and ways of harvesting and processing. Thus, smallholder farmers have been equipped with new skill and it also increased their bargaining power.

Second, it adjust loan for smallholder coffee farmers as working capital from Nib International Bank and Cooperative Bank of Oromia and other financial institution though they have followed rigorous bureaucracy to give loan and it is insufficient. This makes possible for smallholder farmers to use the loan to construct storehouse and to buy coffee, machines and materials.

Third, Technoserve promote coffee of smallholder farmers at international coffee conference (work shop), meeting, different website and embassies. Fourth, Technoserve connect farmer's cooperative with international buyers and invite the buyers to visit how farmers produce and process coffee. Moreover, Technoserve has been working for disengagement of intermediaries in the coffee supply chain and facilitate farmers to sell their coffee with high price directly to international buyers without brokers. These all made farmers more profitable. The high profit farmer cooperatives earn from their coffee enable them to improve their lives and solve different community problem. Farmer's cooperatives have been participated in the community services like helping orphan children, building road and bridge, and provide materials and finance to local health centers.

## **Chapter Five**

### **5. Conclusion and Recommendation**

#### **5.1. Conclusion**

This study tried to assess challenges and opportunities of Technoserve coffee initiative in improving the productivity of smallholder coffee farmers in Gomma Woreda. It identified that Technoserve has been providing different services to improve the productivity of smallholder coffee farmers. These were technical assistance in operating and managing the wet mills, strengthen farmers' agricultural and business skills, coordinates local specialists that can provide additional training, provides cooperative leaders and farmers with training and technical support, provide advisory service to the cooperatives, connects farmers with companies offering credit and create links for farmers to export their coffee directly to buyers than intermediaries and improve farmers bargaining power. As opposed to this, Technoserve was less participating in organizing and registering farmers under cooperatives, and did not render financial and material support to smallholder coffee producer farmers.

While providing its services to smallholder coffee farmers, Technoserve faced multifaceted challenges. This study pointed out the major stumbling blocks which deter Technoserve to achieve its goal in the study area. These were farmers' hesitation of the project, weak stakeholder participation at all levels, weak governance of farmer cooperatives accompanied by lack of transparency and accountability and corrupt leaders and poor infrastructure. Parallel to this, smallholder coffee farmers also faced challenges which hindered them to use the services rendered by Technoserve. These includes low trust on Technoserve, low trust on the cooperative, low access and rigorous bureaucracy to get loan, lack of accountability and transparency among cooperative leaders, and price fluctuation. Moreover, the delay of Oromia Coffee Farmers Cooperative Union to sell smallholder farmer's coffee and return back their money on time is also another major impediment that hinders farmers' cooperatives. This in turn adversely affects them to pay their loan on the agreed period of payment which led to the increasing their loan interest rate and led them to critical financial scarcity which used to buy coffee and other important materials.

This study also assessed both the opportunities of Technoserve and smallholder coffee farmers in the study area. Favorable policy environment, diverse agro-ecology and climatic conditions, existence of genetic biodiversity of coffee and high volumes of coffee potential were the opportunities that Technoserve has to support smallholder coffee producer farmers in the study area. The engagement of Technoserve in the coffee sector in the study area has created opportunities for smallholder coffee farmers in improving their production and productivity. Among the major opportunities created to smallholder coffee farmers, continuous training and advice made by Technoserve's professional business advisors increased farmers' awareness about coffee production and productivity; loan adjustment from Nib International Bank and Cooperative Bank of Oromia enables smallholder coffee farmers to have working capital to construct storehouse and buy coffee, machines and materials; promote coffee of smallholder farmers to international buyers through conference (work shop) and websites; works for disengagement of intermediaries in the coffee supply chain and facilitate farmer to sell their coffee with reasonable price directly to international buyers without brokers. At last, what can be learnt from the findings of this study is even though Technoserve support for smallholder coffee farmers has resulted opportunities to improve their coffee production and productivity in the study area, there are challenges which hindered both Technoserve and smallholder coffee farmers that need urgent response from different stakeholders.

