

The Role of Cooperative Society in Economic Growth of Ethiopia

**A thesis submitted to the school of graduate studies of Jimma University
in partial fulfilment of the requirements for the award of the degree of
Master of Business Administration (MBA)**

By: - Gobisa Achalu



**Jimma University
College of Business & Economics
Master of Business Administration Program**

June 10/2020

Jimma, Ethiopia

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Certificate

This is to certify that the thesis entitled “The Role of Cooperative Society in Economic Growth of Ethiopia” submitted to Jimma University for the award of the Degree of Master of Business Administration (MBA) and is a record of research work carried out by Mr. Gobisa Achalu, under our guidance and supervision.

Therefore, we hereby declare that no part of this thesis has been submitted to any other university or institutions for the award of any degree or diploma

Main Adviser’s Name	Date	Signature
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Co-Advisor’s Name	Date	Signature
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Declaration

I hereby declare that this thesis entitled “The Role of Cooperative Society in Economic Growth of Ethiopia” has been carried out by me under the guidance and supervision of Dr. Jamel Abbafita and Mr Achalu Berecha.

The thesis is original and has not been submitted for the award of any degree or diploma to any university or institutions.

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Signature

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

- ◆ Name and signature of the first advisor: - _____
- ◆ Name and signature of the second advisor: - _____

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ACRONYMS

COOP	Cooperative
FCAE	Federal Cooperative Agency of Ethiopia
Diff	Difference
GDP	Gross Domestic Product
GMM	General Moment Method
ILO	International Labor Organization
ICA	International Cooperative Alliance
SACCO	Saving and Credit Cooperative
WB	World Bank
CBO	Cooperative Bank of Oromia
NGO	Non-governmental Organization
GTP	Growth and Transformation Plan
TFP	Total Factor Productivity
NCBA	National Cooperative Business Association
DFID	Department for International Development
ATA	Agricultural Transformation Agency
FE	Fixed Effect
OLS	Ordinary Least Square
MOFED	Ministry of Finance and Economy

Abstract

This paper examines the relationship between economic contribution of cooperative society and economic growth in Ethiopian economies (across four regional states and one city administration) over 2015-2019 periods. The paper has used various empirical evidence and studies shows that cooperative societies have a greater role in economic growth across developing countries and specifically Ethiopia over time. However, the contribution of cooperative in terms of empowering community, grouping, promoting saving habit, provision of finance as loan, export and provision and distribution of fertilizer in economic growth has not been well analyzed and described across the study area by using g panel data analysis. In this paper the study has employed and estimating the economic contribution of cooperative on economic growth that consists of cooperative societies in the study area by using dynamic econometric techniques (General Moment Method panel model. Dynamic panel data result expressly Difference General Moment Method establishes a short run positive relationship between economic contribution of cooperative society indicators and economic growth. The researcher finds positive and all indicators are statistically significant impact of cooperative size, cooperative members, loan, export and provision and distribution of fertilizer on economic growth of the country under column 1. Furthermore, the study also considers under column 2 and 3(table 4.1), following handling of collapse the number of instruments and choosing separate instrument results, there is positive and significant contribution of saving, loan, capital, export and provision and distribution of fertilizer on economic growth of the study area. However, the number of cooperative sizes and its members are significant and negatively related to real per capita Gross Domestic Product with statistically significant at 1%, 5% and 10% level. Therefore, difference General Moment Method under column 3 is appropriate dynamic panel estimation methods. The result suggests a clear role of cooperative in boosting economic growth in particular, the spillover effects from cooperative development contributions. This study applied diagnostic test underneath dynamic panel estimation particularly Difference General Moment Method by Arellano-Bond test for first-order and second-order serial correlation and Sargan test and confirm that dynamic model is appropriate, which confirms the validity of the model. The result suggests the economic contribution of cooperative society indicators in saving, loan export, creating capital and provision and distribution of fertilizer in a driver of economic growth achievement goal and will advisable to conduct further research through adding other entities and considering long run aspects.

Keywords: Cooperative Economic Contribution, Economic Growth, Dynamic Panel Data, Fixed Effect (FE), General Moment Method (GMM)

CHAPTER ONE

Introduction

1.1. Background of the Study

Over 2.7 billion people in the world live on less 1.94 USD per a day and the 2008-year food crisis has thrown more than 90 million into extreme poverty (USA Ethiopia, 2017). It is an established fact that today, in an era when many people feel powerless to change their lives, cooperatives represent a strong, vibrant, and viable economic alternative, it has been recognized that cooperative societies play a vital role in economic development (Bello, 2005). Economic development needs a strong and responsible any economic institution like the private sector, an influential and inclusive civil society and a vibrant social economy, including cooperative society.

According to Acemoglu D. Johnson, (2005), economic institutions are considered as the fundamental cause of economic growth and it can affect economic growth through pooling the existing resources like physical and human capital of the country to achieve the ultimate goal of the country. Cooperative is one of economic enterprises that can uplift the socio-economic conditions of cooperative members' local communities and beyond through pooling the existing resources, skills and others in the section area. It influences several aspects of economic outcomes like buildup human capital, wealth creation; promote domestic saving, and physical and human capital. This means that cooperative societies determine not only the aggregate economic growth but the distribution of resources in the country and these in turn, contribute to maintaining order in the country.

Cooperative society is one of institutional economics that have a greater role in employment creation, resource mobilization, generating foreign currency, providing agricultural inputs and then lead to output growth both in less developed countries (LDCs) and in developed countries (ILO, 2013). Particularly, in 2007 cooperative society contributed 3% of GDP in New Zealand and Uruguay, 1million (3.5% of the active working population) job creation in France-2010 (Kifle, 2014). According to Zeuli(2002), cooperatives represented a total of 2.7 million

members, \$5.6 billion gross sales, and \$698 million with an additional \$73 million from farm credit associations. They are based on the powerful idea that together; a group of people can achieve goals that none of them could achieve alone.

According to the International Cooperative Alliance (ICA), (1995), a cooperative is an autonomous association of persons united voluntarily to meet their common economic, social and cultural needs and aspirations through a jointly owned and democratically controlled enterprise. According to this definition, a cooperative is an enterprise that satisfies three main criteria that satisfy the requirements of being known and pertinent as well as measurable. Namely; jointly owned, democratically controlled and owned by persons who are voluntarily associated. It influences investment in physical and human resources, research and development (R&D), technology and the organization of production.

There is ample theoretical and empirical literature that confirms a positive effect of the cooperative society on economic growth at the country levels ((Muthyalu, 2013, Eman. 2009). On the other hand, development-oriented scholars claim that what actually matters is the utilization of expected outcomes measured by its depth and outreach.

According to Ijere(1992) cooperative is an economic enterprise and self-help organization used as an instrument for socio-economic transformation all over the world. Cooperative is moved towards self-management and controlling its overall performance to strengthen the enterprise as well as the economic activities by using its own available natural resources, the supply of factors of production and technological progress. Their value and governance systems have allowed them to overcome many of the challenges of both rural and urban settings. Policy makers look at cooperatives as powerful structures able to create job opportunities, resource mobilization and then increase return (ICA, 2013). This study has found evidence for this relationship that has been indications of a positive relationship between saving and provision of finance service as loan on economic growths under column model 2 and 3.

In particular, agricultural cooperatives provide small and medium-scale farmers with strong economic benefits including creating capital, and pooling the local resources, improved access to finance, provision of agricultural inputs and therefore higher return on their production (ILO, 20013). This study has found support for this relationship that has been indications of a positive relationship between agricultural inputs, accessed finance service as loan and economic growths.

According to Swan (1956) economic institutions can increase in goods and services produced in a country. Cooperatives, as economic institutions and as self-help organizations have a potential to create income generation, create wealth, promote domestic saving, and empowerment of the poor people to enable them to participate in the development process. Cooperative society operates in all areas of economic activity growth in almost all countries of the world that can enable to increase the GDP of the countries (NCBA, 2016). It has been instrumental in both rural and urban economic activities and finance along with more is expected to achieve the targets set in the countries.

For this reason, governments in these countries have been supporting the cooperative society extensively through many different programs so as to attain the sustainable development goal program of the country. Ethiopia has also played a crucial role in empowering cooperative societies in significant contributor towards the achievement of economic growth. Among the 27 low-income economies in Africa, Ethiopia had the 4th highest value-add (as a share of GDP) from agriculture in 2016, the overall economic growth of the country is relevant to the success of agricultural sectors. As agriculture continues to be an important to the Ethiopian economy, the cooperative sector is a vibrant engine for economic growth and plays a crucial role for the transformation of the agriculture sector as well as plays an active role in the fields of financing, input and output marketing, agro-processing, storage, dairy, and many other social and economic activities.

Among the populations that are to be members of cooperatives over 26 million individual members have been engaging in different types of cooperatives, accounting 26 percent of the population, are directly enlisted in every stratum of cooperatives across the country (FCA, 2019). However, all cooperative members are not provided expected service to strengthen the economic empowerment of the cooperative society.

Currently, there are 86,570 primary cooperatives, 388 cooperative unions, and 3 cooperatives' federations with nearly 26 million members and a total capital of Birr 22.8 Billion and having 15.5 billion ETB saving funds. Availability of such human resources that creates a conducive environment to organize based on people needs strong and well-developed cooperatives with large numbers of members.

Cooperative society promotes saving and credit habits in the country so that encourage the investment and overcome the financial constraint of the countries. The saving promotion is raised to 3.8% saving share in 2019(15.58 million by saving and credit cooperative and national

saving 410.33 billion birr). And also, it has offered credit service growing from 0.35 billion in 2011 to 4.22 billion birrs in 2019 years.

Empirical studies have rationally shown that the positive economic contribution of cooperative society in economic growth. According to the Federal Cooperative Agency (2010), about 98% of fertilizer was distributed with cooperatives. It has grown from 8.4 million quintal in 2014 to 11.5 million quintals in 2019.

Ethiopia, have obtained both Fair-trade and Organic Certifications to enable them penetrate the international market with ease. Cooperatives have also engaged in export activities; and collected foreign currency 1.6billion ETB in 2014 and 2.8billion ETB in 2019. There is a positive relationship with community member's empowerment, finance service provisions, foreign currency and provision of improved agricultural inputs (fertilizer).

There are different literatures on the subject matter which are empirically studied. However, studies conducted in Ethiopia were few in number and cannot provide a great emphasis to the role of cooperative society in achievement of economic growth of the country with panel data analysis.

Besides, cooperative development in Ethiopia has increased in terms of quantity and economic contributions and began long-term ago in Ethiopia. However, the economic activities of the cooperative in Ethiopia in terms of offering finance service, promote domestic saving, export and access improved agricultural input and others are not provided as predictable as well as negligible studies on the economic contribution of cooperative society by combination of cross-sectional and time series data estimation in the country. Therefore, it is necessary to do a study to analyze how to influence the development of cooperatives on economic contribution and extent of contribution of the cooperative society across the regions over the time.

The major indicators of economic contribution of cooperative society includes empowering the cooperative society's members, promoting saving habits, provision of loan, and provision of fertilizer and engaged in exporting highly commodity crops and then contributing to the economic growth of the country. However, most authors' approaches have been developed for single cross-sections of countries and no comprehensive studies at the national level about the relationship between economic contribution of cooperatives and economic growth.

This paper aims to contribute to the growing literature on the estimation of the relationship between the economic contributions of cooperative society with economic growth of the

country. The study uses panel data from 4 regional states and one city administration of Ethiopia, for empirical analysis.

It used dynamic panel data models estimations (GMM). The RE estimator was excluded because the Hausman test rejects the null hypothesis fixed effect versus random effect and it became inconsistent and biased as the existence of endogeneity problem. Therefore, econometric problems were resolved by Arellano and Bond (1991), and Blundell and Bond (1998, 2000). The estimator used GMM and solved the problems and validated the occurred empirical studies which confirmed the positive relationship between economic contributions of cooperative society's estimation in terms of saving, loan; create capital, export and distribution and provision of fertilizer to increase the agricultural productivity on economic growth of the study area. It has applied the diagnostic test by putting on AR (1) and AR (2) and Sargan test as well as using collapse to reduce the numbers of instruments and choosing the instruments to separate the instruments.

Generally, the rest of this paper is structured as follows. Section 2 presents theoretical framework and empirical review while Section 3 provides a description of the data and methodology. Section 4 reports and discusses the empirical results. Concluding remarks and policy implications of findings are reported in the sections.

1.2. Statement of the Problem

Cooperatives represent a strong, vibrant, and feasible economic growth, as they have been the primary sources of employment creation, resource mobilization, generating foreign currency, provide agricultural inputs and then lead to output growth in all countries (ILO, 2013). It confirms that cooperative society has a greater role in the achievement of economic growth. According to the USAID (2017) assessment report, despite progress has made in Ethiopia, about 25 million Ethiopians still live in extreme poverty (US \$1.90 per day) today. Ethiopia is expected to reduce 10% of the population living in extreme poverty by 2030 and nearly 16 million Ethiopian are forecasted to be living below the extreme poverty line in the same years.

According to Acemoglu D. Johnson, (2005), economic institutions are considered as the fundamental cause of economic growth through pooling the existing resources to produce valuable products that have met the demand of beneficiaries. The author has confirmed that economic institutions including cooperative societies have greater economic contribution in economic growth across the country over periods. Cooperatives is one of the economic institutions that primarily makes an important contribution to sustained economic growth and to making markets function better for poor people through providing input, creating capital, local resource mobilization and other development across the country over time (DFID, 2010).

According to the Planning and Development Commission of Ethiopia (2019), agriculture is registered an average annual growth rate of 3.8% with a percentage share of 33.88% in GDP and absorbed about 70% of the total increase in employment. In spite of agriculture being the pillar of the economy, the sector is poor to bring sustainable changes in the living standards of the community (Muthyalu, 2013). Thus, the government of Ethiopia believed that cooperative society has a greater role to alter the economic activities of the country through overcoming the domestic saving, foreign currency, finance service, human capacity and improved agricultural inputs problem that would have brought the economic growth of the country.

The core agenda of Ethiopian government is sustaining the economic growth of the country and achieving broad-based sustainable development goal to reach in 2030. It has designed to considered through the human development, increasing agricultural products, promoting domestic saving and export growth requires diversifying the economic development which can contribute much to the development of the country. Furthermore, the government believes cooperatives as important vehicles for the implementation of different development programs (Emana & Nigussie 2011).

According to proclamation 147/96 of Cooperative objectives of Ethiopia; cooperative societies are one of the numerous forms of business organization in the country and it is considered as one of the important means of bringing about economic development to the country. It shows that cooperative societies have a positive and significant effect on economic growth through coordinating the knowledge, wealth and labor of the community. Thus, promotion of cooperatives is widely viewed as the most important institutional arrangement for creating human and financial capital, enhancing domestic saving and enhancing exporting to enable them to participate in accelerating the growth of the economy across the country in the given time. It has confirmed that the economic contribution of cooperative and economic growth has positive relationships.

The researchers Kaleb and Tesfaye Haregewoin, (2014) have also validated the relationship between the economic contribution of cooperative society indicators on economic growth of Ethiopia through national foreign exchange earnings, availing finance service for the target group and increasing agricultural productivity through provision and distribution of agricultural inputs. Cooperatives have been instrumental in both rural and urban areas expected to achieve the targets set across the regions over the time.

Empirical work by Barro (1990) has provided support to the notion that capital accumulation and savings is central for understanding growth differentials across countries and recommend that low public saving, on the other hand, domestic saving in general and private saving in particular is the developing stage in Ethiopia has greater economic growth. For this purpose, domestic saving and credit cooperatives are getting successful on saving mobilization and building saving culture by encouraging members to save by waking up members' investment capacities over the time. But, the domestic saving sector in Ethiopia played an insignificant role particularly in 2015/16 and 2018/19(MoFED, 2018/19). Thus, cooperative societies have a greater role to solve this problem through promoting saving habits and exporting highly commodity crops. A successful cooperative business can create wealth and help their members and country by pooling their endowed resource. But, most cooperatives face financial problems in order to expand their business activities and low practicing of acquired skill from previous years and lead to low productivity due to poor management and participation of the members as expected.

To sum up, empirical studies have analytically shown the positive economic contribution of cooperative society in economic growth. This studies account for economic contribution of cooperative society in Ethiopia by making powerful members, provision of finance services and fertilizer and engaged in exporting highly commodity crops. However, most authors' approaches have been developed for single cross-sections of countries. Most empirical evidence relationships between the economic contributions of cooperative society across the region over time span analysis with dynamic panel data analysis are scarce. To bridge the gap in literature, this paper examines the relationship between economic contributions of cooperative society by using dynamic GMM model to estimate economic contribution of cooperatives in economic growth for the period of 2015-2019 of the country.

For this purpose, the paper reviews some empirical studies and analyses secondary data on the economic contribution of cooperative societies. Besides, it seeks to provide sound recommendations for next researchers and supporters so that the government stands behind cooperatives to accelerate development and solve the problem of growing unemployment, provision of finance service, generate income, foreign currency, domestic saving and participation of the communities in the country.

1.3. Objective of the Study

1.3.1. General Objective

The general objective of the study is to examine the economic contribution of cooperative society in economic growth of Ethiopia across four regional states and one city administration (from 2015-2019 years).

1.3.2. Specific Objective

The specific objectives of the study are: -

- ✓ To identify the economic contributions of cooperative society's indicators (community empowerment-cooperative active members, generate foreign currency, provide agricultural input, resource mobilization, creating capital and provision of financing service for the target group) enable to achieve the economic growth across four regional states and one city administration of Ethiopia.
- ✓ To examine the relationship between economic contribution of cooperative indicators and economic growth of the study area,
- ✓ To put forward recommendations emanating from the findings of the study applied

1.4. The Research Hypothesis

The hypothesis in this study, are.

1. Null Hypothesis (H0): - There is no association between economic cooperative society contribution indicators (cooperative size, members, generate foreign currency, provide improved agricultural input, resource mobilization, create capital and provision of financing service) and economic growth in Ethiopia.
2. Alternative Hypothesis (H1): - There is positive association between economic cooperative society contribution indicators (cooperative size, members, generate foreign currency, provide improved agricultural input, resource mobilization, create capital and provision of financing service) and economic growth in the study area

1.5. Significance of the Study

It is hoped that the findings from this study will provide some knowledge in the area of economic contribution of cooperative society toward the achievement of economic growth of the country. This relationship was justified because it may invite other academicians and organization to conduct other further research and lobbying the government to examining the economic contribution of cooperative society. It also helps other supports to know which among the microeconomic institution variables to encourage most in order to attain a desirable economic growth and will equally help to achieve the national vision and beyond.

It will articulate the direction for further studies. In other words, the significance of the study will be, Direct Actors (The Board of Directors, Branch Manager, Cooperative Promoters and NGO) will use the findings of this study to develop further strategies focused on economic contribution of cooperative in the community development. Academicians-contributed to the existing knowledge and provide literature to scholars in the field of economic contribution of cooperative societies.

