

**DETERMINANTS OF AGRICULTURAL OUT PUT
MARKETING PERFORMANCE,(A CASE OF DAMOTA
FARMERS COOPERATIVE UNION
IN WOLAITAZONE,SNNPRS**

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DECLARATION

I, hereby, declare that I have conducted this project titled ‘**Determinants of Agricultural Output Marketing Performance: (A Case of Damota Farmers’ Cooperative Union, Wolaita Zone, SNNPR)**’ under the guidance of Mr. Gemechu Abdissaa, MBA, Dept. of Management, College of Business and Economics, Jimma University. I declare that this is my original work and has not been copied from any source either at this university or anywhere else.

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Abstract

The study is planned to identify and evaluate the determinants of agricultural output marketing performance, (a case of damota farmers cooperative union in Wolaita Zone, SNNPRS'). The opinions of Damota Farmers would be the main technical function for this research. It is planned to be conducted through Causal Research Design collecting on primary data collected from damota farmers cooperative union in Wolaita Zone through self-designed structured questionnaires with 5-point Likert's scale. The data analysis were include descriptive and inferential statistics. The expected contribution of the study is to help the damota farmers cooperative union in Wolaita Zone for smooth and adequate functioning of the agricultural cooperative output administration. According to the study, factors such as Cooperative Management, Members' participation, Marketing information, Financial Resource and Infrastructure access were found to be the determinant factors affecting agricultural output marketing performance. Based on this study, the required recommendations to solve noncompliance of agricultural output marketing performance in the damota farmers cooperative union should be forwarded These include, maintaining Cooperative Management, Members' participation, Marketing information, Financial Resource, Infrastructure access, and providing social services to the general public.

Key words:-

Output, Performance, Cooperative management.

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Abbreviations and Acronyms

ATA	Agricultural Transformation Agency
CSA	Central Statistical Authority
DFUO	Damota Farmers Union Office
FAO	Food and Agriculture Organization
FCA	Federal Cooperative Agency
FCC	Federal Cooperative Commission
FDRE	Federal Democratic Republic of Ethiopia
GAM	General Assembly Meeting
ICA	International Cooperative Alliance
ILO	International Labor Organization
KIIs	Key Informants Interviews
MoA	Ministry of Agriculture
MoFED	Ministry of Finance and Economic Development
MPCs	Multi-Purpose Cooperatives
MPCSs	Multipurpose Cooperative Societies
NGOs	Non-Governmental Organizations
PPS	Probability Proportional to Size
SACCOs	Saving and Credit Cooperatives
SPSS	Statistical Package for Social Science
SSNPR	Southern Nations, Nationalities and Peoples Regional State
VIF	Variance Inflation Factors
WZCOPD	Wolaita Zone Cooperative Promotion Development

CHAPTER ONE

1 INTRODUCTION

1.1 Background of the Study

A cooperative is an autonomous association of persons united voluntarily to meet their economic, social, and cultural needs and aspirations through a jointly owned and democratically controlled enterprise. Cooperatives, as economic enterprises as self-help organizations, play a meaningful role in up lifting the socio-economic conditions of their members, and their local communities (ATA, 2014).

The first modern cooperative, the Rockdale society, was established in England in 1844. It started with twenty eight members who purchased one share of stock. The members consisted of craftsmen such as weavers or shoemakers. The members decided to join forces to work together, sell their products under one roof, and use a part of earnings to purchase supplies in quantity at economical price, another portion of the earnings would be reinvested in growth of the society, and the remainder would be returned to the individual member in the form of refunds (Chukwu, 1990).

In Africa, Cooperatives are omnipresent and represent a significant part of the private sector in most African countries. During colonial period, cooperatives in Africa were used by the colonial powers as a strategic tool to group rural producers into clusters, so that essential export commodities such as coffee, cocoa and cotton, could be collected more cost-effectively. After independence, the governments of the now sovereign States accorded an essential role to cooperatives, in particular for the development of rural areas (ILO, 2008).

In Ethiopia, cooperatives have a long history particularly in the form of traditional collective action organizations, such as work groups (*jiges*, *wonfels*, *debos*), rotating savings and credit associations (*iqubs*), and burial societies (*idirs*), which are still very much present in different areas (Bernard *et al.*, 2010). It was not until the early 1950s that a formal cooperative movement began in the country, and only in 1961 did the imperial government introduce the first formal proclamation on cooperatives that gave rise to the institution in its modern sense (Kodama, 2007).

During the socialist regime (1974-1990) agricultural cooperatives continued to be extended arms of the state and were used primarily as instruments of the government in order to control the agricultural sector and prevent the rise of capitalistic forms of organization. There were two types of agricultural cooperatives during this period: production cooperatives engaged in collective production and service cooperatives handling modern inputs, credit, milling services, selling of consumer goods, and purchasing of farmers produce (Rahmato, 1990).