## **5.2. Recommendation**

Based on the results of this study the following recommendations are suggested:

- ❖ It is recommended that the participation of key stakeholders such as Jimma zone agricultural and rural development office, Farmers Cooperative promotion agency of Jimma Zone, Gomma Woreda agricultural and rural development office, Cooperative promotion agency of Gomma Woreda, Oromia Coffee Farmers Cooperative Union and Banks in supporting the intervention of Technoserve in the coffee sector has to be improved. Because enhancing farmers' production and productivity demands the involvement of those stakeholders at all levels.
- ❖ It is better if private and governmental Banks and other financial institutions open their doors for enough credit availability and minimize their rigorous bureaucracy to give loans for farmers'

cooperatives. If so the problem of working capital that farmer's cooperatives faced to carry out their activity will be solved.

- ❖ It would be suggested that the concerned body has to facilitate the promotion of smallholder coffee farmers' cooperative in to union. This would enable them to have their own Union to sell their coffee timely and it avoids extra cost that farmers pay as a commission for Oromia coffee farmers cooperative union
  
- ❖ It would be advisable for Technoserve to work more on the awareness creation and confidence building through continues training about it activities to smallholder coffee farmers. This would motivate farmers to be more committed on their linkage with Technoserve. This inspires other coffee farmers to organize under cooperative in order to get the assistance of Technoserve.
  
- ❖ Technoserve needs to intensify its training, advisory service and follow up to improve the management skill of cooperative leaders and to ensure accountability and transparency in the cooperatives.
  
- ❖ It would be advisable for Technoserve to focus more on the sustainability of its activity of farmers' empowerment. That would help to make continuous the activity of farmers' cooperative after the project phase out.

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## 7. Appendices

### Appendices -I

Jimma University  
College of Law Department of Governance and Development studies  
M.A in Development Management

#### Questionnaire to be responded by Technoserve Workers

Dear respondent,

I am a postgraduate student at Jimma University. I am working a research for the partial fulfillment of Masters Degree in Governance and Development study. This questionnaire is prepared to assess the **challenges and opportunities of Technoserve coffee initiative in improving the productivity of smallholder coffee farmers in Gomma Woreda**. I am therefore, asking if you would agree to participate in my research by answering a questionnaire. Your name will not be recorded in the questionnaire and your responses remain strictly confidential. The information you provide is used only for the purpose of this study. If you have any question, don't hesitate to ask the data collector. Your cooperation and participation is very necessary for the successful completion of this study. We therefore ask your genuine willingness.

*Thank you in advance for your cooperation!*

#### I. Identification

1.1 Questionnaire code No : \_\_\_\_\_

1.2 Name of the office: \_\_\_\_\_

1.3 Code of respondent \_\_\_\_\_

#### Part I: Background Information

##### A. PERSONAL DATA

Please fill the blank space

1. Sex : \_\_\_\_\_

2. Age: \_\_\_\_\_

3. Level of education: \_\_\_\_\_

4. Your position in the Technoserve : \_\_\_\_\_

5. Your work experience in Technoserve: \_\_\_\_\_

**Part II: Question about service provided by Technoserve**

1. Do Technoserve support smallholder coffee farmers to improve their productivity?

Yes  No

2. If your answer is 'yes' for Q1, please specify the kind of serves provided by Technoserve to enhance and improve the productivity of stallholder coffee farmers

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3. Does Technoserve help smallholder coffee farmers in improving farmers' capacity of coffee production? Yes  No

4. If your answer is yes for Q3, please specify how?

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5. Does Technoserve help smallholder farmers on the improving their coffee quality?

Yes  No

6.If your response is 'yes' for question number 5, please specify the assistance of Technoserve on the enhancing the quality of coffee produced by farmers

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7. Does Technoserve support smollholder coffee farmers while they supply their coffee for market? Yes  No

8. If your answer is 'Yes' for question number 7, please explain what Technoserve is doing for farmers cooperative to supply their coffee directly for market?