Furthermore, the living standard of people in developing countries is poor as compared to developed countries. The only way to improve the living standard is the sustainable output growth. One of the instruments that can enable the sustainable economic growth of the countries is cooperative. This is therefore; the government will be further used as one strategy to analyze the significance of cooperative so as to achieve the economic growth of the country.

Thus, the information has been acquired from this study will be useful to researcher to further investigate the significance of cooperative.

1.6. Scope of the Study and Limitation

The scope of the study has been limited to selected primary cooperative societies of four regional state (Namely Oromia, Amahara, Tigray and SNNP) and one city administration (Addis Ababa) cooperative societies of Ethiopia those engage in the business of multipurpose cooperative, saving and credit, mining and consumer cooperative societies and more. The total primary cooperative those registered under the proclamation of 147/98 and amended procl. 402/2004 and latest amended proclamation No. 985/2016 that organized by the base of community cooperative societies has been entitled to assess under this study. The scope was to cover the direct economic contribution of cooperative society in the achievement of economic growth of the cooperative

with the indicators of human development as membership, domestic saving as resource mobilization, provision of improved agricultural inputs, creating capital, securing hard foreign currency and provision of financing services as loan.

In Ethiopia, evaluating the quality of data, there is no adequate and consistent data. There is no long year data across all regional state for the variables under investigation which are sufficient to undertake the research using time series data. Furthermore, the World Bank and FCA data base have no data for the year before 2014 year for the variables which are examined in the study which places a limitation on the scope of the variables in the study. For this reason, the manifestation of multiple instrument number problems is obtainable while this paper is analyzed. One limitation of this study is that it uses data obtained from different sources. In addition, since the data reported by different organizations are different, it creates a lack of confidence about the reliability of data. Hence, the econometric result of this study is also limited by the quality of the data. In order to solve this, the researcher has collected the data from direct sub-department (Coop Promotion, SACCO, Export, Marketing, Input Supply and Job Creation) of FCA of Ethiopia instead of collect the biased data from their Planning, Monitoring and Evaluation department.

The total number of individuals in Ethiopia who are members of at least one cooperative is difficult to estimate because many individuals are members of multiple cooperatives. In addition, because persons can be members of more than one cooperative, the number of members of cooperatives will be overestimated.

This study was covering the sampled primary cooperative societies of Ethiopia actively working in the four regional states and one city administration of Ethiopia. Data available means all cooperatives are not active. Time range of data has been from 2015-2019. From the perspective of contribution of cooperative society's measurement, there are many problems associated with the accurate measurement of labor work, in particular when disaggregated by cooperative society. Specific challenges in this context include successfully combining information from the main statistical sources, and measuring members of cooperative societies. Besides, the double counting system has occurred as one members of cooperative societies becomes a member of different members of cooperative societies as well as one capital of cooperative would be under the umbrella of else. Measure the members of the cooperative as the social capital of the enterprise.

Moreover, cooperative principle and its contribution are adopted from developed countries and less applicable in our country. In addition, the contribution of cooperatives in Ethiopia may be very minimal to GDP; this demonstrates that overall cooperatives in Ethiopia have not been able to provide an optimal role in economic growth and in improving the development of the country and still incapable of being the solution for economic growth. Then, based on finding of this, government policy of Ethiopia may lead to responding to ensure the suitability and efficacy of implementation and management practices of the countries.

1.7. Structure of the Study

This study has been organized in five chapters. The first chapter deals with introduction of the study, research questions, objectives of the research, Hypothesis, significance of the study, scope and limitation of the study, and finally the Structure of the study. The second chapter discusses concepts and theories related to the area of study. The review of the literature includes the theoretical review in its first section which is followed by the review of the previous studies related to the area and conclusion and knowledge gap finally. Third chapter presents the research design and methodology as well as the model specification. The fourth chapter discusses the presentation, analysis and interpretation of the data collected while the last chapter makes summary of main findings, conclusion and recommendations.

1.8. Operational Definition

- ❖ **Agriculture & Multipurpose Coop:** - All cooperatives based on agricultural activities (crops, animal, honeybee, irrigation, seed and fertilizers, etc.).
- ❖ **Cooperatives:** are the cooperative societies who are eligible and are organized in different economic activities to achieve their common objectives under the federal cooperative society's proclamation. No 147/98 and amended 402/04.
- ❖ **Credit:** means the taking of money from SACCOS for consumption or investment based on the saving amount of the saver to repay after a long period of time or after a short period of time.
- ❖ **Saving & Credit Coop:** - Based at either rural or urban areas, aim to improve members' saving habits, and to provide credit services.
- ❖ **Total exports:** - value of goods provided to the rest of the world by cooperatives
- ❖ **Saving:** means the accumulation of money regularly or irregularly by the members of saving and credit cooperative societies to secure or to gain interest rate or both.
- ❖ **Iqub** is an association of people having common objectives of mobilizing resources, especially finance, and distributing it to members on rotating basis.
- ❖ **Idir:** - is an association of people that have the objective of providing social and economic insurance for the members in the events of death, accident, damages to property, among others. In the case of funeral,
- ❖ **Idir:-** serves as funeral insurance where community members elect their leaders, contribute resources either in kind or in cash and support the mourning member.
- ❖ **Mining:** - Associations involved in the small-scale mining and marketing of different items including sand, marble, gold, salt and other minerals.
- ❖ **Management committees:** are the committees who are elected by the members from the members
- ❖ **Primary cooperatives:** Immediate members are farmers, and are typically geographically organized. Primary cooperatives are somewhat limited in capacity and do not generally access export markets directly.
- ❖ **Member:** - means any physical person, or society established under this proclamation which is registered after fulfilling his membership obligations.
- ❖ **Union:** These are larger cooperatives consisting of a collection of primary cooperatives.

- ❖ **Federation:** These are larger cooperatives consisting of a collection of more than 2 union cooperatives.
- ❖ **Employment:** - Employed persons include those persons of working age who worked for at least eight hours during the reference period as contributing cooperative workers. It reflects a cumulative job opportunity created by cooperatives (both permanent and seasonal).
- ❖ **Union:** - means a union composed of more than one primary cooperative societies that have similar objectives
- ❖ **Federation:** - means a group consists of unions and cooperative societies with similar objectives
- ❖ **Institutions:** Economic agents such as households, enterprises and the government. They are classified as “private” institutions (households, enterprises) and “public” (the government). Private institutions provide factor services to activities, and to other institutions, by supplying them on factor markets. Private institutions are remunerated with payments for factor services, which constitute their income. Institutions consume final consumption goods and services; whose payments constitute their expenditure.
- ❖ **League:** - means cooperative society league of Ethiopia established by cooperative societies at the national level.
- ❖ **Worker** – owned and democratically governed by employees (not necessarily Producers) who become cooperative society members
- ❖ **Mutual:** - A private co-operative type organisation providing insurance or other welfare-related services. Consider also micro-insurance and mutual with both voluntary and compulsory membership.
- ❖ **Consumer** – owned by consumers/customers who buy goods or services from the cooperative.
- ❖ **Bye-Laws:** - On the basis of the sample bye-laws prepared by /the government regulator, in consultation with the national cooperative apex body, the bylaws are prepared and recommended by the Board of an individual cooperative and approved by the general assembly.
- ❖ **Internal Policies and Procedures:** - Members approve in general meeting the guiding principles behind the policies; they also approved the Code of Ethical Conduct. The detailed operational policies and procedures will be approved by the Board or the Joint

Committee Meeting (Board, Supervisory and other ad hoc committees). These policies and procedures are intended to strengthen order and consistency in the management of assist day-to-day activities of the cooperative society.

CHAPTER TWO

2. Literature Review

The following is a review of the academic literature that focuses on economic contribution of cooperative societies enabling the achievement of economic growth of the developed and LDC mainly in Ethiopia. This section comprises four parts. The first section provides a summary of conceptual definition of cooperative societies followed by a review of sources of theoretical aspects in the second section. The third section reviews the literature and shares the results of other studies that are closely related to the study being reported. The fourth section relates a study to the larger discussion in the major economic contribution of cooperative societies in Ethiopia, filling in gaps and extending prior studies.

Then, frames the problem earlier identified after establishing the structure of the study, as well as a benchmark for comparing the results of a study with other findings. The present review of literature consists of both review of theories and empirical studies, as discussed in the following subsections.

2.1. Theoretical and Empirical Literature Review

Introduction

This section reviews the theoretical literature as well as the existent empirical research relating to the role of economic contribution of cooperative in promoting economic growth. The first chapter introduced the overview of theoretical explanation and empirical studies related to economic contribution of cooperative societies. Although theoretical and empirical research by mainly estimating and analysis with cross sectional data and few of authors conduct the research on the contribution of cooperatives and laid the foundation for economic growth of the country. Besides, there exists a massive literature on this field and few of them quantify the contribution in economic growth of the country. Most authors are exploiting cross-sectional country's variations into accounts. In order to mitigate the shortcomings of cross-sectional analysis, this paper examines the dynamic relationship between economic contribution and economic growth across five regional state of Ethiopia

Research on the cooperative role in economic growth has attracted immense importance since the early 1990's among economists and take corrective action by managers. Because, it has extensive consequences to bring economic development. Most of the empirical works were conducted in separation of variables with either cross sectional data or time series while there is probably no study yet using purely the role of cooperative societies in the achievement of economic growth of Ethiopia.

2.2. Concept and Theoretical Review

Introduction

In this section, concepts which discuss the role of the cooperative in economic growth are reviewed. Cooperative is defined in different ways and no single definition is adequate so far as different scholars define the cooperative in different ways. According to cooperative Proclamation Issued no. 147/98 with amendment of 402/2004 as well as the latest amendable proclamation No. 985/2016 are an economic enterprise and membership based and driven organization with the objective of meeting the needs of the members, not to make a profit for shareholders.

Our study includes economic institutions largely determined by the economic sectors identified in the country of Ethiopia. Institutions refer to rules, regulations, laws and policies that affect economic incentives such as incentives to invest in technology, physical capital and human capital (Acemoglu D. Johnson, 2005). The main variables of economic institutions are: protection of property rights through member's empowerment, mobilized resources, provision of finance services and doing business like engaged in exporting with a quality of regulation system.

Acemoglu *et al.* (2005) argued that economic institutions determine long run causes of economic growth. And also, it concluded that the traditional neoclassical economic growth models of Solow (1956), Swan (1956), Cass (1965) and Koopmans (1965) explained the differences in the per capita incomes across regions in terms of saving, exporting and capital accumulation over the time.

In this paper, it has described the multidimensional principle and value of cooperative, and then identifies cooperative contribution in economic sectors that fit within one or more of these dimensions.

According to Acemoglu *et. al* (2005), showed that the importance of quality economic institutions for economic growth in the considerations of geographical location and existence of other resource particularly endowed locality resource. It proved the great importance of economic institutions for achievement of economic growth. Cooperative society is one of the economic institutions that has its own value and principle. Cooperative values include; basic cooperative values (namely self-help, self-responsibilities, democracy, equity, equality and solidarity) and ethical values (namely, honesty, openness, social responsibilities and caring for others). Cooperatives are based on the values of self-help, self-responsibility, democracy, equality and solidarity. In the tradition of their founders, co-operative members believe in the ethical values of honesty, openness, social responsibility and caring for others. Good institutions have a crucial role in that trust. Consequently, good institutions lead to economic growth.

In any business world the birth of a business form of industry association resulted in a separation of ownership and control. This phenomenon was first pointed out by Adam Smith in 1776 and was officially obtainable in the form of agency theory by Jensen and Meckling (1976). They had validated the opportunistic behaviour by managers would cause a conflict of interests between owners and managers, thereby negatively affecting a firm's economic performance. Thus, incentive mechanisms (executive compensation) and effective control (corporate governance) mechanisms are likely to re-align the interests of owners and managers. The board of directors thus plays an important role in aligning the interests of owners and managers. With managers having satisfactory control in running the day-to-day affairs of an organization. It is unlikely that managers would always act in the best interest of the owners However, in cooperative society it uses a 'user-owned, user-controlled business' approach that distributes benefits on the basis of use. It is an enterprises that are formed freely by individuals to pursue the economic interests of their members; it is owned by two or more individuals or enterprises; it controlled democratically and follow the principle of "one person, one vote" and also it has shared identity, that is, members are both owners and customers; and the last is providing services to members "at cost". Since various interest groups and individuals have benefited from various economic

organizations, there is usually conflict about social choices, which is ultimately resolved in favor of those groups with greater economic power and empowerments.

In order to provide further clarification of the scope of cooperatives, the International Cooperative Alliance (ICA) further developed seven “principles” upon which all cooperatives should aim to be founded. They are not strict requirements but rather are to be used as guidance to determine whether an enterprise functions as a cooperative.

The International Co-operative Alliance (ICA) employs broader terms in its definition of a cooperative as “an autonomous association of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly owned and democratically controlled enterprise.” The ICA has adopted the Rochdale Principles (based on a consumer cooperative in England dating to 1844), it has encapsulated in the seven cooperative principles, which include; (1), voluntary and open membership, (2) democratic member control, (3) member economic participation, (4) autonomy and independence, (5) education, training and information, (6) cooperation among cooperatives and (7) concern for community. According to Chambo(2009), cooperative principle like education, training and information and others has direct contribution in economic growth and development of cooperatives society.

The ICA periodically revisits these principles. Common consensus among many scholars namely UN, ILO, ICA and EU are defined cooperative as organizations in form of an enterprise that meets all dimensions of poverty. According to different authors, successful cooperatives societies, seen as self-help organizations, have in common some basic functions and characteristics: generate social capital, have internal rules and regulations, are communally inclusive, autonomous and have a particular size. Cooperatives function on the basis of the values of self-help, self-responsibility, democracy, equality, equity and solidarity.

According to EFDR Government proclamation no.147/1998, article 1 of section 2 has the following definition and category: Societies means cooperative Societies established and registered in accordance with this proclamation and it shall in particular include the following:

- ◆ Agricultural Cooperative Societies;
- ◆ Housing Cooperative Societies;
- ◆ Industrial and Artisans Producers' Cooperative Societies;
- ◆ Consumers Cooperative Societies;
- ◆ Savings and credit Cooperative societies;
- ◆ Fishery Cooperative Societies;
- ◆ Mining Cooperative Societies and more.

"Cooperative Society" means a society established by individuals on a voluntary basis to collectively solve their economic and social problems and to democratically manage. These cooperative societies market a large number of commodities and perform such other functions as providing credit to members, arranging for the supply of the inputs required by them, and meeting their requirements of essential domestic consumption goods.

The System of National Accounts (SNA, 2008) defines cooperatives for statistical purposes cooperatives are set up by producers for purposes of marketing their collective output. The profits of such cooperatives are distributed in accordance with their agreed rules and not necessarily in proportion to shares held, but effectively they operate like corporations. Several studies attempt to examine the importance of cooperative societies in economic growth. Indeed, developed cooperative societies are today the most important driver contributing to economic growth.

The investigation of relative roles of cooperatives is very important because as we can see above different types of contributions sectors have different influences of growth and economic performance. The economic institutions have the major role for growth, and in this regard when manager economist testified the relationship between institutions and growth, have to measure variables that cause quality of economic institutions

At the community and regional levels, growth is something that cooperatives can contribute to in meaningful ways. Cooperative can increase community investment and development by local businesses and consumers via expanded access to credit and savings products, supply improved agricultural input, create capital and export earnings.

It is further suggested that geographical and cultural factors also matter in terms of economic growth, but that institutions are more fundamental in explaining long-run economic growth Institutions are not only significant in explaining aggregate economic growth, but they are also important in explaining an array of economic outcomes, such as the distribution of resources (wealth, physical capital and incomes). This means that economic institutions also influence how economic wealth is distributed among members of the society, be it output, income, physical capital or human capital (Acemoglu *et al.* 2005).

Cooperative principles are emphasizing the centrality of cooperative education, training and information so that they contribute effectively to the development of their cooperatives

(Chambo, 2009). Thus, cooperatives society had better to provide education and training for their members as well as elected representatives and employees. Besides, most authors have confirmed that cooperative has a strong positive economic contribution on the provision of agricultural inputs to enhance agricultural productivity, develop domestic saving habits, provision of financed services, export highly commodity crops and human development and also offering the marketing service and distributing to the users with fair price. Thus, cooperatives are valuable economic institutional assets to create productive resources, lasting economic growth and ensure the economic development of the countries.

Based on this, it can be contended that economic institutions determine the economic performance and distribution of resources in a society.

2.2.1. Theory of Economies of Scale

The theory of scale economies emphasizes that large-scale firms enjoy advantages derived from their economies of scale in production; thereby, the resultant increase in the share of large-scale firms is expected to initiative economic progress. Members of cooperatives put equity into a cooperative enterprise. Cooperatives as a business are also a democratic mechanism for wealth creation through bringing their individual skills, knowledge and others.

According to Gordon (2002 & 2008), successful cooperative businesses can create wealth and help their members by pooling their endowed resource. A cooperative is a collectively owned and operated business. Cooperatives are a form of communal, joint, and democratic ownership of a business whose equity is an asset that can contribute to an individual member's wealth portfolio. It is an instrumental value to mobilize individual resources under a cooperative society which in turn enables people to make collective effort to satisfy common needs and resolve common problems on mutual basis for the purpose of mutual benefit. Ravensburg (2009) cooperative has the capacity of pooling the agricultural product from its members as offering the marketing service and distributing to the users with fair price. Thus, cooperatives are valuable economic institutional assets to create productive resources, lasting economic growth and ensure the economic development of the countries.

Cooperative has played a role in the community, such as increasing business scale and competence, enable to access market, education and create social bond, increase the bargaining

position of cooperative members in the face of market competition and encourage togetherness and solidarity among members to provide mutual support and loyalty to the organization.

2.2.2. Theory of Economic Development (Schumpeter, 1934)

From a completely different viewpoint, Schumpeter (1934) emphasized a feature of large firms with respect to raising capital, and predicted that this would replace industrial functions during economic development. However, he highlighted the role of business enterprise in economic development and defined an economic institution as having a great role in economic growth of the country.

Different research has found that cooperative society has engaged in the market wanting to maximize the profit and collect abundant profits. But, in order to achieve a successful cooperative society and enhance its economic activities; the cooperator profile needs to be promoted among its members. A successful cooperative puts the members' interests before profit maximization (NCBA, 2016; USDA, 2012). Therefore, a cooperative has to offer services and perform certain functions based on the members' needs and the community income. Cooperative organizations need to establish a well-defined purpose and a reason to exist. This justification has to offer a business specialization benefit in the market and provide specific products and services through collecting updated information and then led to engage in business inspiration. To sum up, cooperative society has empirically validated the positive economic contributions in terms of brought economic activities that has ensured the economic and show a significant and direct impact on per capita income.

2.3. Empirical Review

Introduction

This section provides empirical literature reviews from the studies in the world and fitting in Africa in Kenya, Tanzania and Ethiopia on the role of cooperative Societies. A review of the empirical literature is presented in the determinant of economic contribution of cooperative in cross-country settings. The study was based on the observation that the relationship between an economic contribution of cooperative and economic growth. The study listed the key outcomes of cooperative society like cooperative members empowerment through educating and provision of different services, promoting saving habits, loan provisions, provision of fertilizers and exporting across the five regions in different periods. Cooperatives play crucial roles in economic and social development as well as the most significant source of new employment. Most studies were cross-sectional data and limited to analysis of the time series data.