The largely negative experiences of performance of the cooperatives led to their dissolution following the fall of the Derg regime, which created a gap until 1994 when the Government of the Federal Democratic Republic of Ethiopia (FDRE) decided to reestablish the cooperatives in a new way to promote the greater market participation of the smallholder farmers (FDRE Proclamation Numbers 85/1994 and 147/1998). This was again later reaffirmed by the sustainable development and poverty reduction program (FDRE, 2002) and the plan for accelerated and sustained development to end poverty (FDRE, 2005). The current government of Ethiopia has various poverty reduction strategies that include cooperatives as one of its main goals for agricultural development. It makes an effort to organize, strengthen and diversify autonomous cooperatives to provide better marketing services and serve as a bridge between small farmers and the private sector (Bernard *et al.*, 2010).

According to Bezabeh (2012), the current government issued different proclamations, policies and strategies that also include cooperatives: Proclamation 85/1994 to revitalizes cooperatives; Proclamations 147/1998 and 402/2004 to reinforce these principles and strengthen membership incentives by improving members' rights in the areas of ownership, voting, share transfers, and risk management. The cooperative societies in Ethiopia are playing multi-functional role both in rural and urban areas (FCA, 2009).

The SNNPR also has a long history of cooperative movement in Ethiopia, which has been characterized by strong growth, thus making a significant contribution to the overall economy of the region and the country as well. Like the federal government, regional government is also recognized cooperatives as a major contributor to the rural and agricultural development. Different types of cooperatives are established in every corner of the region. From the total population of the region 17 million, nearly 30.3% of the people participated

and benefited directly or indirectly from cooperatives type of business (Nuredin M. & Byeong W., 2015).

The annual abstract of *Wolaita* Zone cooperative department reveals that Primary cooperatives are multipurpose cooperative societies (MPCs) that having 23types of cooperatives, in number 1,475 cooperatives and totally 136,997 members which 98,453 are male 38,544 are female members and holding a total capital of 77,986,710 birr in the Zone. According to zone annual report of 2018, there are 7 cooperatives unions and 163 primary cooperatives. In these unions totally 46,989 members, 39,949 which are male 7040 are female members and holding capital 58,704,387 birr. Moreover, multipurpose farmers' cooperatives 68 with total members 24500 from which 19,000 are male 5,500 are female members and with holding a total capital of 19,282,323 birr (WZCOPD, 2018).

According to Damote Gale Woreda Cooperative Promotion Office report, there are 57 multipurpose cooperatives with total members 7,458, from which 5,013 are male 2,445 are female members and with holding a total capital 7,604,415.25 birr (Damote Gale woreda of Cooperative Office, 2018).

In line with these realities, The finding of the research enhances the cooperatives contribution of outputs marketing in the economic development of the country by resolving the challenges of agricultural outputs marketing.

1.2 .Statement of the Problem

Cooperative is a special group of people with mutual interest to solve their individual problems through common efforts and ultimately attaining economic and social empowerment to the group members and the community. The prime objective of cooperative is to solve problems that individuals failed to address independently. In view of that, cooperatives are involving in output marketing activities, credit provision and providing other services to the members. But the insufficient performance of agricultural output marketing in the country has a major barrier in boosting agricultural sector and the overall economy (MoFED, 2005).

In Ethiopia, the number of agricultural cooperatives has been increasing rapidly and they play a major role in providing farmers with inputs while ensuring members' social cohesion and economic empowerment (MOA et al, 2012). However, according to Emanu (2009) the functionality of cooperatives was constrained by shortages of skilled human

resources (especially in cooperative business development), due to high staff turnover and repeated structural adjustment of the cooperative promotion agencies. In addition, cooperatives also encounter technical skills constraints and capital shortages, which hinder the attainment of objectives. Lack of skills in cooperative development is also attributed the allocation of cooperative professionals to other sectors and replacing them with people who have no cooperative background, which affect the performance of cooperatives. Moreover, according to Jemal (2008), stiff competition, hangover the past and lack of commitment, globalization, and government attitude towards subsidy are the major challenges of cooperative societies in Ethiopia. Furthermore, Yemane (2010) pointed out that embezzlement, limitation in the capacity of Management Committee or Board of Directors, lack of capital, unhealthy competition from private traders, absence of education, and training and lack of physical resources are the main challenges of the performance of agricultural cooperatives.