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9. If your answer is 'No' for Q7, what hindered or limit the level of assistance?

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**Part III Questions about challenges that Technoserve faced to support smallholder farmers**

10. Does Technoserve face any impediments while it gives assistance to smallholder farmers?

Yes  No

11. If your answer is 'Yes' for Q10, please explain the challenges that Technoserve coffee initiative face to support smallholder coffee farmers

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14. Is there marketing problems that smallholder coffee farmers faced?

Yes  No

15. If your answer is 'yes' for Q14, please specify marketing problem that smallholder coffee farmers faced

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16. How Technoserve tried to solve those marketing problems?

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17. Do you believe that the assistance of Technoserve are sufficiently improved the production and productivity of farmers Yes  No

18. If your answer is “yes “for Q17, please tell me the improvement (change) on the overall activities of smallholder coffee farmers

19. If your answer is “no “for Q18, specify the problem behind

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20. Explain the possible solutions to mitigate the challenges that Technoseve faced so far to support smallholder coffee farmers?

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**Part IV: Assessing about the opportunities of Technoserve has to help farmers**

**Instruction:**

**From the following list of opportunities that Technoserve has in assisting smallholder coffee farmers; Circle '1' if your answer is strongly disagree; Circle '2' if your answer is disagree; Circle '3' if your answer is undecided; Circle '4' if your answer is agree and Circle '5' if your answer is strongly agree.**

	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
	1	2	3	4	5
1	favorable policy environment				1   2   3   4   5
2	Diverse agro-ecology and climatic conditions				1   2   3   4   5
3	existence of genetic biodiversity of coffee				1   2   3   4   5
4	Well established brand				1   2   3   4   5
5	High volumes of coffee in the area				1   2   3   4   5

If others, specify \_\_\_\_\_

Appendices-II  
Jimma University  
College of Law and Governance  
Department of Governance and Development studies  
M.A in Development Management

**Questionnaire for Smallholder Farmers**

Dear respondents

I am postgraduate student at Jimma University. I am working a research for the partial fulfillment of Masters Degree in Governance and Development study. This questionnaire is prepared to assess the **challenges and opportunities of Technoserve coffee initiative in improving the productivity of smallholder coffee farmers in Gomma Woreda.**

I am therefore, asking if you would agree to participate in my research by answering a questionnaire. Your participation in this study is voluntary. Your name will not be recorded in the questionnaire and your participation remains strictly confidential. The information you provide is used only for the purpose of this study. If you have any question, don't hesitate to ask the data collector. Your cooperation and participation until the completion of the questionnaire is very necessary for the successful completion of the assessment. **We** therefore ask your genuine willingness.

*Thank you in advance for your cooperation!*

**I. Identification**

I.1 Questionnaire code No. \_\_\_\_\_ 1.3. Name of the Cooperative \_\_\_\_\_  
I.2 Name of the Rural Kebele \_\_\_\_\_ 1.4. Household Code: \_\_\_\_\_

**Part I: Background Information**

**A. PERSONAL DATA**

**Instruction:** Please fill the blank space

1. Sex: \_\_\_\_\_
2. Age of respondent: \_\_\_\_\_
3. Educational status: \_\_\_\_\_
4. Marital status: \_\_\_\_\_

5. Family size: \_\_\_\_\_

**B: Cooperative Membership status**

6. when did you join the cooperative \_\_\_\_\_

7. The criteria that you need to fulfill to become a member of the cooperative  
 \_\_\_\_\_  
 \_\_\_\_\_

8. Your position in the cooperative: \_\_\_\_\_

**Part II: Assessing of the service provide by Technoserve to Smallholder coffee farmers**

**Instruction:**

**From the following list of services provided by Technoserve to your cooperative, Circle ‘1’ if your answer is strongly disagree; Circle ‘2’ if your answer is disagree; Circle ‘3’ if your answer is undecided; Circle ‘4’ if your answer is agree and Circle ‘5’ if your answer is strongly agree.**