In this section we present the empirical models in relation to the economic contribution of cooperative societies in economic growth of the country. The purpose is to offer detailed discussions and theoretical explanations of cooperative and their contribution in economic growth of the country.

Many below mentioned authors have empirically validated the positive relationship between economic contribution of cooperative society (empowering members, developing saving habits, provision of finance services, provision agricultural inputs and engaged in export activities) with economic growth of the country.

2.3.1. Empirical Studies

The empirical literature argues that economic contributions of cooperatives and economic growth are robustly correlated and, more important, that cooperative deepening causes economic growth. According to Gordon (2002 & 2008), successful cooperative businesses can create wealth and help their members by pooling their endowed resource. Scholars argued that cooperative society has been recognized in economies throughout the world. The sector's contribution to wealth, provision of human and financial capital, job creation, and communal progress is highly valued and small businesses are regarded as essential formulas to successfully achieving economic growth. The researcher study had relied profoundly both qualitative and

quantitative techniques to collect primary data and confirm the positive relationship between the variable and economic growth.

According to Acemoglu *et. al* (2005) organizational/economic institutions has a positive relationship with economic growth of Ethiopia. It considered an influential paper in addressing the endogeneity problem of using alternatives for organizations when examining and evaluating differences in economic performance among the regions. The paper uses differences as an instrument to estimate the effect of institutions on economic growth and the 2SLS estimation results are shown to be robust to different specifications, indicating the occurrence of significant effects of institutions on per capita income.

Economic institutions are considered as the fundamental cause of economic growth (Acemoglu, *et. al* 2005). Institutions and the state in the broadest sense have a strong impact on the economy due to the possibility of creating an enabling environment for economic growth and development. Institutional changes aim at adapting to new challenges. Cooperatives is one of the institutions that primarily makes an important contribution to sustained economic growth and to making markets function better for poor people through providing input, creating income and job, resource mobilization, creating capital and other development (DFID, 2010). In literature the causes of cooperative economic contribution differences between countries, as well as the ways in which cooperative can affect economic contributions have increased. Similarly, in this study analysis the causal link of cooperative economic contributions and economic growth has become a subject of interest, so that the possibility that cooperation affects economic growth is more emphasized and also as the needs of existing organizations also developed they will try to change the cooperative economic contributions framework to achieve even better performance. The study was also designed to test the hypothesis that saving, income generated and provision of loan does stimulate economic growth positively.

According to International Cooperative Alliance (ICA, 2013), about 1 billion individual members were groups as cooperative and over 100 million people were created jobs from the cooperative society. Largest number of individual members indirectly represented by the ICA is the United States with 256 million members and there are nearly 30,000 cooperatives in the US. Second countries are in Asia, with India following next behind the US with 93.7 million individual members. Then Japan with 77 million individual members. The fourth largest number of

members is in Iran with 36.9 million individual members. It has a substantial abundance that tends to encourage economic contribution of cooperatives in economic growth of the country.

The empirical literature on growth models using panel data analysis has gained increasing attention since the work of Mankiw, Roomer and Weil (1992) and subsequently Islam (1995) who uses a Difference GMM. Besides, panel data is used to analyze growth models for a set of more than one hundred countries and the empirical results suggest a positive relationship with economic growth of the country.

According to Rabobank (2012) and Bezebih Emana(2009), Cooperative in less developing countries particularly in Ethiopia has a positive relationship with economic growth. They have confirmed that the economic contribution in Ethiopia in terms of generating income, creating jobs, promoting savings, adding value, access markets and giving their members a voice and representation in society has a greater role in economic growth of the country. The contributions of cooperation to economic growth of countries have been very significant. Cooperatives are viewed as an engine of growth and accelerate economic growth that contributes enormously to a nation's Gross Domestic Product (GDP) employment generation, industrial output, poverty alleviation, export promotion and self-independence. The researcher study had relied heavily on both qualitative and quantitative techniques to collect primary data.

All in all, five of the top ten countries, by membership, that the ICA represents- are in Asia. Italy is the first European country with 22.5 million individual members, represented through their organizations by ICA.

According to Zeuli(2002, Wisconsin cooperatives have a total of 2.7 million members and \$5.6 billion in gross sales for 1999. Furthermore, they have \$13 billion in assets and almost \$11 billion in liabilities. They employed 17,413 people full-time and 6,021 people part-time with paying \$583 million in salaries and wages and almost \$80 million in benefits to their employees. In estimating the impact of cooperative society on economic growth, several specifications were used to test the strength of the results. The results generally showed that asset building and agricultural input provisions have a positive and significant effect on economic growth. Cooperatives also offer more to their communities than employment opportunities. They provide market access and essential services to farmers and other community residents. They also help

develop local leadership (human capital) that can start and lead other social and business ventures.

Several empirical studies that analyzed the economic contribution of cooperatives in different parts of Ethiopia and elsewhere also indicate an overall positive contribution to economic development. However, the results are inconsistent, location-specific and vary with the nature of cooperatives (Emana 2009, Getnet and Anullo 2012). They develop an empirical investigation on the economic contribution of cooperatives in economic growth of Ethiopia using cross-sectional and panel data. The result articulates the favorable evidence is likely to be found when the impact of cooperative development on growth conditional on policies and geography is analyzed.

According to FCA (2019), about 98% of fertilizer was imported and distributed by Cooperatives society at Secondary Level (Union). It has grown from 8.4 million quintal in 2014 to 11.2 million quintals in 2018.

Besides, cooperative societies have also engaged in export activities and collected foreign currency 85,030dollar in 2014 and 99,314 dollars in 2018. Moreover, Ethiopia's export has grown by 1.4% to US\$ 2.9 billion in 2016/17 compared to the preceding year. This enabled the country to cover close to 19% of its import bill in the same year. After a growing trade deficit over the last ten years, 2016/17 saw an annual decrease of 6.9%. Cooperatives have a greater role in human development by educating the cooperative society's members. Members are growing from in 2011 years 6,635,458 members to in 2018 years with 26 million members. The results generally showed that they have a positive and significant effect on economic growth. The most estimation of the model applied in the study used the cross-sectional data and the key findings of their study showed that cooperative society stimulated economic growth. The study also showed that interaction between members empowerment, creating capitals, saving, loan provisions and exporting promoted growth. The report shows, the effect of cooperative society on economic growth in Ethiopia using different time series data has a positive and significant effect on economic growth.

The theoretical perspective of the study emphasized the fact that the empirical literature examining the economic contribution of cooperative society on economic growth is increasing in Ethiopia since 1990. Cooperative society encourages economic agents to invest. All these expectations result in a more pooling of existing resources, a more rapid accumulation of

physical and human capital, and faster agricultural product export to earn return, thus inducing faster long-term economic growth. It has a positive impact on cooperative society on economic growth. The authors also found a positive correlation and laid founded for the next years economic growth.

To sum up, the contribution of cooperatives is still very minimal to GDP, this demonstrates that overall cooperatives in the country have not been able to provide an optimal role in development and in improving the welfare of society and its members, and still incapable of being the solution for welfare distribution. Many authors suggest a need for conduct further additional research and updating information regarding the economic benefits of cooperatives. Panel data is now widely used to estimate dynamic econometric models. Its advantage over cross-section data in this context is obvious: we cannot estimate dynamic models from observations at a single point in time, and it is rare for single cross-section data to provide sufficient information about earlier time periods for dynamic relationships to be investigated. Its advantages over aggregate time series data include the possibility that fundamental dynamics may be covered by aggregation biases, and the scope that panel data offers to investigate heterogeneity in adjustment dynamics between different types of individuals, or regions. Whilst these advantages are shared by repeated cross-section data, from which panel data on grouped observations can be constructed on the same individuals - will typically allow more of the variation in the data to be used in constructing parameter estimates, as well as permitting the use of relatively simple econometric techniques.

Based on the objective of cooperative proclamation no.147/96 of Ethiopia stated that the cooperative has the functions and roles as follows; -

- ❖ Achieve a better result by coordinating their knowledge, wealth and labour;
- ❖ Improve the living standards of members by reducing production and service costs by providing input or service at a minimum cost or by finding a better price to their products or services;
- ❖ Expand the mechanism by which technical knowledge could be put in to practice;
- ❖ Develop and promote savings and credit services;
- ❖ Develop the social and economic culture of the members through education and training.

Improving the level of education appears to be crucial for all countries. While human capital is considered one of the main sources of economic growth. This idea is certainly nothing very

original and it has long inspired the works of economists of education or development [Mincer (1985), Schultz (1961) and Becker (1964)].

In many of the African countries, cooperatives societies were considered primarily as tools to execute certain economic, social or political functions on behalf of the government, not as autonomous, self-help member-based organizations that create and consolidate self-employment.

2.4. The Economic Contribution of Cooperative Societies in Ethiopia

Economic institutions are considered as the fundamental cause of economic growth (Acemoglu, *et. al*, 2005). The contribution of economic institutions to economic growth far outweighs the availability of natural resources, the supply of factors of production and technological progress (Johnson and Robinson, 2001). It can influence investment in physical and human resources, research and development (R&D), technology and the organization of production.

Brown (1986), thinks of cooperative enterprise as a business organization in which a group of individuals who have a common interest, mutually agree to join together to establish this business in order to promote their economic activities like production, distribution or marketing of goods and services, and for the provision of welfare benefits to their members with accumulating the existed resource for incoming period.

Since 1992, the Ethiopian government has introduced a more liberalized market-based economic policy with significant institutional restructurings in view of stimulating and accelerating the country's economic growth. The government implemented a medium-term development plan known as "Agricultural Development-Led Industrialization (ADLI)" strategy to inspire farm output and rural incomes, thereby generating broad-based growth and reducing poverty. The strategy focused on increasing production and productivity of smallholder agriculture through complementary intervention such as promotion of improved agricultural technologies, provision of credit services, development of infrastructure and improvement in primary education and health services.

As Novkovic (2007) said, cooperatives have an important role in the economy based on the values and principles of the cooperatives, but rarely recorded in the economic literature as the place to contributing economic development and also developing ethical business practices as well as play a role in other development sectors. Based on data from the SCA, Federal Cooperative Agency, MOFED and others annual published and unpublished bullets. It has seen that cooperative development in Ethiopia has increased in terms of quantity and economic

contributions. However, the economic activities of the cooperative in Ethiopia in terms of finance, job, and access improved agricultural input and others are not provided as predictable. Therefore, it is necessary to do a study to analyze how to influence the development of cooperatives on economic contribution and extent of contribution so as to identifying the managerial decision and also establish the optimal measures to maximize the role of cooperatives in the economy and development. The problems that need to be answered in this research is how the role of cooperative societies on economic contribution and development of communities. Current status of the cooperative enterprise in Ethiopia is growing from time to time in terms of number, type, membership size, saving, capital, export earnings, market transaction and input supply for their members and nonmembers.

2.4.1. Establishment of Cooperative Societies in Ethiopia

From the beginning, humans want to collaborate, work together or work as a team to achieve many of the tasks. The story of ancient Babylon is a good example, where people engaged in a form of cooperative activity in order to build the tallest building that would touch the sky. In Ethiopia, before the modern cooperatives were put in place, there existed cooperative societies that were indigenous to the local people. These includes the Iqub, Idir(Afosh), Wonfel and others indigenous and traditional farmers' societies which functioned at nearly all villages and community levels. The term cooperative is as old as human creation. Many cultures live communal lives whereby individuals or groups help others to accomplish a goal with belief that they would reciprocate whenever their help is required or needed. According to Masuku (2005), traditional forms of cooperation involved community members voluntarily pooling financial resources through an association of people with the common objectives of mobilizing resources, especially finance, and distributing them to members on rotational basis.

Cooperatives are key economic actors worldwide, in both developed and developing countries alike. In Ethiopia there are three well known traditional cooperatives in the country.

Align to the modern way of cooperative, traditional mutual action association has also been playing a vital role in rural and urban communities to bring socio-economic development. Modern Cooperative was begun in Ethiopia during the regime of Emperor Haile Selassie in 1960. There were about 77 Modern cooperatives established and started in Ethiopia. Before the stated years and still today people are organized through traditional cooperatives. Some

documents indicated that Ethiopian Air Line Workers saving and credit cooperative established in 1956.

The movement of cooperation in Ethiopia can be categorized under four phases. Namely; Traditional cooperative (Their system of living in cooperation that means; they work in group, habits of mailing commonly and living together in the nearby villages), the second is the imperial regime (it is a time of modern form of cooperatives begun in Ethiopia during the invasion of Italy). However, the principles and approaches followed were noticeably different, reflecting the political thinking and ideology of the regimes, the third is the military rule(which viewed coops as a key instrument to build a socialist economy pursued the cooperatives agenda more aggressively.) and the fourth is the present government(Government recognizes the role of cooperatives that could be assured food security and poverty reduction by implementing developed policies, strategies and programs and it gives high attention by declaring cooperative proclamation in which included international accepted cooperative principles and institutionalized from federal to kebele which provide promotion, regulation services for cooperatives).

Generally, modern forms of cooperative societies were 1st introduced in Ethiopia in 1960. Since the introduction of cooperative directive, Ethiopia has enacted 4 new proclamations and an amendment act. Namely, directive no. 44/1960, proclamation number 241/1966, 138/1978, proclamation 85/1995, proclamation 147/1998 and amended procl number 402/2004 and 985/16. The new cooperative movement in Ethiopia was triggered by reform made to the socio-political systems. A proclamation no. 147/1998 and amended one in 402/2004 and also 985/16 to provide for the establishment of cooperative societies had been also declared by the federal government to bring all types of cooperative societies under one umbrella. This proclamation ensures that cooperative policy is fully consistent with the universal cooperative principles and the ILO's promoting of cooperative recommendation 1993(2002).

With a population close to 109 million, Ethiopia is the second most populous country in Africa; only Nigeria has a larger population. The country is also characterized by a high, although falling, fertility rate. As a result, Ethiopia's population is expected to grow at a high rate in the coming decades. The link between population dynamics and economic growth is complicated. It depends on the size of the population, its age structure, the speed with which both are changing, and the policy response of governments to these changes through organizing the communities through cooperative society so as to pool the existing resources for overcoming the existing

problem faced. The Ethiopia goal is a long-term development blue-print that is expected to transform the country rapidly industrializing middle-income nation by the year 2030 to be implemented.

Aside from enacting cooperative proclamations, Ethiopia has formulated a five years cooperative development program. The demonstrations that the federal and regional government has realized the contribution of cooperative to economic development, food security and poverty reduction in Ethiopia.

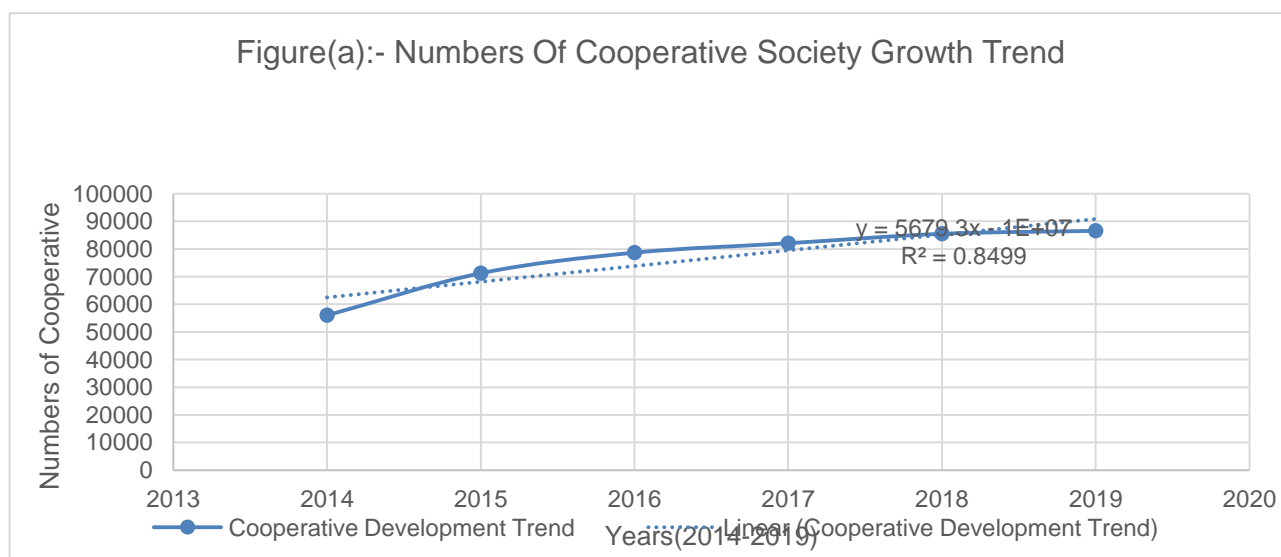
The cooperative structure in Ethiopia consists of different constituents. At the bottom of this structure are the primary societies which render various types of services. There are different types of cooperative based on the type of sectors which a cooperative is engaged to organize.

These include Multipurpose cooperative, saving and Credit Cooperative, Mining, Consumer Cooperative. Besides, cooperative is categorized as following based on the level of the cooperative to be organized (namely primary cooperative societies, Union, Federation and league level). Based on their share type includes; Multipurpose cooperatives (31%), saving and credit cooperatives (36%), consumer cooperatives (8%) and others (25%).

The growth of Agriculture, services and manufacturing industry have been considered critical in order to ensure sustainability of the economic growth and to realize the vision of becoming a middle-income country by 2025. Despites, the manufacturing industry has very insignificance contribution to the national economy, despite the pervasive notion that the country needs to maintain manufacturing output at a sizeable share in GDP The coop sector has been envisaged to play a leading role with working in all sectors with in terms of production and productivity, contribution to export earnings, promote domestic saving, technology transfer, skills development and job creation.

Consequently, the real cooperative value added has been analysis below:

Figure (a): - Cooperative Development trend in Ethiopia



Source: - Processed Data from Federal Cooperative Agency (2020)

This can be seen from the trend of cooperative society’s growth, where the expected economic contribution of cooperative movement has shown positive growth from year to year. The table shows that the numbers of cooperative societies have shown an increase from 6781223 in 2010 to 26,254,137 in 2018/2019. Multipurpose cooperatives, saving and credit cooperatives, consumer cooperatives, and housing cooperatives are the most important types in terms of number of establishments.

2.5.1. Growth of Ethiopian Cooperative Membership

Kimberly, Z. (2002) defines Cooperative Societies as a registered voluntary association of persons with membership not less than ten persons, with a common interest formed and operated along democratic principles, for the purpose of economic and social interests at least costs, to its members who contribute the capital and manage the business so established by delegating some powers to elected management. Economic policies and macroeconomic conditions have also attracted much attention as determinants of economic contribution. This is because they can set

the framework within which economic growth takes place (Barro and Sala-Martin, 1995). Economic policies can influence several aspects of an economy through investment in human capital and infrastructure, improvement of political and legal institutions. According to Valerian and Peluso (2011), analysis the relationship between good economic institutions and economic growth to bring sustainable economic growth. This brings about high-quality institutions, for example, bylaw, the rule of law, property rights, good judicial practices, less harassment from the police, etc through creating greater awareness.