Therefore, in the study area marketing agricultural outputs are facing crucial problems. According to Damota Farmers Union Office (DFUO 2017), agricultural Cooperatives Societies are incompetent to collect and to sale members' products well during harvesting season with fair price and down payment, then members' sale their product to venders. Therefore members are not benefited from their produce and affected by market fluctuation. Cooperative members do not trust the cooperative societies due to lack of monitoring activities of cooperative management/boards members. Most members are not voluntary to serve their cooperative as members of Management Committee and others committee members. In addition, Management committee uses the resource out of the objectives rules and regulations of cooperatives. They do not know about ownership right of members. They do not serve members equally and fairly based on the by-law and they also do not prepare report about actual performance to general assembly. In general, agricultural cooperative societies are incapable to give expected service to their members and the surrounding community.

The service rendered by cooperatives is seasonal and it is limited to somehow on input distribution (Adisu, 2011). In addition to this some of the critical problems facing Agricultural Cooperative Societies in the study area are lack of financial resources, lack of market information, poor members' participation, and infrastructural access problems.

The above mention problems place the farmers as usually price takers due to the fact that they have poor marketing skill and limited bargaining power. There have been attempts made by the government to improve the marketing skill and bargaining power of farmers through establishment of cooperatives and promoting other group action approaches (Dawit, 2005).

The current study focuses the assess of the effect and analyze the cooperative management factors, poor member participation factors, lack of marketing information factor and lack of financial resources factors and infrastructural access factors on the agricultural cooperatives output marketing performance.

1.3 Research questions

1. What is the effect of cooperative management on agricultural cooperative output marketing Performance?
2. What is the effect of poor member participation on agricultural cooperative output marketing performance?
3. What is the effect of marketing information on agricultural cooperative output marketing performance?
4. How to evaluate the effect of financial resource on agricultural cooperative output marketing performance?
5. What is the effect of infrastructural on agricultural cooperative output marketing performance?

1.4 Objectives of the Study

1.4.1.General Objective

The main objective of this study is to assess determinants of Agricultural Output Marketing Performance, A case of Demota Farmers' Cooperative Union.

1.4.2.Specific Objectives

Based on the general objective, the following specific objectives are drawn:

1. To examine the effect of cooperative management on agricultural cooperatives output marketing performance.

2. To investigate the effect of poor member participation on agricultural cooperatives output marketing performance.
3. To assess the effect of marketing information on agricultural cooperatives output marketing performance.
4. To identify the effect of financial resources on agricultural cooperative output marketing performance.
5. To evaluate the effect of infrastructural access factor on the output marketing performance of agricultural cooperatives.

1.5 Research Hypothesis

A research hypothesis is a predictive statement, capable of being tested by scientific methods, that relates an independent variable to some dependent variable (Kothari, 2004).

Traditionally the null hypothesis is assumed to be correct, until research demonstrates that the null hypothesis is incorrect (Mathers, Fox, & Hunn, 2007).

Based on the above objectives and different literatures, the following hypotheses are set for the study under consideration:

1. H1: Cooperative management factor has significant effect on the performance of agricultural output marketing
2. H2: Members' participation factor has significant effect on the performance of agricultural output marketing.
3. H3 Marketing information factor has significant effect on the performance of agricultural output marketing.
4. H4: Financial resource factor has significant effect on the performance agricultural output marketing.
5. H5: Infrastructure factor has significant effect on sales volume of agricultural output marketing.

1.6 Significances of the Study

There are so many studies on Agricultural Cooperatives and investigate factors influence their performance that have been conducted in different weredas and regions of Ethiopia and other countries as well. However, there is no such kind of study in recent times in the Demote Gale worda. The findings of the study benefits different stakeholders

regarding on factors that are currently affecting performance of agricultural cooperative societies.

The study will help specially the researcher for partial fulfillment of the requirements for the award of masters on business administration. The study will also help policy makers and implementers to understand issues related to cooperatives agricultural development, values, principles and their challenges as well. Institutions and individuals who are interested to know agricultural cooperatives in the woreda can use this research material as reference. As well, it could be used as a reference for researchers who are interested to study in similar topic.

1.7 Scope of the Study

The area coverage of this study will be delimited Damote Gale woreda in Wolaita Zone of SNNPR, Ethiopia. Conceptually, the study restricted to determinants of agricultural cooperatives output marketing performance. There are different issues that can be researched in relation to agricultural cooperatives, this study will be delimited to Cooperative management factor, Member participation different activities, and sales growth, Marketing Cost reduction, Bargaining Power and carrying for others (stabilizing the market) as predictors of Agricultural cooperative marketing performance. Agricultural cooperative marketing performance may be limited to subjective performance evaluation techniques based on the perception of respondents.

Methodologically, the study was employed quantitative and qualitative approach to analyze the data to obtain through an Interview Questionnaires (Schedules) by using SPSS version 20. The study was used both descriptive and causal research design.

1.8. Limitations of the Study

There are a number of limitations associated with the research. Due to shortage of budget (to pay per diem for enumerators), and logistics (transportation facility needed in case of no cooperatives found near districts' town), the researcher couldn't cover all cooperatives in the study areas. Moreover, the sample selection limits the ability to generalize the finding of the overall population. Because, the population sampled in this study are only members of agricultural cooperatives. However, these limitations do not influence the effectiveness of the outcomes of the research.