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree				
1	2	3	4	5				
1	organize and register small holder coffee producer farmers under cooperatives legally to access inputs and finance			1	2	3	4	5
2	technical assistance in operating and managing the wet mills			1	2	3	4	5
3	strengthen farmers’ agricultural and business skills			1		3	4	5
4	coordinates local specialists that can provide additional training and agronomy services			1	2	3	4	5
5	provides cooperative leaders and farmers with training and technical support			1	2	3	4	5
6	Provide advisory service to the cooperatives			1	2	3	4	5
7	connects farmers with companies offering quality inputs and credit			1	2	3	4	5

8	create links for farmers to export their coffee directly to buyers than intermediaries and improve farmers bargaining power	1	2	3	4	5
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If others, Specify \_\_\_\_\_

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2. Does Technoserve support your cooperative members to improve your coffee production?

3. Yes  No

3. If your response is 'yes' for question number 2, specify the service provided by Technoserve to increase your coffee yields?

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4. Does Technoserve help you in increasing your coffee quality?

Yes  No

5. If your answer is 'Yes' for question number 4, please specify the special assistance

Technoserve gives to your cooperative on the assuring coffee quality

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6. Do Technoserve help your cooperative on the supplying your coffee for international market?

Yes  No

7. If your answer is 'yes' for Q6, please specify how?

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8. List if there are problems with the support of Technoserve regarding increasing your coffee yield and supplying qualified coffee for market

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**A. Assessing financial and material support of Technoserve**

9. Does your cooperative get financial and material support from Technoserve? Yes  No

10. If your answer is yes for question number 9, specify for what purpose your cooperative have used the loan

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11. Does Technoserve arrange loan for you cooperative? Yes  No

12. If your answer is yes for Q11, please tell me for what purpose your cooperative have used the loan

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13. From which financial institutions Technoserve adjust loan for your cooperative

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**B. Assessing about training provide by Technoserve**



**Part III: Assessing the challenges of smallholder farmers to use support of Technoserve**

**Instruction:**

From the following list of challenges which hinder farmers cooperative from using the assistance of Technoserve coffee initiative, Circle '1' if your answer is strongly disagree; Circle '2' if your answer is disagree; Circle '3' if your answer is undecided; Circle '4' if your answer is agree and Circle '5' if your answer is strongly agree.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree				
1	2	3	4	5				
1	Low trust on Technoserve			1	2	3	4	5
2	Low trust on the cooperative			1	2	3	4	5
3	Low access and Rigorous bureaucracy to get loan			1	2	3	4	5
4	High interest rate of loan			1	2	3	4	5
5	Technoserve failed to consider indigenous knowledge of farmers			1	2	3	4	5
7	Lack of appropriate professional skill among Technoserve field workers			1	2	3	4	5
8	Weak linkage between Technoserve and cooperatives members			1	2	3	4	5
9	Price fluctuation			1	2	3	4	5
10	Poor infrastructure			1	2	3	4	5
11	Low communication among cooperative members			1	2	3	4	5

If others, specify \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

20. Explain the possible solutions to mitigate those challenges your cooperative faced to use the service provided by Technoserve

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**Part IV Assessing the opportunities that created to smallholder coffee farmers by Technoserve assistance**

21. Does the assistance of Technoserve create any opportunities to your cooperative members?

Yes  No

22. If your answer is 'yes' for Q21, please specify the opportunities that you obtained as a result of Technoserve assistance

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### **Key informant Interview Question (semi- structured)**

- **For Technoserve field workers**

1. What kinds of services Technoserve provides to smallholder coffee farmers?
2. Does the support of Technoserve sufficiently improving the productivity of smallholder coffee farmers?
3. Does Technoserve face any challenges on its activities with farmers?
4. What were the better conditions which helps the activities of Technoserve on its activity?

- **For farmers cooperative committee**

1. What kinds of assistance Technoserve provides to farmers of your cooperative?
2. Do you believe that the assistance of Technoserve could improve the productivity of smallholder coffee farmers?
3. Does your cooperative face any impediments which hindered to use the service provided by Technoserve?
4. Are there any opportunities which created to your cooperative by the assistance of Technoserve?