Human capital and social capitals are the basic inputs that generate productivity and economic benefits (Solow, 1975). Inputs of physical and human capital as a main resource of the growth process in any country. It is the knowledge and skills that individuals use to solve problems. Social capital is the arrangement of human resources to improve the flow of information to generate future income. Social capital refers to cooperative societies systematized on the basis of networks, norms, and trust that facilitate coordination and cooperation for mutual benefits.

According to Chambo(2009), cooperative principle like education, training and information and others has direct contribution in economic growth and development of cooperatives society. Cooperative societies are aware of the need to have good economic institutions to realize this objective. To achieve good economic institutions, it encourages the cooperative members to embrace democratic practices, promote rules of law and property rights. This study is therefore undertaken to ascertain to what extent has the promotion of these good economic institutions impacted on per capita growth in the country.

A few studies indicate that cooperative membership also has a significant impact on economic growth. According to Cooperative law of Ethiopia, Cooperatives should provide education and training to enable members to effectively participate to strengthen the co-op movement and to “work for the sustainable development of their communities through policies approved by their members. Cooperative society has stimulated economic growth in the country and examined the impact of economic institutions on economic growth in the country. This study is therefore designed to bridge the existing gap by investing across the intervention over the time.

According to Hartono and Sarwono (2011) the biggest number of cooperatives is concentrated in regions with a better economic situation.

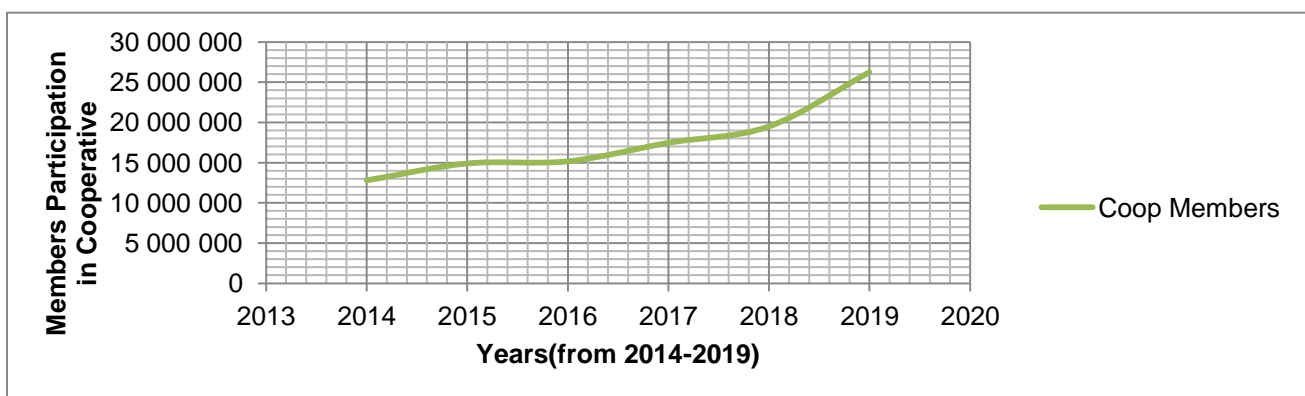
In cooperative society it is essential to increase production volume via utilized input function including the capacitating of cooperative members through educating and exercising the cooperative approach and utilizing the existing resources.

It has measured the quality of human capital using proxies related to education with becoming the members of cooperative societies. Therefore, evidence from empirical studies suggests that human capital is a key determinant of economic growth. Education benefits are given to members in areas of production, distribution and buying and selling of goods and services through statement. The societies have joint pride of ownership. Thus, they are jointly owned and managed by the members. They take decisions and make policies jointly.

Sustainability of cooperatives depends on active membership (see from below table). Of 112,079,000 total population of Ethiopia, around 23% of population is grouped with cooperative society in Ethiopia. The number of memberships in cooperatives relative to the total population provides a measure of cooperative outreach and consumer value in the countries. Cooperatives exist to provide members with services such as savings, loans, education and training as well as buying and selling goods at reasonable prices (consumer goods and farm inputs). This enables members to earn income, increase their purchasing power and promote among themselves equitable distributions of the net surplus.

It has been measured as the membership penetration rate relies to total population.

Figure (b): - Cooperative Member’s Participation Growth



Source: – Collected Data from Federal Cooperative Agency (2020)

The increase in numbers has led the government to actively plan for the cooperative movement in Ethiopia.

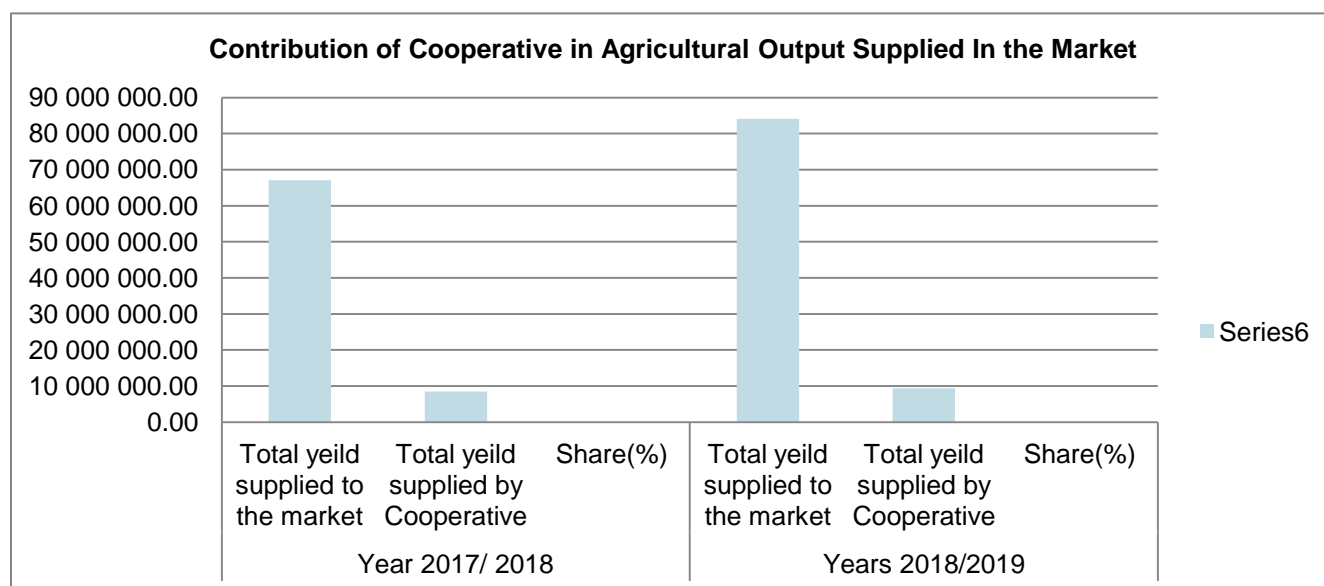
2.5.2. Role of Cooperatives in Supports for Output Marketing Activities

According to cooperative principles and objective of cooperative societies; they have involved in increase purchasing power of the organization through pooling the product of members with reducing a cost of distributive system and elimination of unnecessary middlemen, removal of useless duplication of services, and elimination of fraudulent/ fake/imitation practices like adulteration, short weight, etc. for collecting high revenue. In Ethiopia. Cooperative farming entails a coordinated effort in which farmer's pool resources in order to maximize their production and returns. "The purpose of the cooperative (business) is to provide greater benefits to the members such as increasing individual income or enhancing a member's way of living by providing important needed services.

It is an internal trade and an apex organization of marketing cooperatives in the country. It is engaged in interstate trade in agricultural commodities, particularly food-grains, pulses, oilseeds, cotton, jute, species, fruits, vegetables and honey with a view to assuring better prices to the producers. The objectives of internal trade operations are both the market support to farmers and maintaining steady supply of commodities to consumers of reasonable prices.

The various products, which are expected to be marketed by the cooperatives, are Coffee, Honey, grains, vegetables, Animals and other agricultural outputs. Even though cooperatives create markets for the members' products in particular and for the local community in general, they could not utilize their potential. This is due to various constraining factors, such as dependable market, limited financial capacity, lack of qualified and committed leadership and lack of members' commitment, beside problem such as lack of transport facilities, infrastructures (road) and lack of strong/functional/ apex organ such as cooperatives federation among other things have limited their marketing ability. While many researchers are beginning to use alternative measures besides GDP to measure progress and output in a society, we believe that there is still great value in looking at GDP relative the cooperatives' revenues or value addition.

Figure (c): - Contribution of Cooperative in Agricultural Output Supplied in the Market



Source; Cooperative Promotion and Market Development Agency, 2019/2020

As shown above graph shown, from the total agricultural output that has supplied to the market, cooperative has 12.7% share in 2017/2018 and decline to 11.17% share in 2019.

The contribution of cooperative in creating market access is one of the main benefits of establishing a cooperative. Cooperatives are engaged in both purchasing inputs and consumption goods, and also access to selling outputs. The price cooperatives pay for members’ outputs and the price they charge their members for inputs are much better, to the advantage of members, than those paid and charged by traders.

According to FCA, 2010, Cooperatives have 52.3% market share with vegetable and fruit, 12.64% market share with all transactions made. Above table shows that, the total sales volume in quintals are 12.7% share in 2017/2018 and decline to 11.17% share in 2019. Firstly, the cooperatives purchase the products from their members. This process provides the individual members with an honest and low-cost market for their products and dividend after their cooperative sells the products to the market at a reasonable profit margin.

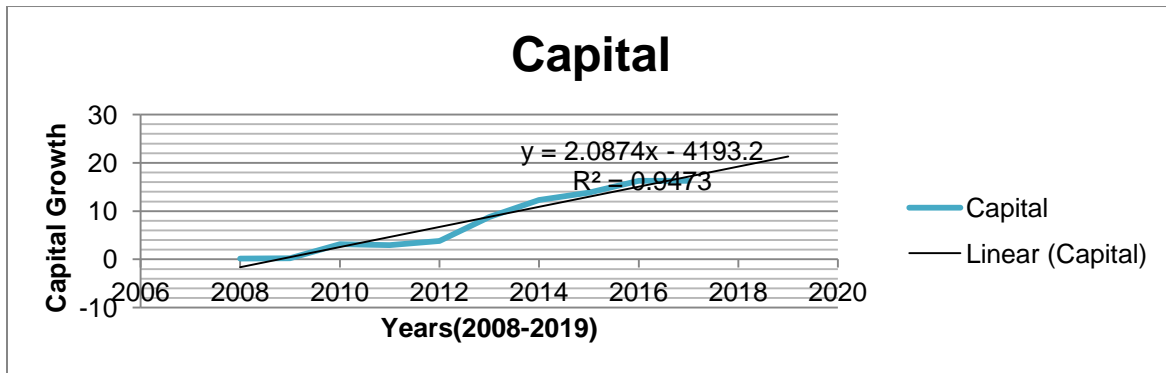
2.5.4. Wealth Creation

According to Solow (1975), physical capital and social capitals are the basic inputs that generate productivity and economic benefits. Physical capital, including financial assets, consists of the material resources used to improve flows of future income while social capital is the arrangement of human resources to improve the flow of information to generate future income. Social capital refers to cooperative societies systematized on the basis of networks, norms, and trust that facilitate coordination and cooperation for mutual benefits. Besides, an accumulation of capital by increasing savings rate leads to a larger amount of capital stock and higher output level but this growth is only temporary and lasts until the economy reaches a new and higher level of steady state which is the long run equilibrium of the economy

According to Birchall (2003), cooperative began by enabling people to raise themselves above poverty, but later they became a means by which low- and middle-income people continued to accumulate economic advantages. Cooperatives are well placed to mobilize capital and can therefore bridge the economic and the social gaps by providing employment, an equitable distribution of profits and above all, promote additional income through profit-sharing, distribution of dividends and other benefits like community facilities (health clinics and schools). Cooperatives are also major sources of employment in large-scale enterprises providing food stuffs, services to consumers, and financial services.

Nembhard (2002), says that successful cooperative businesses create wealth and help their members accumulate wealth. There are many types of cooperative in the country: multipurpose cooperatives, artisan, saving and credit, consumers, mining, fishery and others. All these cooperatives have greater contributions in economic development through pooling the endowed resource in the locality through increased income and business know-how gained as a result of membership. Cooperatives help to create, improve and protect the income and employment opportunities of their members by pooling the limited individual resources of members to create business enterprises that enable them to participate in production, profit-sharing, cost-saving or risk-taking activities.

Figure (d): - Capital Growth of Cooperative



Source: Compiled from Federal Cooperative Agency, Ethiopia from 2008 to 2019.

According to Agustina, (2016) capital that comes from members is determines the members benefit more when compared to capital originating from outside. According to above table, the capital of cooperative is growing from 2008 to 2019.

2.5.5. Agricultural Input Supply

Agriculture's role in the process of economic growth has framed a central question in development economics for several decades (Johnston and Mellor 1961; Schultz 1968). While arguments differ regarding the specific mechanisms through which agricultural productivity increases might contribute to structural change in the economy.

According to Pollet (2009) agricultural input have a significant direct impact on promoting economic growth of the country. Cooperatives play a major role in distributing the agricultural produce at fair prices to both a buyer and a seller. The importance of cooperatives can be inferred from the fact that most of the total households in rural areas are covered by cooperatives.

Agricultural inputs such as fertilizer, improved seed and pesticides are key ingredients for bringing about improved agricultural production and productivity. The continuous economic growth registered in the country is attributable to the growth registered in the agriculture sector of the economy (CPA 2009). In this regard cooperatives are believed to have made the lion share contribution towards achievement of this remarkable agricultural growth in the country mainly through timely supply of agricultural inputs to member and nonmembers farmers in different

parts of the country. Starting from the year 2005 cooperative unions has started to directly import fertilizer and distribute it to farmers.

Cooperatives are also the dominant distributors of seed and fertilizer to farmers: they account for about 90% of modern input distribution (MoA/ATA, 2012). The share of cooperatives in fertilizer marketing was 98%, with a similar proportion for improved seed (FCA, 2019). Cooperatives generally obtain inputs from quasi-public agencies and seed producers and sell both fertilizer and seeds to all farmers (members and nonmembers) who are charged less for this service than comparable organizations in other countries. Historically, Ethiopia only used two fertilizers; Urea and DAP. However, from 2013, NPS was introduced as a substitute to DAP. There is no primary production of fertilizer in Ethiopia and about 5 fertilizer blending plants installed in 4 regions. The plants currently blend small volumes with each having an installed capacity of 50mtph. They have stocks of Boron, Zinc and Sulphur which they use to add to the NPS and DAP to meet the soil/crop specific requirements of farmers. In 2018, OCP came in to help the management and operation of all the blending plants, in a bid to provide technical support to the cooperatives that have not been successful in running the plants.

Following the introduction of fertilizer in Ethiopia in the late 1960s, fertilizer application levels remained low until the mid-1980s, when consumption increased slightly with the introduction of the Peasant Agricultural Development Program (PADEP). Since then, a series of policies continues to reshape fertilizer supply in Ethiopia.

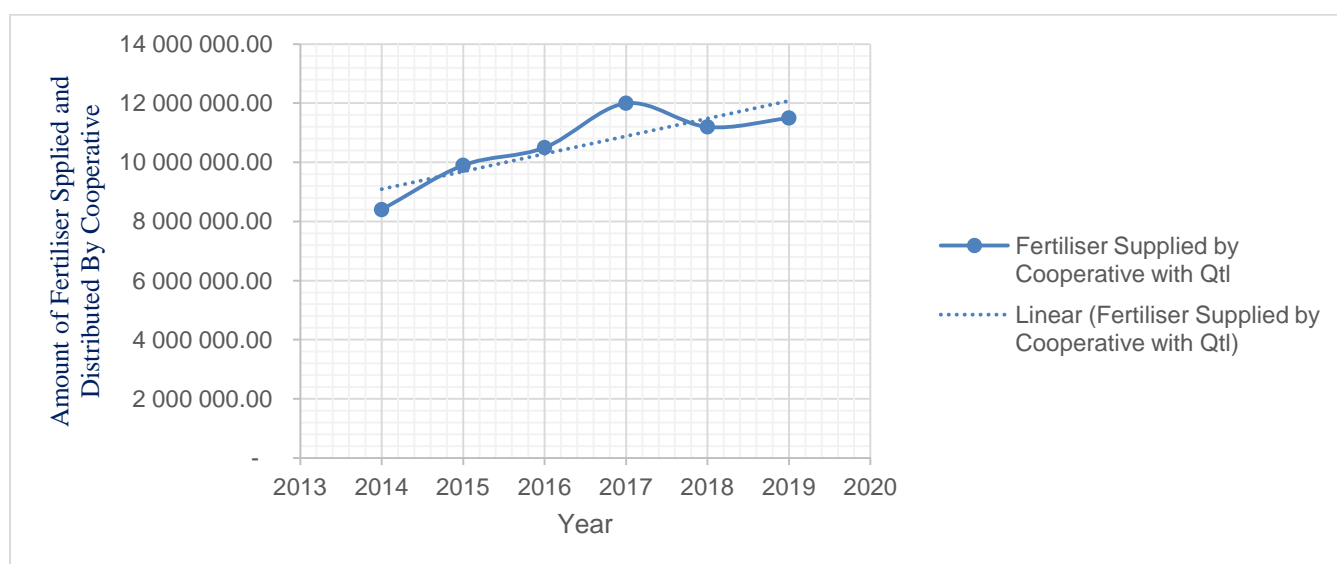
Prior to 1992, the government-run Agricultural Inputs Supply Corporation (AISCO) was the sole player in a subsidized fertilizer market network. Inefficiency and cost concerns led to partial liberalization in 1992, which allowed a few private companies and regional state-run agencies to enter the market. However, competing against a state-run enterprise for a limited market demand became difficult, which led these private firms to exit the market. By 2007 the regional state-run agencies were replaced by farmers' cooperatives, and in 2008 AISCO was renamed AISE, reverting to its prior status as the sole fertilizer importer.

The share of the market for private firms decreased from 30 percent in 1996 to less than 10 percent by 2001 and then to zero in 2002. As the share of private companies diminished, regional state-run agencies took over, but these were also replaced with cooperatives as AISE became the sole importer.

Fertilizer import and distribution is done by the public sector organization called the Ethiopian Agricultural Business Corporation (EABC). EABC imports the fertilizer through Djibouti port,

discharges the cargo at the port, and delivers the product directly to the cooperative union warehouses if they are ready to use them or stores in its 33 warehouses located around Mekele, Addis Ababa, Adama, Shashemene, and Komblocha to be transferred later to the cooperatives. At this specific year there were only three unions engaged in importing and distribution of fertilizer. But in subsequent years the number of unions engaged in importing of fertilizer has increased. The total amount of fertilizer imported and distributed by the cooperative unions during the last four years (2013-2016) was 100,000; 175,000; 228,700 and 327,500 tons respectively.