1.9. Organization of the study

This thesis is organized in to five chapters as follows:

Chapter 1: Introduction - deals about introduction part which comprises the Background of the study, statement of the problem, objectives of the study, research hypothesis, and significance of the study, scope and limitation of the study.

Chapter 2: Related Literature Reviews - discuss on both theoretical and empirical review of literatures and Research gap and theoretical framework of Agricultural cooperative society's performance from international and national perspectives.

Chapter 3: Research Methodology – devotes on the study area, research design, types and source of data, sample design and sampling techniques, target population of the study, data collection methods, and methods of data analysis.

Chapter 4: Result and Discussion – presents the data analysis, presentation and interpretation of the finding.

Chapter 5: conclusions and recommendations – presents conclusions derived from the empirical findings, sets out recommendation of the study, and directions for future research.

CHAPTER TWO

2 THEORETICAL REVIEW

In this chapter, general concepts and definitions of agricultural cooperatives, values and principles of cooperatives, theory of cooperatives, social cooperation theory, game theory and cooperation, agricultural cooperatives, historical development of cooperatives in Ethiopia, and agricultural cooperatives output marketing are reviewed. In addition, the chapter reviews marketing performance, key factors of agricultural cooperatives output marketing, overview of agricultural output marketing on crop production, review of empirical studies, and conceptual framework of the studies are presented.

2.1 Concepts and Definitions of Cooperatives

Cooperatives are autonomous and voluntary associations of peoples having similar needs and objectives united together for the purpose of meeting their social, economic, and cultural aspects that would have been impossible to achieve on individual bases, ILO (2005). Cooperative is association of persons who have voluntarily joined together to a common end through the formation of a democratically controlled organization, making equitable contribution to the capital required and accepting a fair share of the risks and benefits of the undertaking, in which the members actively participate. People come together not only for fellow feeling but also to help themselves, Bezabeh (2012).

In general, according to Chambo (2009), the definition of cooperatives is built on four major catch words; first, they are formed by groups of people, who have a specified need or problem. Second, the organization is formed freely by members after contributing to its assets. Thirdly, the organization formed, is governed democratically in order to achieve desired objectives on equitable norms, and fourth, it is an independent enterprise promoted, owned and controlled by people to meet their needs. Cooperative societies may, according to their nature, be established at different levels from primary up to the federal level. Cooperative societies at primary level are with individual persons as members, while cooperative unions are formed at the secondary level with cooperative societies as the members. Thus, in the latter case, cooperative societies in the same sector within a specific geographical region could join together to form a cooperative union for purposes of mobilizing capital to invest in a bigger business venture that is beyond the reach of a single

cooperative society. The same logic is used by cooperative unions to form cooperative federations and ultimately an apex organization at the national level to represent all cooperatives in the country (FDRE, 1998).

2.1.1 Agricultural Marketing

The term agricultural marketing is composed of two words-agriculture and marketing. Agriculture, in the broadest sense, means activities aimed at the use of natural resources for human welfare, i.e., it includes all the primary activities of production. But, generally, it is used to mean growing and/or raising crops and livestock. Marketing connotes a series of activities involved in moving the goods from the point of production to the point of consumption. It includes all the activities involved in the creation of time, place, form and possession utility. Agricultural marketing comprises all the operations, and the agencies conducting them, involved in the movement of farm-produced foods, raw materials and their derivatives. Agriculture marketing system in developing countries can be understood to compose of two major sub-systems i.e. output marketing and input marketing. An efficient agricultural output marketing sub-system is an important means for raising the income levels of farmers and satisfaction of the consumers (Sorokhaibam and Devi, 2011)

2.1.2 .Review of Basic Issues Concerning Agricultural Output Marketing

Cooperative Values and Principles

2.1.3. Cooperative Values

According to the ICA (1995), statement on the cooperative identity, cooperatives are based on the values up on which cooperatives are founded. These values are categorized as basic and ethical values. The basic values are self-help, self-responsibility, democracy, equality, equity and solidarity where as the ethical values are honesty, openness, social responsibility, and caring for others.

2.1.4 Cooperative Principles

The cooperative principles are guidelines by which cooperatives put their values into practices. Cooperative societies have certain distinguishing principles or characteristics, which set them apart from other forms of business organizations. As a result of this, the ICA (1995) adopted seven fundamental cooperative principles to guide the activities of international cooperative movements. The principles are also enshrined in the cooperative society's proclamation No. 147/1998 of the FDRE. These include: Voluntary and Open Membership, Democratic Membership, Control Autonomy and Independence, Education, Training and Information, Cooperation among Cooperatives and Concern for Community.