- **For workers GWARD and GWFCPA offices**

1. Do you know about the assistance provided by Technoserve to farmers' cooperative of your Woreda?
2. Do you believe that the productivity of smallholder coffee farmers could improve by the assistance provided by Technoserve?
3. Did you observe any challenges which Technoserve or farmers cooperatives faced to provide and use the services

**Observation check list to the services provided by Technoserve to smallholder coffee farmers**

	<b>Services provided by Technoserve to farmers</b>	Yes	No
1	Technoserve provide agronomy service to farmers		
2	Technoserve provide technical assistance in operating and managing wet mill		
3	Technoserve provide training and advisory service to farmers		
4	Technoserve made Continuous follow up of the activities of farmers by its professional field workers field		
5	Coordinates local specialists that can provide additional training		

**Thank you!**

**Yuunversiitii Jimmaa  
Koollejji Saayinsii Hawaasaa fi Seeraa**

**Muummee Barnoota Governansii fi Develooppiment**

**Digirii lammaffaa**

**Gaafannoo Oomishtoota Bunaaf Qophaa'e**

Ani Yuunversiitii Jimmaatti Digirii lammaffaatiin barattuu barnoota Governmentii fi development kanan ta'e yeroo ammaa qo'annoo koo hojjetaan jira. Qorannoon kunis rakkoo Teknoserviin omishtummaa bunaa Omishtoota aanaa Gommaa fooyyessuu irratti isa mudate madaaluuf kan qophaa'e dha. Kanaafuu gaaffiiwwan kanneeniif deebii quubsaa ta'e naaf kennuun qo'annoo kana irratti akka na gargaartan, kabajaan isin gaafadha. Maqaan keessan gaafannowwan kana keessatti waan hin dabalanneef hirmaanaan keessan ofitti amanamumaan haa ta'u. Odeeffannoon isin kennitan kaayyoo qo'annoo kanaaf qofa kan oolu dha. Gaaffii yoo qabaattan nama odeeffannoo isin harkaa fuudhu gaafachuuf duubatti hin deebi'inaa! Madaalliin qo'annoo kanaa bu'a qabessumaan galmaan ga'uuf tumsii fi hirmaannaan keessan ga'ee olaanaa taphata.

Hirmaannaa keessaniif Galatoomaa!

**kutaa I. Odeeffanno waliigalaa**

1. Koodii gaafannoo\_\_\_\_\_

1.2. Maqaa ganda baadiyaa\_\_\_\_\_

1.3. Maqaa waldaa\_\_\_\_\_

1.4 Koodii gaafatamaa\_\_\_\_\_

**A. Odeeffanno dhuunfaa**

**Qajeelfama: Maaloo bakka duwwaa guutaa!**

2. Saala\_\_\_\_\_

3. Umurii\_\_\_\_\_

4. Sadarkaa barumsaa\_\_\_\_\_

5. Haala fuudhaa fi heerumaa\_\_\_\_\_

6. Baay'ina maatii\_\_\_\_\_

**B. Gaafannoo waa'ee miseensummaa Waldaa Ilaallatan**

7. Miseensa waldaa ta'uuf ulaagaa barbaachisu\_\_\_\_\_

8. Waldaa kanatti yoom makamte\_\_\_\_\_

9. Gahee hojii \_\_\_\_\_

**kutaa II: Madaallii tajaajiloota “Teknoserviin” kennaman**

**Qajeelfannoo:**

Tajaajiloota armaan gaditti tarreeffaman keessaa kanneen teknooserviin waldaa keessaniif kennaman itti yoo deebiin kee ‘Baayinaan wali hin galu’ ta’e ‘1’itti mari, yoo deebiin kee Wali hin galu ta’e ‘2’itti mari, yoo deebiin kee hin murteessine ta’e ‘3’ itti mari, yoo deebiin kee waliin gala ta’e ‘4’ itti mari, yoo deebiin kee Baay’inaan Waliin gala ta’e ‘5’ itti mari.