Figure (e): - Trend in the volume of import and distribution of fertilizer by cooperative



Source: - Processed Data, 2020

Totally, 98.8% of the country's fertilizer is distributed by cooperative societies. Cooperatives are becoming increasingly important to individual members, the community, the business sector, and the national economy in Ethiopia. Apart from the role of cooperative unions in import, their role as 'distribution channel' is much more important. Cooperative unions have been playing a tremendous role in distribution of fertilizer to farmers (ACDI/VOCA, 2005). In the year 2000, cooperative unions distributed 3,645,503 Quintal of fertilizer. Around 95% of the total inputs supplied to the rural community in 2014 are distributed through cooperatives. There is carryover from the fertilizers distributed to regions, most of which would be used for irrigated crops. Fertilizer carryover stocks averaged 33 percent of imports between 2002 and 2011, with a high of 61 percent in 2002 and a low of 12 percent in 2007. These stocks, resulting from the mismatch between actual fertilizer demand and imports, accentuate the year-to-year variability in fertilizer

import levels. Consumption levels vary across the country with the Oromia, Amhara, SNNP and Tigray region. The results generally showed that asset building and agricultural input provisions have a positive and significant effect on economic growth.

2.6.6. The Contribution of Cooperatives in Generating Employment

Investment in human capital, in particular in education and health, has been one of the important pillars of intervention by the Ethiopian government to foster long-term capabilities of the country and to deal with rampant poverty. One of the contributions of cooperatives is generating employment for both members and nonmembers of the cooperatives. One of the objectives of the study is to assess the contribution of cooperatives in generating employment. In Ethiopia, the challenge of employment generation is equivalent to achieving the objective of sustained growth and reduction of poverty. One of the prime roles of cooperative in the national and local economy is creation of employment opportunities for members and citizens in general (Dorsey, J. & Tesfaye 2005).

Accounting Matrix in the rural areas of Wisconsin state via cross section data. 798 cooperatives have generated 17413 full-time and 60211 part-time jobs and confirm cooperatives are a basis for unemployment reduction. A strong argument could be made that in measuring cooperative employment relative to only the adult population in a country should be used. However, for consistency we also use total population in this measure. It should also be noted that these employment figures are considered formal employment and could significantly under represent the actual employment. Many farmers contribute their labor to the cooperative and income is derived from the sale of products through the cooperatives. While these agriculture cooperatives have volunteer labor many also have employees but data was not available. That said we did not find evidence of cooperative employment being near 100 million as the ILO had previously estimated.

Cooperative is a business enterprise that is used, owned, and controlled by the same people, the members. In other words, the users of the services offered by the cooperative are the members themselves, not outsiders. The services offered by cooperatives to their members may include marketing services, financial services, and employment generation, among others, based on the nature of the cooperative. Except for some forms of cooperatives, such as, savings and credit cooperatives, marketing cooperatives, dairy cooperatives, and consumer cooperatives, which may be run by a few volunteer members or paid non-member employees, most other forms of

cooperatives are supposed to be run by all their members as employees, thereby creating employment opportunity for their members. On the other hand, higher-level cooperatives, namely, unions and federations are commonly run by employed non-member professionals owing to the huge capital and management complexity thereof. Unfortunately, no data on the number of non-member employees in all levels (primary, union, and federation) were readily available.

Table (i): - Employment Created by Cooperative

Type of Job Created	No of Employment Created ('000)					Average (%)
	2015/16	2016/17	2017/18	2018/19	2019/2020	15/16
1. Job created by domestic and foreign investment project	25,434	30,487	368,217.00			564%
2. Small Enterprise	1,665,517	1,172,678	187,945			-277%
1+2	1,690,951	1,203,165	556,162			-56%
Job created by Cooperative societies						
a. SACCO	97,243.00	103,000.00	611,472	582,000	499,132	253%
b. Other Cooperative Society	19,340.00	17,654.00	23,437		83,000	8%
A+b	116,583.00	120,654.00	634,909	582,000		217%
(1+2) + (a+b)	1807534.00	1323819.00	1191071.00			
Cooperative Share	6.45%	9.11%	53.31%			

Source: - FCA (2017/18)

As can be seen from table 1.1 above, there were about 1,690,951 employment in 2015/16, 1,203,165 in 2016/2017 and 556,162 new jobs created by other sectors. The cooperative has created jobs for 116,583 in 2015/2016, 120,654 in 2016/2017, 634,909 in 2017/2018 and about 582,000 numbers of employments in 2018/2019.

This is therefore; the above table shows the increasing contribution of cooperatives to total employment, with a share that increased from slightly more than 6.45%, 9.11% to 53.31% jobs from 2015/2016 to 2018/19 respectively. However, that improvement should not hide the fact that coop's contribution rate to total employment is still weak. Such a proportion is far from the proportion for cooperative in other developing countries.

According to FCA (2008) cooperatives also support the self-employment of 115,079 members. Cooperatives serve not only members but also other nonmembers particularly through employment opportunities. In Ethiopia, cooperatives have provided self-employment

opportunities for about 1,049,047 members, and for more than 100,000 non-members. This shows that cooperatives have an enormous role in reducing the unemployment problem of the country (FCA, 2014). The results generally showed that it has a positive and significant effect on economic growth.

2.6.7. THE CONTRIBUTION OF COOPERATIVE IN RESOURCE MOBILIZATION AND CREAT CAPITAL

According to Somavia (2002) cooperatives are specifically seen as significant tools for the creation of jobs and for the mobilization of resources for running any business activities. Many cooperatives provide positive contributions of financial sector development to economic growth through financing for management business. It directly contributes to economic growth through value created of small entrepreneurship and businesses, positive spillovers, improvements in human development indicators. Saving and Credit Cooperative (SACCOS) is one of the thematic working areas of promoting saving culture in the society and working in both urban and rural areas. SACCO is a group of communities who contribute money into a common fund in order to raise investment, finance and distribute same as soft loans to members. So, the main aim of this type of cooperative society is to encourage savings among members and also offer credit facilities to members to enable them engage in economic activities.

ILO (2011) has studied how the cooperative contributed in many communities to increasing both human and social capital through strengthened social networks. Cooperative societies have stimulated productive creating capital among large numbers of individuals through improved production methods resulting from education and training activities offered to members of cooperatives, enabling farmers to improve incomes, nutrition and food security through higher yields.

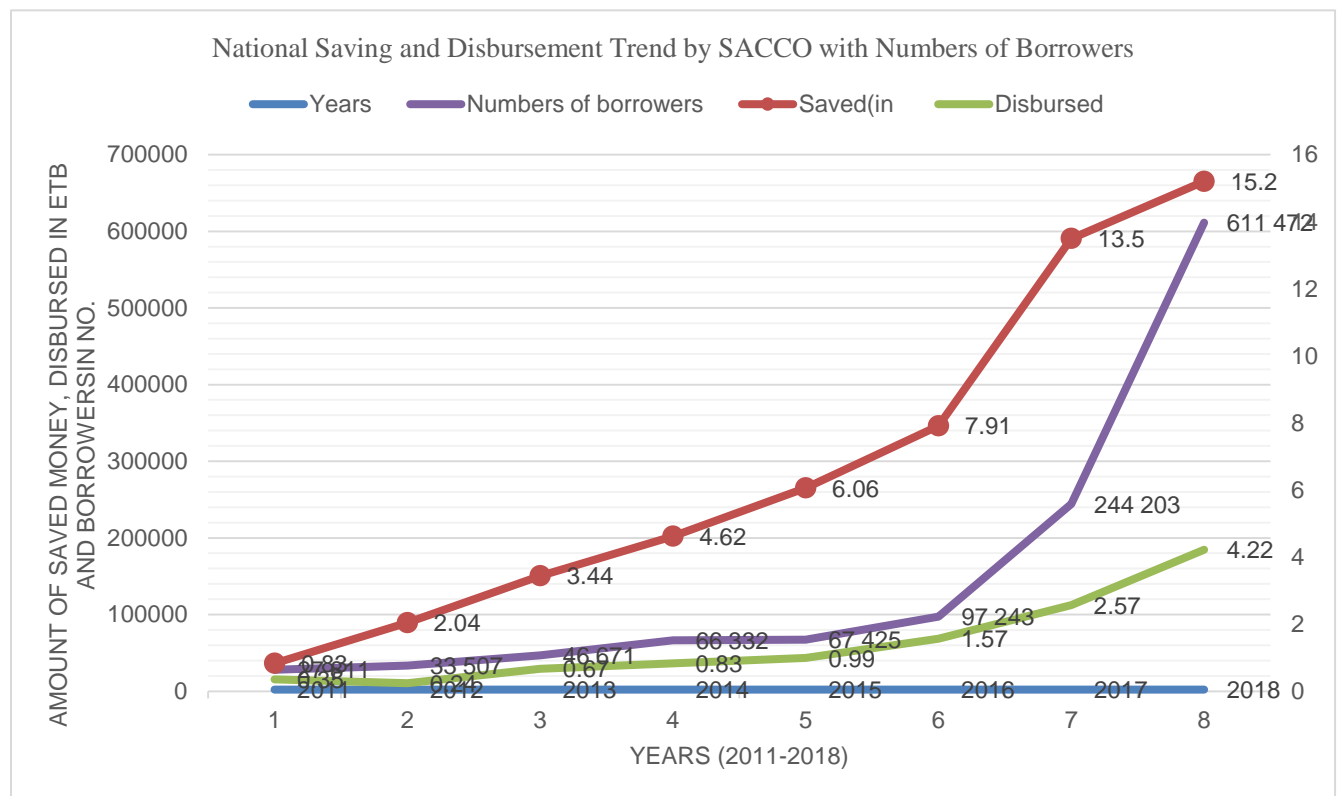
According to Ugochukwu and Ugwuoke (2013) about 80% of cooperative societies were forced with poor management by officials, poor participation of members, inadequate training and inadequate capital base in cooperatives to run the business activities. SACCO is expanding credit services and spreading a savings culture among the unbanked segments of the population: these are considered important policy tools in mobilizing savings in the country. Basically, cooperatives are established to solve the problems of low bargaining power, lack of market information, lack of transportation facilities, unable to buy agricultural inputs, unfair prices, inefficiency, the problem of financial exclusion, and middlemen exploitation, among others.

Ethiopia’s financial sector does not offer competitive financial services on the scale required, as it remains small, fragmented and lacking in depth and breadth. Access to finance particularly is a major impediment to the expansion of productive activities.

This type of saving is contributed by cooperative members deposited or saved regularly beyond the minimum requirement approved by cooperative general assembly. It depends on the consent of the member and it can be withdrawn at any time from the cooperative account by normal procedure after submission formal prerequisite formality fulfillment.

An overview of the role of cooperatives in promoting economic empowerment through savings and credit mobilization has been presented in table below.

Figure (f): - National Saving and Disbursement Trend by SACCO with Numbers of Borrowers



Source: Cooperative Promotion Department, FCA, 2019

Saving and Credit Cooperative societies are an increasing trend from the period 2011 to 2019 in terms of mobilized resource as saving, amount of disbursed and numbers of beneficiaries as borrowers. In other words, the amount mobilized as savings increased from 0.82 billion in ETB in 2011 to reached 15.20 billion ETB in 2019. Of these, 0.35 billion ETB was disbursed in 2011 for 27,811 cooperative members and 4.22 billion ETB was disbursed for 611,472 borrowers with low interest rates. During the period 2011 – 2019 witnessed an increasing trend of mobilized

resource and disbursement. The results of the study showed that economic institutions promoted growth. The study further demonstrated that investment also promoted economic growth.

However, despite the fact that Cooperative has been identified as a tool for economic development and provision of employment and develop saving habit, but lack economy of scale due to their limited financial size and poor proper management skill there has been identified as factors that hamper the development of cooperative in Ethiopia across the region over the next years. The results generally showed that it has a positive and significant effect on economic growth.

2.6.8. The Contribution of Cooperative in Export Earning

According to Bernard, 2010 and FCA (2014) cooperative societies have used as tools to overcome the shortage of foreign currencies by supporting the production and export of high value commercial crops, like coffee. In order to get a clear overview of previous studies on the effect of cooperative on economic development, we have divided the discussion as underneath.

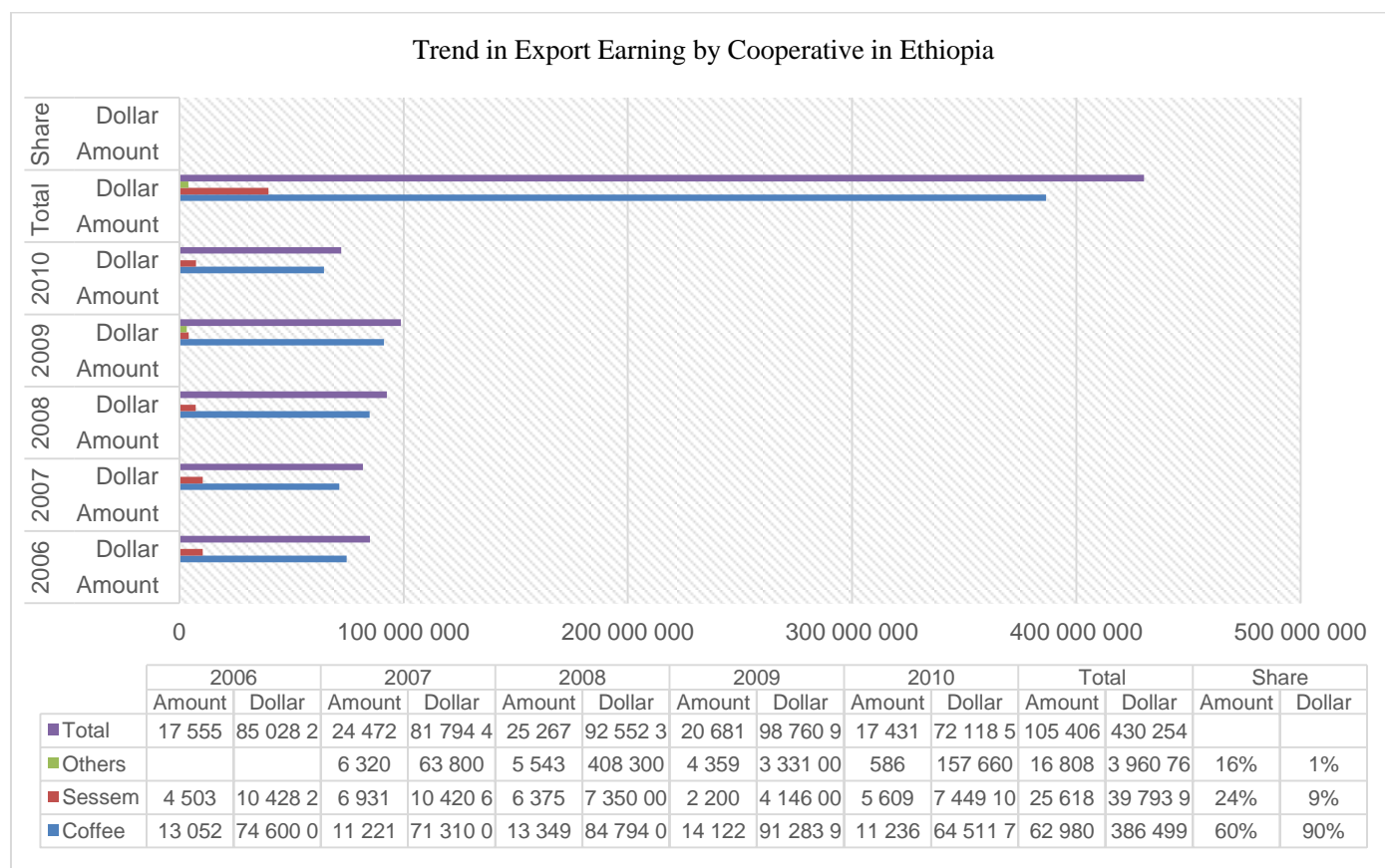
Openness to trade has also been used extensively in the economic growth literature as a major determinant of growth contribution. Openness affects economic growth through several channels such as exploitation of comparative advantage, technology transfer and diffusion of knowledge, increasing scale economies and exposure to competition. Openness is usually measured by the ratio of exports to GDP.

Exports – Exports of agricultural commodities through the co-operative marketing system developed on a large scale. The coop exports agricultural commodities, particularly coffee, sesame, alive animals, vegetable and fruit and other animal's byproduct through maintaining its quality and time delivery.

According to data collected from FCA (2018/2019), Producers cooperative union has been exporting to the world market and benefiting from the fair-trade coffee sales and other organic confirmation certificate since its establishment and it has more than 10 years export experience. The producer's cooperative union and federations, 17,555 tons in 2014 with 85,028 dollar and 17,431 tons produced organically in 2018EC with 72,118 dollars are annually exported to the world markets. The union has been enhancing the socio-economic development of the society in particular and the country in general. The major coffee is exported to Europe, USA, Japan, Far East countries, Canada and Australia by union. The following data discussion shows us the

general export marketing practices of the union and federation for the last five years presented here under from secondary data.

Figure (g): - Trend in Export Earning by Cooperative in Ethiopia



Source; Processed Data, 2020

As the above table indicates, the union's export volume increases from year to year except in 2009 and 2010 in which the sale amount decreased from the previous trend. However, the sale value in Birr was the highest in the year due to an unexpected raise of coffee prices on the global market was the main reason. The highest and the lowest export volumes were seen in 2009 and 2006 years respectively. The sale value in terms of birr earned from sale of coffee increases from 2006-2010 years. It tells us as the time changes the price of coffee also changes even though the amount of sale volume decreases, the sale price increases due to the demand of coffee increase in the global market. From total export of the year, cooperatives have 60% share from exported commodities in the country.

2.6.7. The Contribution of Cooperative in Value Added

In order to expand the contribution of cooperatives in industrial transformation, organizing agro-processing industries is one of the focusing areas of economic growth program. Thus, the cooperative sector is aggressively working on expansion of agro-processing industries and value addition

Table (ii): - Value Addition Made by Cooperative Society

Type	2015	2016	2017	2018
Industry (coffee, packing material, honey processing and others)	496	553	823	878

Source: - FCA (2019)

It shows that since 2012 to date, cooperative societies have organized 7 millers factors, 1 packing material factories, 106 milk complex, 4 food oil processor, 1 spice processor, 5 vegetables & fruits processor, 12 honey processor and others agro-processing were planned, based on these stretched plan 9 millers factors, 1 packing material factory, 66 milk processing complexes, 5 edible oil processors, 1 spice processor, 2 vegetables & fruits processors and 4 honey processors and 406 coffee processors and others totally 496 different agro-processing industries were organized in last five year program.