2.1.5 Theory of Agricultural Cooperatives

According to the definition of the International Cooperative Alliance (ICA, 2005-2010) a co-operative 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. Co-operatives are based on the values of self-help, self-responsibility, democracy, equality, equity and solidarity (ICA, 2005-2010).

The cooperative can be applied to any business activity. For example, types of cooperatives include producer, consumer, workers and service cooperatives. Ortmann and King (2007) maintain that in general, agricultural cooperatives can be classified into three broad categories according to their main activity namely:

- 1) Marketing cooperatives, which may bargain for better prices, handle, process or manufacture and sell farm products,
- 2) Farm supply cooperatives, which may purchase in volume, manufacture, process or formulate, and distribute farm supplies and inputs such as seed, fertilizer, feed, chemicals, petroleum products, farm equipment, hardware, and building supplies, and
- 3) Service cooperatives, which provide services such as trucking, storage, ginning, grinding, drying, artificial insemination, irrigation, credit, utilities, and insurance. Further, the same authors point out that most of the agricultural cooperatives are relatively small businesses. Empirical evidence suggests that profit margins are generally lower in markets with a substantial cooperative presence (Rogers and Petraglia, 1994; Haller, 1993 cited by Torgerson et al., 1998: 11).

Cooperatives may have increasingly important roles to play in providing agricultural producers access to markets and providing vehicles for capturing value added. Using the dynamic model, Royer and Smith (2007) argued that contrary to conventional thinking, cooperatives can successfully distribute surplus earnings to producers as patronage refunds, while using prices as instruments for achieving and maintaining optimal output levels. However, the existence of patronage refunds limits the ability of cooperatives to restrict producer output to optimal levels and that, as a result, cooperatives are unable to pursue objectives or exercise market power in the same manner as other firms.

2.1.6 Theory of Social Co-operation

This has its antecedents in the notion of altruism, or the selfless concern for the welfare of others. A behavior that is often contingent on the individual's economic, social and life stage. Research into human behavior suggests that co-operation is influenced by the ability of individuals to communicate and develop a sense of group identity. Uncertainties about the environment or social participation by others are also potentially important factors. For example, in the case of grain harvests, individual's concerns over the size of future yields (environmental uncertainty), or the contribution of others to the harvest (social uncertainty) may affect their willingness to co-operate. Also important are resource asymmetries where the individual has larger shares of resources and choose to contribute more to the common good, or are forced to do so via government taxes (Biel, 2000).

Social Co-operation Theory suggests that individuals collaborate due to a sense of common or shared goals, common or shared values and a sense of community whereby they identify with each other and show mutual care and respect for others in the same group. According to Birchall and Simmons (2004) there is a process they identify as the participation chain that moves via three distinct stages: First, Resources (the assets, capabilities, time, money and skills of the participants going into any future collaboration); Second, Mobilization (the factors driving co-operation, such as mutual needs, opportunities and recruitment efforts); Finally, Motivations (the forces driving collaboration and sustaining co-operative activity)

2.1.7 Agricultural Cooperatives

Agricultural cooperatives are agricultural-producer-owned cooperatives whose primary purpose is increasing member producers' production and incomes by helping better link with finance, agricultural inputs, information, and output markets. The purpose of agricultural cooperatives is to help farmers increase their yields and incomes by pooling their resources to support collective service provisions and economic empowerment. In Ethiopia, the number of agricultural cooperatives has been increasing rapidly and they play a major role in providing farmers with inputs while ensuring members' social cohesion and economic improvement (MoA, 2012).

The agricultural cooperatives perform many functions such as assemble the products of producers and facilitate more efficient handling and more competitive sales, and then grade and ship to market, supply agricultural inputs to the market and credit provision for customers (FCC, 2005). Agricultural cooperatives are believed to play a crucial role in curbing farmers' problems by providing services ranging from making credit and modern inputs available to creating market opportunities and selling members' output (Thomas and Fanaye, 2012).

Agricultural cooperatives can also be an effective means to empower women in rural areas and help them to overcome the constraints they face in accessing education, knowledge and information, as well as productive assets (FAO, 2010).

2.1.9 Historical Development of Cooperative in Ethiopia

In Ethiopia, Cooperation among people has existed since history has been recorded. Traditional forms of cooperation involved community members voluntarily pooling financial resources through "iqub", which was an association of people having the common objectives of mobilizing resources, especially finance, and distributing it to members on rotating basis. There were also initiatives for labor resource mobilization that were to overcome seasonal labor peaks, known as "Jigie", "Wonfel", among others. There was also the idir, which was an association for provision of social and economic insurance for the members to the events of death, accident, damage to property, among others. This informal association continues to operate in Ethiopia (Bezabih, 2009).