Baayinaan wali hin galu	Wali hin galu	Hin murteessine	waliin gala	Baay’inaan Waliin gala				
1	2	3	4	5				
1	Qonnaan bultoota waldaa jalatti galmeessuu fi gurmeessuu			1	2	3	4	5
2	Callaa guddisuu fi itti fayyadama isaa irratti gargaarsa ogummaa kennuu			1	2	3	4	5
3	Dandeettii oomishtoota bunaa fi galii isaanii cimsuu			1	2	3	4	5
4	Ogeessota naannoo qindeesuun leenjii dabalataa fi tajaajila oomishtummaa akka kennan gochuu			1	2	3	4	5
5	Dura bu’oota waldaa fi oomishtoota bunaaf leenjii fi gargaarsa ogummaa kennuu			1	2	3	4	5
6	Waldaaleef tajaajila gorsaa kennu			1	2	3	4	5
7	Buna omishtootaf dhaabbata qulqullina bunaa irratti hojjetanii fi liqqii kennan wajjin walitti hidhamiinsa uumuu			1	2	3	4	5
8	Oomishni bunaa kallattiidhaan gabaaf akka dhiyaatu omishtootaf haala mijeessuu			1	2	3	4	5

Kan biroos yoo jiraate

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2. Teknooserviin oomishni bunaa keessan akka dabaluu gargaarsa isiniif ni taasisaa?

Eeyyee  Lakkii

3. Gaaffii 2ffaaf deebiin kee ‘Eeyee’ yoo ta’e tajaajiloota oomisha bunaa keessan dabaluu isinii kennaa jiru ibsi!

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4. Teknooserviin qulqullina buna keessanii dabaluu irratti gargaarsa isiniif ni taasisaa?

Eyyee  Lakkii

5. Gaaffii 4ffaaf deebiin kee ‘Eeyyee’ yoo ta’e, gargaarsa addaa teknooserviin oomisha bunaa qulqullinni isaa mirkanaa’e akka oomishtuuf sii godhe ibsi!

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6. Teknooserviin buna keessan gabaa addunyaaf akka dhiyeesitan gargaarsi isiniif taasisu jiraa?

Eyyee  Lakkii

7. Gaaffii 6ffaaf deebiin kee ‘Eeyyee’ yoo ta’e, akkamitti akka si gargaaru ibsi!

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8. Callaa guddisuu, qulqullina bunaa eegsisuu fi buna gabaaf dhiyesuu irratti hanqinoota gargaarsa teknooservii waliin walqabate yoo jiraate ibsi!

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**A. Madaalli Gargaarsa Meeshaa fi Qarshii “Teknooserviin” Kennamu**

9. Teknooservii irraa gargaarsa qarshii fi meeshaa ni argattuu?

Eeyee  lakkii

9. Gaaffii 9ffaaf deebiin kee ‘Eeyyee’ yoo ta’e, dhimma maaliif akka itti fayyadamtan ibsi!

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11. Teknooserviin tajaajila liqii siif mijeessaa? Eeyyee  Lakkii

12. Gaaffii 11ffaaf deebiin kee ‘Eeyyee’ yoo ta’e liqii argatte dhimma maaliif akka fayyadamte yookaan oolchite ibsi

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13. Dhaabbilee (maallaqaa) faayinaansii kami irraa teknooserviin tajaajila liqii akka argattu siif mijeesse?

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**B. Madaallii Leenjii “Teknooserviin” Kennamu**

14. Teknooserviin leenjii siif kennee beekaa? Eeyyee  Lakkii

15. Gaaffii 14ffaaf deebiin kee yoo ‘Eeyyee’ ta’e, oomishtummaa keessan fooyyessuu irratti bu’aan leenjichaa maal akka fakkaatu ibsi!

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16. Gargaarsi teknooservii irraa argattu oomishtummaa kee fayyesseera jettee ni yaaddaa?