2.7. Research Gap Identified

Empirical studies have analytically shown that there is positive economic contribution of cooperative with economic growth across the country over a given period. Satisfactory answers to these studies account for economic contribution of cooperative by empowering the members, promoting saving habits, provision of loan, and provision of fertilizer and engaged in exporting highly commodity crops. Referring the result of previous scientific studies, the cooperative existence in Ethiopia has a different pattern of influence on the economic contributions at micro level and then laid founding for macroeconomic growth of the country. It can be caused by several factors such as scope of the study, the study periods, research methods, location, and numbers of observations. From various previous studies, none of the researchers conducted and comprehensive research about the economic contribution of cooperative society in Ethiopia. So far, the research on economic contribution of cooperative that used a quantitative approach is still partial only to certain cooperative society and certain regions, not nationwide. Meanwhile,

macro research is more likely to use a qualitative descriptive analysis approach and single cross-sectional data procedure techniques.

Moreover, most authors' approaches have been developed for single cross-sections of countries under the assumption of exogenous growth determinants. These studies can therefore not address a second main challenge to growth econometricians, the endogeneity of growth determinants. In principle some of these issues can be dealt with in a panel data context, which allows including regions-specific fixed effects in the empirical model and accounting for feedback from economic growth to the regressors.

The findings of many authors have shown that Cooperative is a key for economic development. However, it has faced on the problematic of organizational and structural problems, lack of financial resource and capacity, huge interference of the political tier in the functioning of the cooperatives, absence of professional management, lack of strategic plans for proper planning with a growth orientation, lack of entrepreneurial and marketing skills (Veerakumaran G, 2007 and Alema, 2008 and ate.).

This empirical evidence from literature has shown that study on the role of Cooperative in economic growth of the country has been carried in Tanzania, Kenya, Ethiopia and others. A developed financial sector is today the most important driver contributing to economic growth. This confirms that cooperative efficiency and contribution improvements are effective in promoting countries economic growth.

However, the literature available at disposal confirms that very few studies have attempted to measure the economic contributions of cooperatives in the context of Ethiopia, which means their contribution to economic development has not been well studied and little is known about their contribution as an economic sector. Until this proposal, no comprehensive set of national-level magnitudes of cooperatives had been compiled about the relationship between economic contributions of cooperatives with economic growth. Hence, this research will be conducted having the aim of filling the gap on such areas of cooperatives contribution in the economic growth of the country. On the other hand, the contribution of the cooperative societies to national economies has been seriously underestimated.

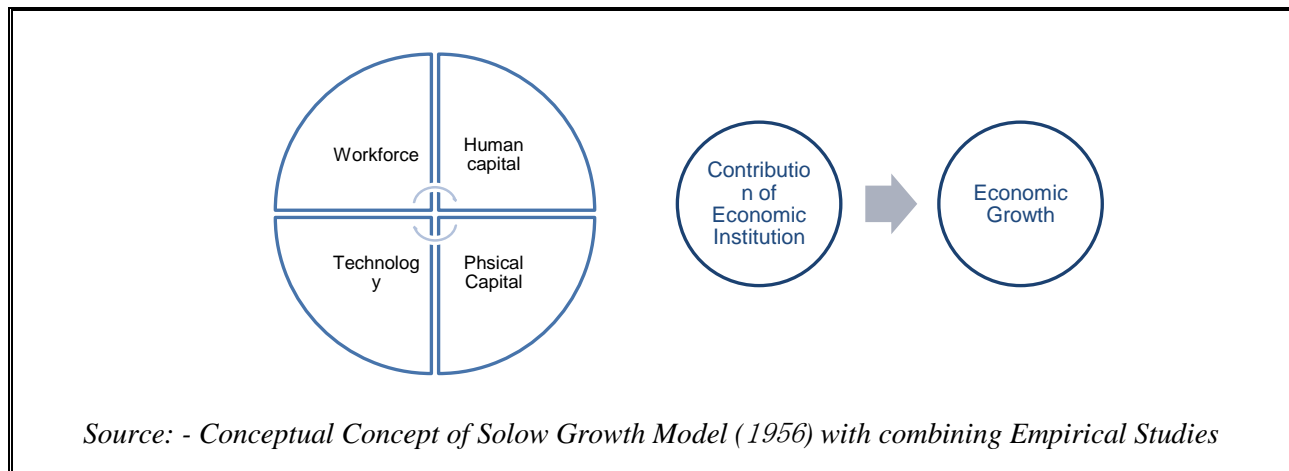
2.8. Conceptual Framework

Generally, the theoretical framework and outline is based both on the findings in chapter one and two and on some features briefly touched upon. The conceptual framework of this study is based on a literature review on the role of cooperatives to the economy and social welfare.

Based on Solow growth model (2011), the model considers the major determinant of economic growth namely Human Capital (K), Financial Capital (F), exports of goods and services (Ex) and another determinant. The model takes the following reduced form:

The conceptual framework visualization of this research can be seen as in below figure.

Figure 1. Framework of Research Concept



The above picture is derived from the Solow growth Model and above review literature. We have briefly looked at the economic contribution of cooperative society variables and touched upon the importance of economic sectors. This analysis took the form of utilizing annual growth rate across Ethiopian regional states. This variable includes numbers of cooperative development trends, cooperative members, domestic saving mobilization, fertilizer supplied and distribution, export, loan and capital. The major independent variables were numbers of members engaged in business, contribution capital, saving, credit provision, input supplied, export earned currency and cooperative size.

Thus, hypothetically, there is a positive correlation between economic contribution of cooperative growth and economic growth overtime, which can be less or more than proportional rate (Figure 1). Based on the previous research and the type of data used, to answer the purpose

of the research is used regression data panel model which combines time series data and cross section (Baltagi, 2005).

The study attempts to empirically investigate the relationship between economic contribution of cooperative society and economic growth across the region, over time in Ethiopia. The overall goal of the cooperative is to assist the cooperative members in their activities by taking over one or several economic functions. The achievements and the success are measured by the stage of each cooperative contribution efforts, effectiveness, and extent of national economic development.

Multiple linear regression models are an econometric model which depicts that dependent variable is linearly related to the many independent variables whereby the relationship between the two is not exact but subject to individual variations (Gujarati, 2004). Once the coefficients for explanatory variables (economic contribution of cooperative) are estimated, the model is used to determine and explain the variable (economic growth) for policy implications. This paper considered an augmented growth model by Solow as adopted from Seetanah (2011). The model considers the predictable sources of economic growth namely Human Capital (K), Financial Capital (F), exports of goods and services (Ex) and other determinants. The model takes the following reduced form:

$$Y = f(Y_{t-1}, K, F, EX, E) \dots\dots\dots \text{Equ(1)}$$

Where Y is the difference of the log of GDP per capita ($\ln Y_t - \ln Y_{t-1}$), Y_{t-1} (Y lag) is the log of GDP per capita lagged by one to represent initial level outputs, K is the gross physical create capital, F is the financial capital, Ex is the exports of goods and services and E is the other determinant. As such, the econometric model specification can be written as:

$$Y_{it} = \beta_0 + \beta_1 Y_{it-1} + \beta_2 K_{it} + \beta_3 F_{it} + \beta_4 EX_{it} + E_{it} \dots\dots\dots \text{Equ(2)}$$

Where *i* denote the different regions/countries in the sample, and *t* denotes the time dimension. The small letters denote the natural logarithm of the variables implying a double log-linear specification for ease of interpretation (that is in percentage terms).

Where, $E_{it} = \mu_i + \lambda_t + v_{it}$

E_{it} is an error term variable (where μ_i represents the unobservable individual (cross section) heterogeneity, λ_t denotes the unobservable time heterogeneity and v_{it} is the remaining random

error term. The first two components (μ_i and λ_t) are also called within component and the last (ν_{it} , panel or between) component,

According to Gujarati, D. (2003), panel data analysis endows regression analysis with both a spatial and temporal dimension. The spatial dimension pertains to a set of cross-sectional units of observation.

CHAPTER THREE

3. Research Design and Methodology

3.1. Description of the Study Area

The study area incorporated selected primary cooperative societies found in four Regional States of Ethiopia (Oromia, Amahara, Tigray and SNNP) and One City Administration (Addis Ababa). The 4 regional states and one city administration of Ethiopia selected were chosen out of the 9 regional states and two city administrations in Ethiopia.

3.2. Source and Dimensions of the Data

This study improves on existing cross-regional databases in several data dimensions and uses the time dimension, updating the data set and generating 5 periods for analysis. It also adds to the cooperative society firm size, equipping a range of economic contribution of cooperative society measures across the regions.

Region coverage dimension: - This study both updates and expands the region's coverage of previous data collection efforts. By seeking regional observations from previously identified public domain sources, the study improves the accuracy of the economic contribution of cooperative society's measures explained above. This study also provides a wider sample of federal data than others available.

Time dimensions: - The temporal addition is 5 years. First, the study adds the most recent data for originally available federal as well as regional levels. This allows greater precision in analysis, since the data source reflects a shorter time horizon relative to the regional dimensions as possible. Then, the study supplies 5 time periods extending from 2015 to 2019. With 5 time periods, the study analyzes the possible relationship between economic contribution of cooperative society and economic growth across the study area over time.

Secondary data has been used to undertake the study. Secondary data generated in the study comes from the Federal Cooperative Promotion Agency, World Development Indicators Online of the World Bank, Journal Article, Federal Planning Development Commission, Annual Published Bulletin and etc. The time variant data covered the period 2015 to 2019 from which a dynamic panel data was compiled on four regional states of Ethiopia and one city

administration. A number of variables which could have been part of the sample were omitted due to lack of sufficient data on some of the variables under investigation.

A cooperative is a people centered business enterprise and engages in economic activity through combining the resources of capital, labor, and other inputs to create and sell a product or service to either members or non-members. The agent or management committee has delegated to implement and achieve the ultimate goal of the business enterprise under the control of the members. The contribution of the cooperative in the study was measured in terms of the magnitude of business activity context (i.e in quintal, numbers and Birr). It was offered descriptive background for all above mentioned indicators major aggregate economic sectors where cooperatives are active.

3.3. Sampling Technique, Data Collection and Data Analysis Methods

During the study, a purposive random sampling technique was used to take selected cooperative societies found in four regional states and one City Administration samples from the total nine regional states of Ethiopia. The name of cooperative societies includes; Oromia Regional State, SNNP, Amahara, Tigray and Addis Ababa City Administration. Sampling was undertaken from different types of cooperative activities: Multipurpose cooperative, saving and Credit Cooperative, Mining and Consumer cooperative Societies in Ethiopia which are established under the proclamation of 147/98 with amended procl 402/2004 and 985/16. The target population for the study was all registered and active primary cooperative (numbers of cooperative society size, members, capital, saving and loan) and Union (only for provision of fertilizer, export and import items) in Ethiopia in four regional state and one city administration, which were involved in the supply of farm inputs, supply of purchased agricultural products, mobilized fund, exporting and consumer goods.

Dynamic panel data analysis was used. It is preferred for indicating the relationship between economic contributions of cooperative lead to economic growth across the regions over a given time. It is data derived from a combination of cross section data that consists of 4 regional state and one city administration ($n = 5$), as well as time series data for 2015-2019 ($t = 5$), thus the number of observations in this study is 25 times. The data is balanced panel data and became unbalanced after processed by STATA. Secondary data were collected from reports (both published and unpublished) undertaken by the Federal Cooperative Promotion Agency. Data,

such as the cooperatives' constitution and bylaws of financial management, relating to the cooperatives were also collected from the cooperatives studied.

Once data gathered, then data fed to STATA version 14, then by using a descriptive and inferential statistics method of data analysis appropriate graphs and tables were processed to internalize the raw data collected from the reference. Finally, data were presented and discussed accordingly. The collected data was regressed and analysed using descriptive statistics, and multiple linear regression analysis.

Descriptive statistics such as mean, standard deviation, maximum and minimum values were calculated to analyze the general trends of the data over the study period. Correlation matrix analysis was used to examine the relationship between the variables used in the study. Multiple regression models especially Difference GMM were used to test the contribution of determinant variables on the economic growth. In our context it implies that the past, current and future economic contribution of cooperative in the economic contributions sector and growth are interrelated and driven by common economic factors that are difficult to separate. The relationship between growth and economic contributions of cooperative variables (economic institutional contributions) researchers are used initial values of independent variables or instrumental variables across the regions (Acemoglu *et.al*, 2005). Estimation of dynamic panel expressions (Difference GMM) in panel settings was used as static panel data was biased and inconsistent estimators due to endogeneity problem. Panel data analysis was used through controlling time effects and the different effects at the level of individual-specific variables (Baltagi, 2013). Furthermore, since the OLS and others effect is inconsistency in the model, difference dynamic panel data particularly Difference GMM and also Arellano-Bond estimation test and Sargan test /instrumental variable and testability was carried out and confirmed appropriate models.

3.4. Theoretical Model and Econometrics Model

The study attempts to empirically investigate the relationship between the economic contribution of cooperative society trend and economic growth in Ethiopia. The overall goal of the cooperative is to assist the cooperative members in their activities by taking over one or several economic functions. The achievements and the success are measured by the level of each cooperative contribution efforts, effectiveness, and extent of national economic development.

Multiple liner regression models are an econometric model which depicts that dependent variable is linearly related to the many independent variables whereby the relationship between the two is not exact but subject to individual variations (Gujarati, 2004). Once the coefficients for explanatory variables (economic contribution of cooperative) are estimated, the model is used to determine and explain the relationship between the variable and economic growth across the regions over time. This paper considered above reviewed literatures align with economic growth model by Solow as adopted from the predictable sources of economic growth namely Human Capital (K), Financial Capital (F), exports of goods and services (Ex) and another determinant.

The assess Cooperative Society requires a detailed and reliable quantitative time series database for comparative analysis. Therefore, for the purpose of this study it was decided to measure the performance of cooperatives by using indicators; National Economic product as the dependent variable to determine economic growth. Based on the review of both theoretical and empirical studies, the link between economic contribution of cooperative societies (members, saving, foreign currency, loan, provision of improved agricultural inputs, and cooperative society size) with economic growth. On the basis of the above theoretical and empirical literature, the contribution of cooperative function to be estimated can be specified in general functional forms as:

Dynamic Panel Data Model..... (1)

$$\Delta GDP_{it} = \rho GDP_{it-1} + \beta_1(CS_{it} - CS_{it-1}) + \beta_2(P_{it} - P_{it-1}) + \beta_3(C_{it} - C_{it-1}) + \beta_4(S_{it} - S_{it-1}) + \beta_5(L_{it} - L_{it-1}) + \beta_6(F_{it} - F_{it-1}) + \beta_7(EX_{it} - EX_{it-1}) + \Delta\delta t + \Delta\eta_{it} + \Delta e_{it} \dots \dots \dots \text{Equ(4)}$$

Therefore, the general and basic specification of the model as follows:

$$Y_{it} = \beta_0 + \beta_1 CS_{it} + \beta_2 CM_{it} + \beta_3 S_{it} + \beta_4 E_{it} + \beta_5 IF_{it} + \alpha_i + U_{it} \dots \dots \dots \text{equation (3)}$$

Where, the explanatory variables with signs expected from the regression coefficients are given as follows; -

Table: - 2.1. Description of Variable

Variable (abbreviated)	Descriptions
lnGDPT-1	lagged annual gross domestic product
GDP_{it}	Annual gross domestic product (in Billion ETB)
Csit	Numbers of cooperative society (in Numbers)
C_{Pit}	Cooperative society members (in Numbers)
Cit	Cooperative capital contribution (ETB)
S_{it}	Annual saving habit development growth (ETB)
Lit	Loan disbursement (ETB)
EX_{it}	Export growth (ETB)
F_{it}	Fertilizer input supplied and distributed growth rate

The notation for the regression

It uses double subscripts first for entities (cross-sections) and second for time periods.

I= entities (cross sections or regional state or city administration),

T= time periods (years).

U_{it} is an error term variable (where μ_i represents the unobservable individual (cross section) heterogeneity, λ_t denotes the unobservable time heterogeneity and v_{it} is the remaining random error term. The first two components (μ_i and λ_t) are also called within component and the last (v_{it}), panel or between) component, Where, $U_{it} = \mu_i + \lambda_t + v_{it}$

And the subscript i and t represent region and time period.

Individual effects; Where

- ❖ $D_3 = 1$ for Tigray; and zero otherwise.
- ❖ $D_2 = 1$ for Amahara; and zero otherwise.
- ❖ $D_4 = 1$ for SNNP; and zero otherwise.
- ❖ $D_1 = 1$ for Oromia; and zero otherwise.
- ❖ $D_5 = 1$ for Addis Ababa; and zero otherwise.

4. CHAPTER FOUR

4.1. Discussion of Results and Interpretation

4.1.1. Description of the Data Used

This study follows existing literature in the selection of variables to examine the relationship between economic growth and the contribution of Cooperatives. The first measure the growth, the study computes the annualized growth rate of real GDP per capita for the national applicable time period (from 2015-2019). Then, list out the economic contribution of cooperative society indicators and measures of the economic contribution of cooperative society. For a measure of economic contribution of cooperative society, this study collects the raw data from relevant documents and constructs an indicator of the relative economic contribution for each regional cooperative economic contribution. The study first collects the raw data of variables (namely number of cooperative societies, Cooperative members, capital status, saving, loan, fertilizer, export) and then the positive economic contribution of the variables across each region against the economic growth of the country. Like earlier efforts, this study limits its measures to economic contribution share of cooperative against the regions as well as the nation's due to limited data availability.

The four (4) regional state (namely Oromia, Amahara, Tigray and SNNP) and 1 city administration (Addis Ababa) has been selected. Purposive sampling technique has been used. The reason for using this method of sampling technique was; to consider cooperative society which have five and more years and have successive good position and opportunities over the study period (94 % of the total population).

4.1.2. Cooperative Proclamation and Distribution of Co-Operatives in Ethiopia By Region

Organization of Cooperatives Based on the Federal Cooperatives Proclamation 147/91 article 6 (1), amended 402/98 and 985/2016 as well as Regional Proclamations (Amhara: 134/98 articles 6, 7 and 8; SNNP: 111/99 article 6 (1), and Tigray: 145/2000) cooperatives can be established and organized from primary cooperative up to cooperative federations. There is different type of cooperative society have grouped based on its functions and geographical location and community needs. Namely; Agricultural Cooperative Societies, Housing Cooperative Societies, Industrial and Artisans Producers' Cooperative Societies, Consumers Cooperative Societies, Savings and credit Cooperative societies, Fishery Cooperative Societies and Mining Cooperative Societies. In more functional based, there is Multipurpose cooperative, saving and Credit Cooperative, Mining and Consumer Cooperative. Based on their share type includes; Multipurpose cooperatives (31%), saving and credit cooperatives (36%), consumer cooperatives (8%) and others (25%).

The Cooperative Proclamation, together with regional regulations, provides for four cooperative levels: primary cooperatives, unions, federations, and a national cooperative league to lead the cooperative movement for all types of cooperatives. Cooperative law currently stipulates that only multi-purpose cooperatives can provide services outside the sphere of activity for which they were founded.

In terms of the spatial distribution of co-operatives across regions and city administration, data from the Federal Cooperative Agency (FCA) indicate the presence of significant disparities.