However, the formation of modern cooperative societies was started soon after the Italian invasion. It was only in 1960s that a cooperative was legally enacted. During the reign

of Haile selassie, the cooperative legislation No.241/1966 was proclaimed and about 154 different types of cooperatives were organized. Based on this proclamation 158 cooperatives were established with 33,400 members and 9,970,600 Birr total capital. However, the focus was only on potential areas for agricultural production in order to enhance the production economically important crops/cash crop for export and as are suit, land ownership was basic criterion for membership. In most part of country few land lords owned the land. So for the very beginning, it failed to meet the demand of marginalized group of farmers. Commercial farmers were encouraged to become members of the cooperatives (Zerihun, 1998).

During the socialist regime, the government proclaimed organization proclamation in 1978: proclamation number 138/1978. During this era, tremendous efforts were done to promote agricultural service cooperatives as well as producers cooperative societies. Up to 1990 there were 10,524 different types of cooperatives with 4,529,259 members and capital of Birr 465,467,428 throughout the country. From these cooperatives 80 percent were rural cooperatives (Zerihun, 1998). However, during this regime, cooperatives that were organized earlier were considered unnecessary and discarded. The newly organized cooperatives under the regime have purposefully made instruments of political power. Their organizational procedures were not based on internationally accepted cooperative principles (FCA, 2009). Moreover, beside this reason, cooperatives' movement used to suffer from a loss of credibility in the eyes of their members and the public in the general because the political ideology of the then existing government (Zerihun, 1998).

In 1991, the old military regime was defeated in the civil war. The new government embarked on major political and economical reforms. The new constitution provided to the decentralization in which substantial political, economic, and social policy power has been devolved to the nine regions and two city council administrations. By abolishing more centralized economic policy and planning, the new market liberalizing policy, which is democratic and decentralized policy launched the formation of new "Agricultural Co-operative societies proclamation No. 85/1994". This proclamation restricts the government from negative interface in the independent cooperatives. For establishment of different types of cooperatives in the country, "Co-operative society proclamation No. 147/1998" replaced the proclamation No. 85/1994. This proclamation shall in particular include the following:

Agricultural, Consumer, Housing, Industrial Artisan Producers', Credit and Saving, Fishing and Mining Cooperative societies Alema, 2008).

Moreover, Co-operative society proclamation No. 147/1998 also provides for the establishment of cooperatives, according to their nature, at different levels into four-tier structures: the primary societies (i.e the lowest level which is supposed to be formed by ten or more persons who live, work within a given area, and who have common interest); the secondary level (i.e woreda and regional unions formed by two or more primary level cooperative societies); tertiary level (i.e federation of different unions at regional and/ inter-regional level); and the quaternary level or cooperative league (i.e the confederation of all level cooperatives in the country at the national level (Alemu, 2011).

2. 1.9.1 Primary Cooperatives in Ethiopia

A Primary Agricultural Cooperative is a cooperative in which all the members are individuals. The purpose of Primary Agricultural Cooperative is to provide employment or services to its members and to promote community development. According to FCA (2015) annual report indicates; there are 56,044 primary cooperatives, both agricultural and nonagricultural sector. Throughout the country the total number of primary cooperative reached to 9, 165,267 of which 6,949,589 are male and 2,215,678 are female members and holding a total capital of 11.6 million birr. ACs and SACOs currently constitute the most common type of cooperatives in the country in terms of number, membership and capital. Total member of agricultural primary cooperatives have 5,645,962 members of which 4,695,331 are male and 950,631 are female members and holding a total capital of 2,269,699,088 birr. Secondly, saving and credit cooperatives have 1,736,122 members of which 1,059,885 are male and 676,237 are female members and holding a total capital of 5,126,912,681 birr (FCA, 2015).

2.1.9.2 Secondary cooperatives in Ethiopia

A Secondary Agricultural Cooperative is a cooperative in which two or more primary cooperatives, including juristic persons, can form a secondary cooperative. The members are Primary Agricultural Cooperatives. According to FCA (2015) annual report indicates; there are 311 cooperative unions in Ethiopia, with a capital amount of 2.2 billion birr. Out of this, Agricultural Cooperatives hold 1.57 billion birr; followed by saving and credit cooperatives 618 million birr and others sectors hold 24 million birr. According to FCA, out of 311 unions 181 (58%) of secondary cooperative in Ethiopia operate on Agricultural sector, 88(28%) of secondary cooperative engaged in financial sector or saving and credit services SACCOs) and the remaining 42 (14%) of secondary cooperative operate in others sectors like Consumers, Mining, and Housing construction.

2.10 Agricultural Cooperatives Output Marketing

Agricultural cooperatives are providing services to smallholder farmers, which serve the dual purpose of aggregating smallholder farmers and linking them to output market. Cooperative marketing is an extension of the principles of cooperation in the field of marketing. It is a process of marketing through a cooperative association formed voluntarily by its members to perform one or more marketing functions in respect of their product (Davis, 2008).