Eeyyee  Lakkii

17. Gaaffii 16ffaaf deebiin kee yoo ‘Eeyyee’ ta’e, fooyya’iinsaa fi jijjiirama inni jiruu fi jireenya kee irratti fide ibsi!

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18. Gaaffii 16ffaaf deebiin kee yoo ‘Lakkii’ ta’e, rakkoo gufuu isinitti ta’e ibsi !

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**Kutaa III Madaalli Rakkoo ykn Gufuu Gargaarsa “Teknooservii”Argachuu Irratti Oomishtoota Bunaa Mudate**

**Qajeelfannoo:**

**Rakkowwan armaan gaditti tarreeffaman keessaa oomishtootni bunaa kennutti akka hin fayyadamnee gufuu ta’a jettee kan yaaddu irratti yoo deebiin kee Baayinaan wali hin galu’ ta’e ‘1’itti mari, yoo deebiin kee Wali hin galu ta’e ‘2’itti mari, yoo deebiin kee hin murteessine ta’e ‘3’ itti mari, yoo deebiin kee waliin gala ta’e ‘4’ itti mari, yoo deebiin kee Baay’inaan Waliin gala ta’e ‘5’ itti mari!**

Baay’inaan wali hin galu	Walii hin galu	Hin murteessine	waliin gala	Baay’inaan Waliin gala				
1	2	3	4	5				
1	Teknooservii irratti amantaa dhabuu			1	2	3	4	5
2	Waldaa irratti amantaa dhabuu			1	2	3	4	5
3	Hanqina fi Baay’ina Ulaagaalee liqii fudhachuuf mudatanii fi			1	2	3	4	5
4	dhala olaanaa			1	2	3	4	5
5	Itti gaafatamumaa fi iftoominni dura bu’oota gidduutti dhabamuu			1	2	3	4	5
6	Aadaa buna oomishtootaa Teknooservii ilaalcha keessa galchuu dhiisuu			1	2	3	4	5
7	Hanqina ga’umsaa fi dandeettii hojjetoota teknooservii irratti mul’atu			1	2	3	4	5
8	Walitti dhufeenya lafaa teknooservii fi waldaa gidduu jiru			1	2	3	4	5
9	Gatiin oomisha bunaa dhaabbataa ta’u dhiisuu			1	2	3	4	5
10	Rakkoo geejibaa			1	2	3	4	5
11	Hanqina walitti dhufeenya miseensa waldaa gidduu			1	2	3	4	5
Kanneen biroo yoo jiraatan ibsi								

20. Rakkowwan tajaajila Teknooservii akka hin arganneef gufuu ta'an haquuf furmaata ta'an ibsi!

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**Kutaa IV Madaallii carraa Gargaarsi "Teknooservii" Oomishtoota Bunaaf uume**

21. Gargaarsa Teknoserviin wal qabatee carraan adda isiniif uumame jiraa?

Eeyyee  Lakkii

22. Carraa gargaarsi teknooservii qonnaan bultoota waldaa keetiif uume ibsi!

## **Gaaffii Afaanii**

### **Gaaffii dura bu'oota waldaatiif qophaa'e**

1. Waldaan keessan gargaarsa maal maal "Teknoservii" irraa argata?
2. Gargaarsi "teknoservii" irraa argattan Oomishtummaa waldaa keessanii foyyesseera jettee ni yaadda?
3. waldaan keessan gargaarsa "teknoservii" argachuu irratti gufuun isa mudate ni jiraa?
3. Carraa gaarii gargaarsa "teknoserviin" isiniif uumame jiraa?

### **Gaaffii hojjettoota WQMDAG fi WBWHGAG tiif qophaa'e**

1. Waa'ee gargaarsa "teknoservii"n oomishtoota bunaa aanaa keessaniif kennaa jiru irratti hubannoo qabdaa?
2. Gargaarsi "teknoserviin" oomishtummaa bunaa omishtootaa foyyesseera jettee ni yaadda?
3. Rakkoo "teknoservii" yookaan buna oomishtootaa ta'ee mudatee argiteettta?

**GALATOOMAA!**