The number of cooperatives established till the end of 2019 is presented in Table A1 below;

Table A1. Distribution of Cooperative Growth across the Regions

Years	Region					Ethiopia
	Oromia	Amahara	Tigray	SNNP	AddisAbaba	
2014	16,419	7,412	4,539	11,702	12,130	56044
2015	19,928	15,424	4,116	13,857	12,183	71249
2016	20,876	17,901	5,422	14,957	13,083	78684
2017	21,778	18,676	5,657	15,604	13,649	82089
2018	22,682	19,451	5,892	16,252	14,215	85496
2019	22,920	20,972	6,331	16,773	14,693	86570
% (to 2019)	26.4%	24%	0.7%	19%	19.9%	94%

Source: Processed Data, 2020

Table A1. Shows a distribution of cooperative growth across the region and one city administration from 2014-2019. About 94 percent of the co-operatives are found in five regions and one city administrations – in Oromia, Addis Ababa, Southern Nations, Nationalities and Peoples’ (SNNP), Amhara, and Tigray regions. The remaining five regions account for only 6 percent of the co-operatives in the Country (Figure 2.2).

4.1.3. Variables and Descriptive Statistics

In this study, the database consists of the panel data set of 4 regional states of Ethiopia and one city administration (4) for Ethiopia for the 2015-2019 term (T). Dataset is a balanced panel and has $N \times T = 5 \times 5 = 25$ observations. Dependent variable is lnGDP (Gross domestic product, *billion ETB), one Endogenous Explanatory Variable and there are 6 independent variables. Independent variables and measuring units are listed in Table A2.

Table A2. Independent Variables and Measuring Units

Code	Variable	Expected Sign	Units
lnGDP	Current account balance (In ETB)	(+)	Percent
lnCs	Numbers of Primary Cooperative Society Establishment (In No)	(+)	Percent
lnCp	Numbers of Primary Cooperative members (In No)	(+)	Percent
lnC	Capital of Primary Cooperative Society (In ETB)	(+)	Percent
lnS	Resource Mobilized As Saving by SACCO (In ETB)	(+)	Percent
lnL	Amount of Loan Disbursement (ETB)	(+)	Percent
lnF	Amount of Fertilizer Supplied and distributed by Cooperative Society (in Quintile)	(+)	Percent
lnEX	Amount of Exported by Cooperative Society’s(In ETB)	(+)	Percent

The above table’s and expected sign in the model reveal the expected relationship between the dependent variable and explanatory variables

This paper used panel data covering 2015-2019 from the Federal Cooperative Agency of Ethiopia and MOFED as well as published annual documents by Federal Cooperative Agency as well as other relevant documents from the website of World Bank indicators data for country regard to Ethiopia. We provide summary statistics for the paper Table A3. Contain information on data and on the data source.

Table A3. – Summary statistics of Dependent and Independent/endogenous variable

	lngdp	LnCS	lnP	lnC	lnS	lnL	lnF	lnEx
Mean	7.52	9.51	14.86	21.84	21.07	19.87	14.32	19.10
Std.Dev.	0.25	0.50	0.60	0.65	1.17	0.75	0.80	1.95
Min	7.16	8.32	13.47	20.32	19.30	18.50	13.07	14.44
Max.	7.88	10.03	15.79	22.80	23.06	21.08	15.38	21.18
Obs.	25	25	25	25	25	25	20	18
N	5	5	5	5	5	5	4	4
T	5	5	5	5	5	5	4.5	4

Source: Processed Data, 2020

Table A3. Shows a summary of selected data. Considerable heterogeneity can be noticed with respect to the average and to the standard deviation. However, it cannot be concluded from the data whether those are deviations within regions with regard to timing, or whether it is the case of discrepancies between regions. In any case, the existence of such a variation is a good requirement for econometric analysis. This is because, especially in the context of the analysis of temporal dimensions, greater variations also allow greater accuracy in assessing the impact of the independent variables

4.1.4. Correlation Matrix Analysis

This section illustrates the nature of relationship and how the different pairs of variables correlate in the panel matrix system under annex. Below depicts the positive, negative and strengths of association between the different pairs of variables.

Within the correlation analysis, it can be seen that all of the variables used in the model are correlated with each other, and have a positive sign, which certainly an expected result is considering the theoretical and empirical assumptions. However, correlation analysis is useful for two reasons; First of all, the relationship between dependent variables shows that they are interconnected, but the size of the correlation coefficient differs significantly from the value of one and the value of coefficient suggests a pool of regions that are characterized by a heterogeneous economic structure of economic growth. The second segment of the correlation analysis refers to the independent variables used in the model. It is important to determine the extent of a correlation which can lead to conclusions.

From below attached annex, lnGDP and other variable show a positive relationship with cooperative establishment size (lnCs) at 0.40, Cooperative members (lnCp) 0.50, Capital 0.61,

saving 0.64, loan 0.71, 0.35 and export 0.40 with exhibit a positive relationship respectively. The relationship between all other variables is also positively associated with each other's respectively.

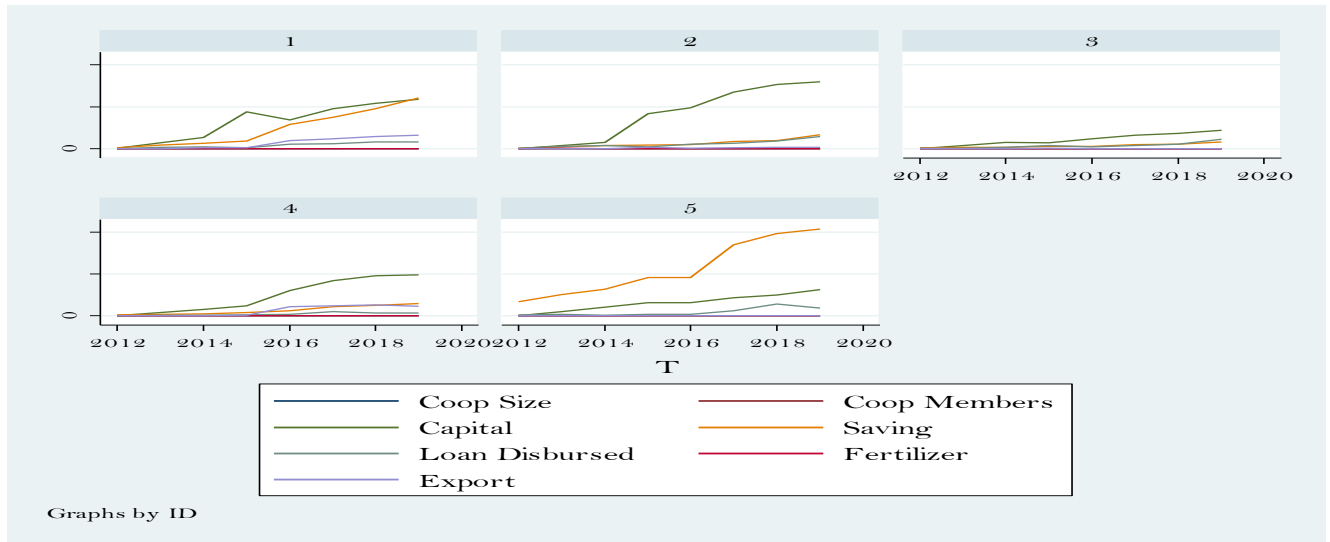
However, some of the variable association pairs exhibit strong relationships as they are greater than 80% inception strength level, showing a very high possibility of serial correlation problem. As the result in the table above cannot be statistically depend on upon to premise our conclusion on the relationship between the dependent variable and regressors, the study goes further to test with dynamic regression models(Difference GMM), which is best appropriate to adopt in our study, aside our earlier adoption of the dynamic panel model, in a bid to arrive at a broader and more healthy result.

4.1.5. Economic Contributions of Cooperative Growth across the Regions

As per aforesaid authors, they have confirmed that cooperatives have an important role in the economic contribution of both less developing and developed countries. It has seen that cooperative development in Ethiopia has increased in terms of quantity and economic contributions with promoting numbers of cooperative society size, increasing number of members participation, provision of finance services, providing and distribution of improved agricultural input, exporting and creating capital formation.

Below, the table shows that, economic contribution of cooperatives across the regions (Region 1=Oromia, Region 2 = Amahara, Region 3= Tigray, Region= SNNP and Region 5=Addis Ababa) is growing from 2012 to 2019.

Figure: -2.1. Economic Contributions of Cooperative Variable across the Growth



Source: Authors' computation using STATA (14 version) Statistical Package, 2020

4.2. Findings and Interpretations

The result of panel data analysis is demonstrated in the tables, the effect of the transformed variables can be interpreted in terms of the impact of percentage change on the dependent variable, and the effect of non-transformed variables can be interpreted as the impact on the change in the outcome. We have started the presentation of the results with cooperative contributions on economic growth variables. Previous studies show that there is a strong positive effect of cooperative growth on economic growth. According to Acemoglu, *et.al* (2005) a new establishment institution formation has been greater economic growth in the countries. This paper finds no significant effect of cooperative size and members empowerment under the estimation of OLS, FE and FD Transformation effect models. According to Baltagi, cross-sectional dependence is a problem in macro panels with long time series (over 20-30 years). This is not much of a problem in micro panels (few years and large number of cases).

Therefore, the regression coefficients are estimated using dynamic panel data after detecting the existence of serial correlation, heteroskedasticity and endogeneity problem in the OLS regression

This methodology is most frequently used in the growth literature – difference Generalized Method of Moments. The estimator used difference GMM (one-step GMM), permits the researchers to solve the problems of serial correlation, heteroskedasticity and endogeneity of

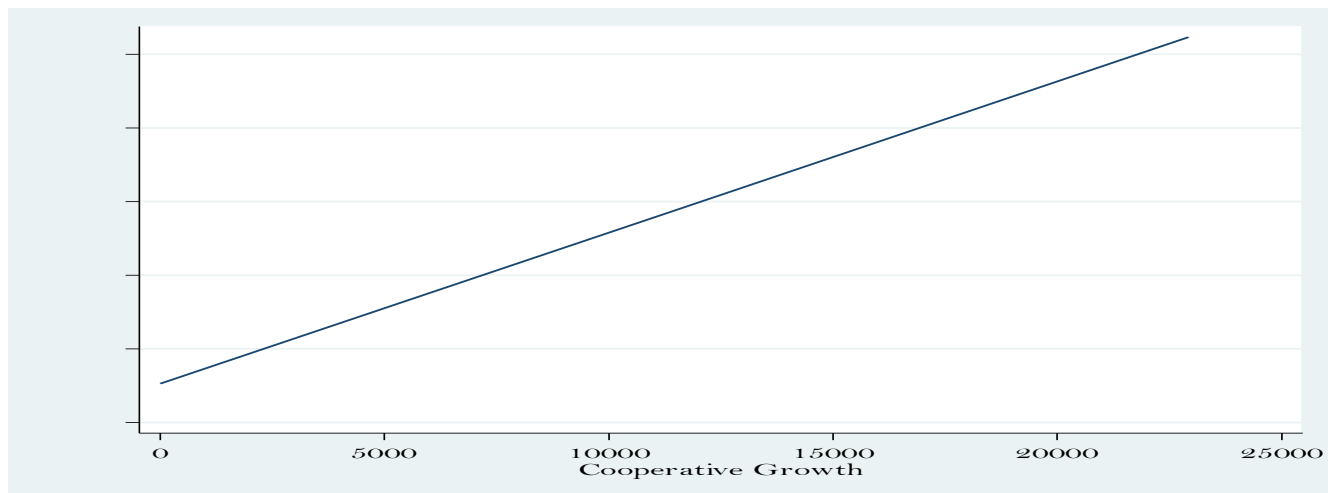
some explanatory variables (Leitao, 2010). These econometric problems were resolved by Arellano and Bond (1991). To estimate the dynamic model, we applied the methodology of dynamic panel data analysis. The rest of this result is structured to analyzing both static and dynamic data estimation, testing and interpretation of the result reported in this section.

5.2.1. Relationship between Cooperative Growth Vs Economic Growth

This analysis and that from most model estimators however, have some limitations because of data used, namely cross-country on one particular time, not time series data on a long distance of subsequent periods. In fact, based on cross-country data, regression coefficients as in these studies do not show how the economic contribution of cooperative society to economic growth of the country. The results only give some idea about the correlation between the two variables. The economic contribution of one sector cannot be witnessed in one period to be years else, as the effect itself is a dynamic process in nature, crossing a range of periods. Moreover, the nature as well as the amount of the effect of cooperatives on economic growth may vary among regional states of the study due to differences in many domestic factors, including economic endowment structure, population size, policy environment, and characteristics of and problems facing cooperative society.

Unfortunately, time series data on cooperative society from individual regional state and countries are hard to find in less developing countries with respect to the share of Cooperative Society in economic development that has enabling to achieving the economic growth of the countries. It confirms that the relationship between cooperative development trend and GDP growth is positive.

Graph 1. Graph that indicate the Relationship between Cooperative Development Trend and Economic Growth



Source: - Processed Data, 2020

The results in graph 1 indicate a very robust relationship between the cooperative development rate and the rate of economic growth. According to DFID (2010), Cooperatives have an important contribution to sustained economic growth in the country. Output growth in primary cooperative can be originated from seven sources: growth in number of establishments (with constant output per unit of establishment), growth in number of members, domestic saving habit, create capital, loan, provision and distribution of fertilizer and exporting a combination from 2015 to 2019 years sources. The hypothesis that the same coefficients apply to each region. It is a standard F test, based on the comparison of a model obtained for the full sample and a model based on the estimation of an equation for each individual.

4.3. Empirical Results

This section delivers dynamic panel data analysis particularly Difference GMM regressions results of empirical estimations on the relationship between economic contribution of cooperative society indicators and economic growth. Two techniques of estimations were used to revisit the various econometric approaches which studied the link between the cooperative society's and the economic growth as described before. These methods are static panel data (Pooled OLS, First Difference, and OLS -Fixed effect) and dynamic panel data particularly difference (difference GMM- Arellano and Bond, 1991).

In a static panel model, the techniques are not appropriate due to inconsistent and biased results that have confirmed the Wooldridge (2012). Then, Dynamic panel model is more robust in dealing with these sources of endogeneity, we carried out a final check with the one-step system GMM. A complementary estimation strategy for the economic growth equations is therefore pursued through the use of Arellano and Bond's (1991) generalized method of moments (GMM) difference estimator, which purges the fixed effects.

There are several advantages of using GMM panel estimators. First, we are able to control for time fixed effects and region-specific effects. Second, we can use appropriate lags of the either dependent or independent variables as instrumental variables to deal with possible endogeneity in the regressors. The GMM panel estimators can solve these econometric problems using lagged observations of the explanatory variables as instruments.

Hence implying the Arellano-Bond dynamic estimator is the most appropriate model to be further confirmation and investigation tests. The other considerations relating to the additional equation the expected sign is positive and the mainly estimated coefficient is positive rather than insignificant at 10%. The expected sign is positive, which is confirmed by the estimation.

4.3.1. Analysis of the Dynamic Panel Data Estimations

A major challenge encountered in the Ordinary Least Squares (OLS) estimating technique is that it fails to solve the endogeneity problem of the independent variables limiting correlation between the lagged dependent factor and the residuals. The differencing GMM technique, which, compared to the OLS method, can resolve the endogeneity and heteroskedasticity problems and improve the performance of estimators in a panel model (Headey, 2013). As per Nickell (1981)-the fixed effect estimators for the dynamic panel estimators are biased and inconsistent, we had better to consider the endogeneity problem and inconsistent estimators, thus, we can use instrumental variables. Andersen and Hsiao (1982), they recommend that earlier lag period is used as instrumental variables and 1st difference or level of second difference of dependent variable is considered as instrumental variables. Endogeneity bias can lead to inconsistent estimates and incorrect inferences, which provide misleading conclusions and inappropriate theoretical interpretations and also lead to coefficients having the wrong sign. Thus, this method may be consistent but not efficient because instrumental variable doesn't exploit all available moments' conditions (Arellano and Bond, 1991).

The GMM model removes endogeneity by internally transforming the data – transformation refers to a statistical process where a variable’s past value is subtracted from its present value (Roodman, 2009). In this way, the number of observations is reduced and internal transformation enhances the efficiency of the GMM model.

There are two types of transformation methods to estimate GMM estimators; namely, first-difference transformation (one-step GMM) and second-order transformation (two-step GMM). Since our variable is value and limiting the problem of loss of too many observations, we apply to use the first-difference transformation (one-step GMM). According to Roodman(2009), if a variable’s recent value is missing, then the first-difference transformation (where a variable’s past value is deducted from its current value) could result in the loss of too many observations. To solve data loss, Arellano and Bover (1995) recommended the use of a second order transformation (two-step GMM) and applied first-step GMM on this analysis.

It is usual in the growth literature to apply the GMM (Blundell and Bond 1998, 2000). The validity of instruments is tested using a Sargan test of overidentifying restrictions and serial correlation. First-order and second-order serial correlation in the first-differenced residuals is tested using AR_1 statistics (Arellano, Bond, 1991). The GMM estimator is consistent if there is no second-order serial correlation in the residuals (AR_2 statistics). The dynamic panel data is valid if the estimator is consistent. We used the criterion of Windmeijer (2005) small sample correction to have consistent standard errors. As shown in Table 1, the two equations present consistent estimates, with no serial correlation for the GMM estimator. The specification Sargan test shows that there are the same problems with the validity of the instruments used for equations. When number of instruments exceed number of cross-sectional units, it weakens the power of Sargen test for instruments validity. It also causes endogenous variable to be overfitted and fail to remove their endogenous components (Roodman, 2006/2009)

Based on this approach, the dynamic panel data estimation of instrumental variable is estimate as below table.