Agriculture marketing system in developing countries can be understood to compose of two major sub-systems i.e. output marketing and input marketing. The factors in the output marketing sub-system include farmers, village/primary traders, wholesalers, processors, importers, exporters, cooperatives, regulated market committees and retailers. The input subsystem includes input manufacturers, distributors, related associations, importers, exporters and other who make available various farm production inputs to the farmers. An efficient marketing system is an effective agent of change and an important means for raising the income levels of farmers and satisfaction of the consumers (Sorokhaibam and Devi, 2011).

Three types of product markets exist in Mozambique. These are the informal markets, the formal trading and the relief grain deliveries. In the informal market, local grain trade at the village is dominant. Those who produce a surplus sell to those in need, either within the

local community or to neighboring communities. These informal channels create employment and increase food security but also result in a loss of tax revenues. This informal trading has however spread across borders. Mozambique is involved in formal grain trade with its neighbors. The formal trading is subjected to regulations. Agricultural productivity in Mozambique has not reached sufficient levels to enable the countries to produce grain surpluses and depend less on imports through formal trading. In 2006, maize and wheat production levels were high and there was less need for import of these two. Export of maize reached its peak during this period of 2000-2007, in 2006 (Kizito *et al.*, 2011).

In Ethiopia, farmers who are members of cooperatives tend to achieve higher yields, and staple crops that are marketed through cooperatives attain a better price. Agricultural cooperatives help farmers solve a collective action problem, that is how to procure inputs most efficiently and market their outputs on more favorable terms than they could achieve by themselves. Accordingly, Ethiopia's Growth and Transformation Plan foresees a central role for agricultural cooperatives in increasing the productivity and household income of smallholder farmers (Bernard *et al.*, 2010).

Besides their progressive role in output marketing, agricultural cooperatives in Ethiopia are effective in providing embedded supportive services, significantly contributing to members' technical efficiency. Though many variations in the agricultural cooperatives model can be distinguished, typical agricultural cooperatives in Ethiopia combine both agricultural supply and marketing activities. Currently, agricultural cooperatives market more than 10 percent of farmers' produce and supply farm inputs for all farm households irrespective of membership (Gashaw *et al.*, 2013).

Most cooperatives in Ethiopia do not sufficiently help members improve their yields and incomes. While they are currently active in procuring and distributing inputs, many are neither effective nor efficient in providing this service, as well as other core services, such as output marketing and value addition, quality- and technology-related extension, and efficient allocation of surpluses. For cooperatives that do provide output marketing service, transaction sizes are often small, and marketing revenues often do not sufficiently accrue to farmers. Many cooperatives sell outputs at lower prices than could be achieved with better market information, storage, and processing. Quality has also been an issue. For example, only 18%

of cooperatives that had contracts with the World Food Program in 2010 were able to fulfill them, while others delivered outputs of insufficient quality and quantity (MoA, 2012).

In 2008, the Ethiopian Commodity Exchange was created to reduce uncertainty in agricultural output markets and promote commercialization of the major Ethiopian agricultural commodities. Membership to these markets is encouraged for cooperatives. Although, the government of Ethiopia has promoted the involvement of cooperatives in the established commodity exchange, cooperative membership has had an insignificant impact on agricultural commodity commercialization. In fact, only the minority of cooperatives engage activities of output marketing. Although, these cooperatives often provide storage and higher prices for farmers output, these are not enough incentives for all farmers to ensure greater participation (Francesconi, 2009).

2.11 Marketing Performance

Assessing marketing performance is very difficult. Unlike purely internal measures of performance, such as defects per million, and marketing performance depending on external, largely uncontrollable actors, such as customers and competitors (Neely, 2007). Furthermore, (Lamberti & Noci, 2010) identify the following marketing performance indicators: Financial output indicators, which compare the result of the marketing actions to the cost associated to implement the actions such as profits, sales, cash flows); Non-financial output indicators, such as market share, customer satisfaction, and so on; Input indicators, which reflect marketing performance in terms of effort such as marketing budget and marketing assets or marketing unit behavior such as marketing audits and Multiple hybrid indicators which evaluate macro dimensions related to efficiency, effectiveness and interdependence of the multiple dimensions of the marketing performance system.

Hence, marketing performance measured on different techniques mentioned above, to make the study more manageable, the performance of agricultural cooperatives in Damote Gale studied by giving strong emphasis on sales growth, marketing cost reduction, bargaining power, and carrying for others (stabilizing the market).