Table 4.1: - Empirical Results Reported for Dynamic Panel Model- Difference GMM

Variable	Dynamic Panel Estimation					
	Diff-GMM-1		Diff-GMM-2		Diff-GMM-3	
	Coeff	p> z	Coeff	p> z	Coeff	p> z
lnGDpt-1	0.0039 (0.002)	0.00*	0.0039 (0.00009)	0.00*	0.0054 (0.0001)	0.00*
LnCs	0.39 (0.071)	0.005*	0.39 (0.032)	0.005*	0.39 (0.063)	0.005*
lnP	0.55 (0.094)	0.004*	0.56 (0.03)	0.00*	0.55 (0.037)	0.047**
lnC	-0.145 (0.02)	0.002*	-0.148 (0.008)	0.00*	-0.145 (0.015)	0.022**
lnS	-0.042 (0.017)	0.067***	-0.046 (0.0028)	0.00*	-0.042 (0.009)	0.703
lnL	0.041 (0.007)	0.005*	0.040 (0.0015)	0.00*	0.041 (0.03)	0.007***
lnF	0.097 (0.009)	0.001*	0.095 (0.0039)	0.00*	0.097 (0.03)	0.00*
lnEx	0.013 (0.0015)	0.001*	0.012 (0.008)	0.00*	0.013 (0.006)	0.00*
No. Observ.	10		10		14	
Instruments	10		9		13	
Arellano-Bond test for serial correlation	AR (1) = 0.195		AR (1) = 0.849		AR (1) = 0.097	
	AR (2) = 0.313		AR (2) = 0.220		AR (2) = 0.201	
Sargan	0.01		0.00		0.136	
Group	4		4		4	
F-Stat/Wald Chix ²	3.53+ ¹⁰		906		18.46	
Prob.> F	0.00		0.00		0.018	

Source: Author's computations (by STATA 14), 2020

*Note: Values given for sample from 2015-2019. Standard error indicated in parentheses. */**/** are statistically significant at the 1%, 5% and 10% levels respectively. The GMM regression were estimated using data for four regional/one city administration of Ethiopia (25 total observation). The AR (1 and), Sargan test is described. Its P-value is given and individual coefficients are statistically significant at the * 1%, ** 5% and *** at 10% significant level. Three difference GMM model is used to estimate dynamic panel coefficient on the first difference model (Diff-GMM-1), then used collapse the instrument numbers in second step (Diff-GMM-2) to reduce the number of instrument and finally used the model of Diff GMM-3 to solve the Sargan related problem.*

As reported in above table 4.1; the equation presents three diverse dynamic panel data estimation in one-step difference GMM and eight significant variables: (lnGDpt-1, lnCs, lnCp, lnC, lnS, LnL, lnF, lnEx). Our test statistics hint at a proper specification. The result of difference GMM

shows a consistent and significant positive relationship between measured numbers of cooperatives with economic growth. As the results presented in Table (4.1) illustrate, the coefficient of the lagged GDP ($\ln\text{GDPT-1}$) was found to be positive and significant. Under the first part economic contribution of cooperative on economic growth apart from saving and capital; a percentage change in cooperative establishment is associated with a 0.39% increase in economic growth in the short run at the 1% significance level. On average *ceteris paribus*. Hence, under first difference GMM coefficient estimation, all economic contributions of cooperative society (apart from saving and capital) and economic growth exhibits an inelastic relationship across the regions. This shows that the effect of GDP per capita as a measure of economic contribution of cooperative on economic growth was also positive and played a significant role in contributing to economic activities, which is consistent with the hypothesis under column 2 and 3(table 4.1).

Cooperative society's members/participants): one of the principles of cooperative is ensuring the economic participation of members. Cooperative member's participation has a positive coefficient. This means that human capital development in the last years has had a positive impact on per capita GDP growth in the country for following years. The theories of economic growth maintain that human capital development has a positive impact on economic growth. However, a review of related literature shows some instances where the human capital development or empowerment in less developments is crucial to economic growth which is measured by value additions as well as increasing new innovations and being entrepreneurs in the countries. According to Ugochukwu and Ugwuoke (2013) about 80% of cooperative societies were forced with poor management by officials, poor participation of members and inadequate training base in cooperatives to run the business activities. This leads to reduced profitability of the business and it may bring impediment of the cooperative to the expansion of productive activities. This shows that the effect of cooperative members participation on economic growth was a negative relationship and played a significant role in contributing to economic activities, which is consistent with the above authors under column 2 and 3(table 4.1).

Cooperative capitals: According to Gordon (2002 & 2008), successful cooperative businesses can create wealth and help their members by pooling their endowed resource. A cooperative is a collectively owned and operated business that could be playing no significant role to invest more in economic activities in subsequent years under column 2 and 3 (table 4.1). As the Federal

Cooperative Agency report (2017) cooperatives face financial problems in order to expand their business activities and hire professionals to become more effective in their operations. This shows that the effect of creating capital was positive and played a significant role in contributing to economic activities as a better capital basement from the previous years to meet common needs and resolve common problems on mutual basis for the purpose of mutual benefit. Saving: - Promoting saving habits and also domestic credit has a positive impact on economic growth with a coefficient. In the literature, they have found a positive influence of deposits growth rates on the economic growth of the country under column 2 and 3(table 4.1). However, this paper finds no evidence for this relationship that has been indications of positive signs and no significance. This might be caused by the following reasons: First, the reason could be low capital requirements for develop resource mobilization at community levels as saving across the regions. Culturally, communities have experienced traditional ways of using resource deposits and loan outstanding.

According to FCA (2019), there is limited access to financing is one of the main concerns of cooperative society. Many rural financial institutions (mainly savings and credit cooperatives, or SACCOs) generally have insufficient capital and capacity to provide agricultural cooperatives with services at the scale they need, mainly because of individual-based loans and high interest rates that are too high. According to Lewis (1954), savings plays a crucial role in the internal resource mobilization and economic growth of developing countries. In the finance-growth literature, financial sector services such as credit availability influences economic growth through their impact on capital accumulation and technological innovation. Gross savings has a positive impact on economic growth with a coefficient 0.042 and 0.703 significant level. Poor saving cooperatives are likely to take more risks in the following years that are affecting domestic resource mobilization that could be playing a significant role to invest more in economic activities in subsequent years (Lewis, 1954).

Loan: according to Acemoglu (2003), cooperatives were also primarily used as tools to overcome the shortage of foreign currencies by supporting the production and export of high value commercial crops, like coffee for lasting the sustainability of economic growth (FCA 2014). In order to get a clear overview of previous studies on the effect of cooperative on economic development, we have divided the discussion as underneath. This paper also indicates that there is a positive relation on economic growth. According to Pollet (2009) cooperative society can expand poor people 's access to financial services regarding loan disbursements,

support enterprise start-up and expansion, build assets and smooth out consumption through pooling the resource for disbursing the loan for the next years. It enables most farmers or communities to have a significant direct impact on income generations of communities and lead to economic growth through the services they deliver (namely financing problems, agricultural inputs, access to markets and etc), evidence of their significance in other social and societal domains has not been particularly forthcoming. Thus, the paper has supported the significance of credit/loan in positive contributions of the cooperative on economic growth effects for disbursing the loan that could be collected before as saving. The expected sign is positive and the results are significantly positive.

Agriculture's role in the process of economic growth has framed a central question in development economics for several decades (e.g., Johnston and Mellor, 1961; Schultz, 1968). Using cross-country panel data, this forms a macro-level physical production function for agricultural product increases. We confirm that fertilizer and other modern agricultural inputs yield growth. It examines the causal link between changes in cereal yields and aggregate economic outcomes, including gross domestic product (GDP) per capita. Fertilizer and export are not according to the hypothesis formulated which indicates that there is a negative balance of payment in LDC and it is consistent with the finding. Agricultural co-operatives play an important role in the provision of agricultural inputs (fertilizers, improved seeds and pesticides) to smallholders, supplying a distributing 98 per cent of all fertilizers used (FCA, 2018). This study has found evidence for provision and distribution of fertilizer to beneficiaries that might cause economic growths in succeeding years.

To sum up, the above table shows the results from the estimators that, GMM model controls for endogeneity by internally transforming the data and by including lagged values of the dependent variable. The GMM model offers a superior estimation technique compared to the OLS model. Endogeneity problems, which may lead to biased coefficients in the regression, are present in the data and the use of instrumental variables eliminates correlation between variables that have been used in the model and individual components of the error terms. As the GMM model controls for endogeneity and includes lagged values and applies an internal transformation process, the results reported under the GMM could be significantly different than those reported in the OLS column. A positive value of the explanatory variables means a positive impact on

economic growth; a negative value of the coefficient means a small contribution of the variable due to underperformance of the cooperative society as compared to previous years.

In general, all variables over the previous five years are positively correlated with economic growth of the basement years and succeeding years, while cooperative members and size growth is negatively correlated with economic growth and less likely take part in economic contributions that could be playing a significant role to empowering the members and promoting cooperative society betters in economic activities in subsequent years.

Diagnostic Results

The Diagnostics part of the Table 4.1 shows diagnostic tests of the appropriateness of dynamic panel instruments used. The first tests are conducted under static panel data using Hausman test to test the significance of all regressors. And also articulating to testing the existence of endogeneity problems (instrumental variable; - there was a lower probability value and led to a sign of the endogeneity problem existing in the model).

Then use dynamic panel estimation test, Arellano-Bond test for first-order and second-order serial correlation and sargan test through using collapse to reduce the number of instruments and other separate instrumental techniques. The first-order autocorrelation AR (1) rejects the null; the p-values of the Arellano and Bond statistics in Table 1 at the 1%, 5% and 10% significance level. While the test for second-order autocorrelation AR (2) fails to reject the null hypothesis of no autocorrelation and the statistics reported are p-values giving the probability of correctly rejecting the null hypothesis of no autocorrelation. Moreover, as expected, we do not find the presence of statistically significant second-order serial correlation. Therefore, both AR (1) and AR (2) tests support the validity of the first differenced GMM estimator of Table 4.1. Besides, the serial correlation AR (1) and also AR (2) is rejecting H_0 (as P-value is greater than 0.05) and it shows a dynamic model is appropriate under column 3.

The second test is a Sargan test of identifying restrictions under the null hypothesis of the validity of the instruments (Arellano and Bond, 1991). The validity of the instrument set is checked using a Sargan test. This test is asymptotically distributed as chi-squared under the null. The instruments used in the first differenced GMM or in the system GMM are not rejected by the Sargan test of over-identifying. In Table 4.1, we found that the Sargan test of the validity of instruments used is not statistically significant at the 10 percent level in first differenced GMM for all models. With respect to the Sargan test of overidentifying restrictions, the high p-value suggests that we cannot reject the null hypothesis that the set of instruments is appropriate.

Therefore, the Sargan test supports the validity of the GMM estimator and does not indicate a serious problem with the validity of the instrumental variables.

It passes the sargan test for over-identification of instruments with a p-value of 0.136. Again, the estimation passes a sargan test and the AR (1) and AR (2) test is satisfied with a p-value of 0.097 and 0.201. The values for these two post-estimation tests are reported in Table 4.1, which confirms the validity of the model used in our estimation process.

We conclude that the tests for autocorrelation and the Sargan test confirm that the Diff-GMM estimator estimated for column 3 in Table 1 are appropriate. First-differencing introduces AR (1) serial correlation when the time-varying component of the error term in levels is serially uncorrelated (Arellano and Bond, 1991). Therefore, GMM estimator is consistent only when second-order correlation is not significant although first-order correlation need not be zero. Again, the first and second order serial correlations tests are all satisfied.

CHAPTER FIVE

5. Conclusions and Recommendation

5.1. Conclusion

This study examined the economic contribution of cooperative society in economic growth in four sub-regional states of Ethiopia and one city administration, over the period of 2012-2019. The dynamic panel data- Generalized Method of Moment Panel Model were employed as estimation techniques. The result of our analyses indicates significant differences in our findings reported under column 1, 2 and column 3 GMM estimations, due to instrumental problem. We estimate the growth equation using the generalized method of moments (Difference GMM) method as proposed by Arellano and Bond (1991) through inserting the collapsing and choosing the instrument. The estimated coefficient shows that there is a strong positive relationship between economic contribution of cooperative society (namely creating capital(lnC), provision of finance services as loan(lnL), provision and distribution of fertiliser(lnF) and export(lnEX)) under column 2 and 3(table 4.1) and also significant at 1% and 5% level on economic growth of the study area. It can be concluded that, economic contribution of Coop in economic growth analysis by Diff GMM was best explained included in the model under column 3. The implication of the results is that there is a positive economic contribution of cooperative society in the study area that leads to stimulate real growth in the economies of the country (Ethiopia).

But, the coefficient of cooperative members(lnCs) and sizes(lnP) are negative impact on economic growth and significant at 1% level and 5% level. It can be concluded that, a low practicing acquired skill from previous years and lead to low productivity due to poor management and participation (Ugochukwu and Ugwuoke, 2013).

Econometric estimations support the hypothesis formulated. The study results are healthy with dynamic panel data (Difference GMM). The proxy creating capital, provision of finance service as loan, provision and distribution of improved agricultural inputs(fertilizer) and export used to evaluate the economic contribution of cooperative society present a positive correlation on economic growth when we used dynamic panel estimation techniques under column 3(table 4.1). Thus, it has confirmed that cooperative society performance stimulates the economic growth

across the country over a shorter period of time. The study has however some limitations regarding utilization of minimum entities and conducting relations with other sectors and its economic shares. Thus, future research should take other indicators into account. Eventually, the study recognize that this topic requires further research. In particular, each variable indicator should include in the analysis to validate.

5.2. Recommendation

Although this study doesn't consider the economic contribution of cooperative society variable through comparing with other sectors as well as analysing the share of the economic sectors of the country over the long term, as this sector has positive economic contribution in economic growth of the country through further develop the domestic endowment resources with pooling for increasing bargaining power, investment activities, build up the capacity of local communities and adopt economies of scale aspect. It is advisable to develop the proper legislation and regulation, create clear value chain development and well organizational structures within and between primary to apex level and consider the long-term economic contribution of cooperative with adding other regions over the study area. Further opening up and supporting the cooperative society in different sectors of these economies would no doubt enhance the economic contribution of the sector with positive effect on their growth rates and economic growth as well.

Both government and NGO continue to emphasize the role of economic contribution of cooperatives has on economic growth, and hence Ethiopia, continue to put more effort on developing their members participation, management capacity, financial systems and effectiveness of the cooperative to achieved stated goal of the cooperative society. Besides, supporting in capacity building before and after organized with, ensures the implementation of appropriate cooperative principles and bylaws so as to enhance their managerial skills and make cooperatives self-reliant, independent and member controlled in order to help them perform their economic functions and create more economic power and better jobs creation. And also, create market linkage with potential service providers and financial capacity building institutions to maintain the cooperative society's economic contributions sustainability.

Future areas of research include measuring better cooperative bank development and studying the impact of cooperative banks on inequality and social development. Regional cooperative

banks may prevent a capital drain and thus foster development, especially in less developing countries (including Ethiopia).

In this regard, more emphasis should be placed on the role and importance of cooperatives in technical cooperation projects particularly in local economic resource development and overcoming the current countries faced challenges.

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Appendices

Annex 1.1: Collected Data (Economic Contribution of Cooperative Society-Variables)

ID	Period	No. Coop	Coop Members	Capital	Saving	Loan Disbursed	Fertilizer	Export
3	2015	4116	1057861	672942745.3	242268617.4	378671984	476700	65059280
3	2016	5422	1724016	1158176499	242268617.4	196589094	543860	9523310.16
3	2017	5657	2014476	1603532670	449934712	372610932	654460	1881938.2
3	2018	5892	2258433	1823063928	521543686	548632770	745960	0
3	2019	6331	2347186	2172789674	786269125	1103993963	767620	0
4	2015	13857	2938712	1180354738	395835920	117044835	1165480	36107280
4	2016	14957	2488866	3027556892	581500455	166229504	1048800	1094561236
4	2017	15604	2891084	4191750041	1079946890	465509825	849000	1197435109
4	2018	16252	3215703	4765620583	1251824913	347848042	1230510	1308864753
4	2019	16773	3363528	4862784173	1442766522	348434794	1535090	1148184653
5	2015	12183	713267	1559612212	4555102303	159700000	0	0
5	2016	13083	1319313	1559612212	4555102303	159500000	0	0
5	2017	13649	1557046	2159333346	8459612578	570508030	0	0
5	2018	14215	1768646	2454956364	9805994985	1424851000	0	0
5	2019	14693	1824169	3110441985	10368471664	924897181	0	0
2	2015	15424	3777935	4166672939	446295819	216057817	3083430	154190080
2	2016	17901	4151756	4866014933	449348431	537722307	2993300	55523548.08
2	2017	18676	4819937	6737154420	834517731.1	627852106	3588350	70756400.59
2	2018	19451	5356975	7659502942	967334687.1	888340299	3791250	151182515.9
2	2019	20972	5626309	8011455960	1629643965	1431497205	3805380	132889787.4
1	2015	19928	4074788	4415937303	922948910	108975200	2894230	85532480
1	2016	20876	5050914	3444331465	2874312252	506984850	3683690	949961296
1	2017	21778	5868575	4768787863	3738497428	583887668	3761620	1153516985
1	2018	22682	6529612	5421657630	4765090686	770274488	4777420	1417634130
1	2019	22920	7262604	5892568237	6052587300	805481904	4795210	1585341179

Where, ID (1-Oromia, 2-Amahara, 3-Tigray, 4-SNNP and 5-Addis Ababa), ranged from 2015-2019 years

Source: - Federal Cooperative Agency of Ethiopia (from different department-Cooperative Promotion, Marketing, Income Generating, Marketing and Promotion, Export, Planning, Monitoring and Evaluation), 2019

Annex 1.2: Summary of Data

	lngdp	LnCS	lnP	lnC	lnS	lnL	lnF	lnEx
Mean	7.52	9.51	14.86	21.84	21.07	19.87	14.32	19.10
Std.Dev.	0.25	0.50	0.60	0.65	1.17	0.75	0.80	1.95
Min	7.16	8.32	13.47	20.32	19.30	18.50	13.07	14.44
Max.	7.88	10.03	15.79	22.80	23.06	21.08	15.38	21.18
Obs.	25	25	25	25	25	25	20	18
N	5	5	5	5	5	5	4	4
T	5	5	5	5	5	5	4.5	4

Annex 1.3: - Correlation. Matrix

	lnGDP	lnCs	lnCP	lnC	lnS	lnL	lnF	lnEx
lnGDP	1.0000							
lnCs	0.4034	1.0000						
lnCp	0.5071	0.9214	1.0000					
lnC	0.6142	0.8706	0.8602	1.0000				
lnS	0.6435	0.7383	0.8109	0.6569	1.0000			
lnL	0.7173	0.3373	0.5284	0.5586	0.5607	1.0000		
lnF	0.3508	0.8640	0.9529	0.8109	0.7050	0.5025	1.0000	
lnEx	0.4095	0.6672	0.5029	0.5320	0.7260	0.2689	0.4273	1.0000

Annex 1.4: - Diagnostic Test Result

Results of the Hausman test

Hausmn Fixed Random Test				
---- Coefficients ----				
	(b) Fixed	(B) Random	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
LnCS	1.37794	-0.0956082	1.473548	0.5196703
LnP	-0.0293273	0.4355549	-0.4648822	0.1197463
LnC	-0.0964268	0.0350813	-0.1315081	-
LnS	0.0640422	0.0567054	0.0073368	0.1259758
LnL	0.0543003	0.0959121	-0.0416118	0.0219329
LnF	0.3153517	-0.2424244	0.5577761	0.1176235
LnEx	0.0417402	0.0153154	0.0264249	---

Prob>chi2 =	0.0000			

<i>Chi-Sq statistic</i>	<i>18</i>
<i>[prob.]</i>	<i>0.388</i>
<i>Df</i>	<i>17</i>
<i>fixed effect/random effect</i>	<i>Fixed</i>

Source: research findings

The Hausman test was performed (Ashrafzadeh & Mehregan 2008). The quantitative results of the Hausman test are presented in Table (2):

Annex 1.5: - Foreign Currency Exchange Used (World Bank) and Ministry of Finance and Economy

<i>Years</i>	<i>Exchange rate</i>	<i>Remark</i>
<i>2012</i>	<i>17.78</i>	
<i>2013</i>	<i>18.71</i>	
<i>2014</i>	<i>19.67</i>	
<i>2015</i>	<i>20.68</i>	
<i>2016</i>	<i>21.84</i>	
<i>2017</i>	<i>23.96</i>	
<i>2018</i>	<i>27.67</i>	
<i>2019</i>	<i>29.21</i>	