2.12 Key Factors of Agricultural Cooperatives Output Marketing

Several authors discuss factors that may affect marketing agricultural outputs. According to Dawit 2005, the weak performance of agricultural output market in Ethiopia has been recognized as a major impediment to growth in the agricultural sector and the overall economy. The performance of agricultural marketing system is constrained by many factors such as: poor quality of agricultural produce, lack of market facilities, weak extension services which ignored marketing development and absence of marketing information Wolday (1994).

Although different policy reforms increased market integration and market competition in local grain markets, wider systemic and structural constraints may have limited the impact of reforms. A fundamental problem facing the country is the persistently high transaction costs associated with trading agricultural commodities. Inadequate market information systems that do not provide smallholders and traders with price information, when coupled with poor infrastructure and weak private-sector capacity, significantly impede commercialization of the country's largely subsistence-oriented smallholder population (Eleni *et al.*, 2003).

In many developing countries, smallholders face relatively greater challenges when it comes to commercializing their surplus output. One way of explaining the persistently low level of smallholder commercialization relates to the idea of transaction costs that is the costs entailed in marketing surplus output create a wide differential between selling and purchase prices, limiting the benefits smallholders are able to accrue from their market-based exchanges (Fafchamps and Hill, 2005).

2.12.1 Cooperative management factors

According to Kifle (2015) carried out research on cooperative movement in Ethiopia. In this study he examined management committee members have no knowledge of cooperative business transaction. In most cases cooperatives are unable to employ high quality management staff and the burden of due diligence is left to cooperative members who may have limited education on financial management. The committee members elected by the general assembly to lead the affairs of societies for fixed period do not have the necessary

capacity to bring good management, not under gone in skill upgrading. Thus, the good management is the main and crucial weakness of cooperatives.

According to Katar & pundir (2000) examined, most of the cooperatives were constrained by lack of professionalism in their management, lack of good elected leadership, small size of business and hence inability to attain financial viability. They observed that all the above factors needed to be addressed if the cooperatives were to remain relevant and competitive in both local and international market.

2.12.2 Members 'participation factors

According to Azmah and Fatimah (2008), carried out research on factors influencing cooperative membership and share increment; Application of Logistic Regression Analysis in Malaysia cooperatives. In their study they examined two issues; first, the factors that might influence cooperatives' membership preferences such as age, income level, types of occupation, educational background, and level of outside influence; second, the factors that affect and influence members' decision to increase share capital ownership cooperative. Members shopping habits at cooperative store, duration of membership, attendance at annual General Assembly Meeting (GAM), involvement in other cooperative activities, and involvement in other voluntary activities. In their findings they agreed that cooperative success not only relied on the strength and efficiency of board of director and management but more importantly on membership commitment and this is the area of the researcher wants to explore on how the member influence the performance of cooperative societies.

Muhammad (2014) noted that members education on how to run cooperative greatly influenced how cooperatives performed thus advised that they have deliberate efforts to ensure the capacity of its members were built so as to sustain the cooperatives performance.

2.12.3 Marketing information Factors

According to Admasu, 1998 as cited in Demeke 2007, analyzed that the performance of coffee marketing system with the aim of evaluating the overall performance of coffee marketing and concluded that there was marketing inefficiencies prevailing in the system. The following critical factors for coffee marketing inefficiencies were identified: lack of standardizations at rural market centers, lack of appropriate price information system, abnormal profit in marketing, lack of short run integration between central and local prices.

Vigneshware (2003) identified as, the main problems faced by agricultural marketing cooperatives are lack of grading, traditional method of sale, weighing procedure, delayed payment, low market table surplus, defective transport, lack market information, insufficient number of regular markets, lack of integration between production and marketing. Moreover, Prakash (2003) identified as the main problems faced by agree cooperatives are lack of communication/interaction between the managers and committees; lack of business linkages; very low level of flow of market intelligence and low level of appreciation of value addition through agro-processing.

2.12.4 Financial resources Factors

According to Muthylu (2013), lack of inadequate initial capital, and poor linkage with the financial institutions was problems to hinder the performance of multipurpose cooperatives are the main problems. The perception of cooperative unions in the economic activities is affected by their management capacity, experience, and access to credit (Bezabeh, 2009).

Almaz (2008) showed that, the availability of credit has positive impact on the performance of cooperatives. Moreover, according to (Opata at el, 2014), amount of credit from donors and volume of saving generated from members are the identified factors that contribute to their overall success and performance of cooperatives.

2.12.5 Infrastructural access Factors

According to Muthylu (2013), poor storage and transport facilities, electricity and irrigation facility were among the important problems of infrastructure to affect the performance of multipurpose cooperatives in input and output agricultural marketing. The storage or warehouses owned by cooperatives are below the required standard and this problem results cooperative not to purchase agricultural produce from their members' especially perishable agricultural produce.

2.1.3 Overview of Agricultural Output Marketing on Crop Productions

Ethiopia is the second largest producer of crop production in sub Saharan country (CSA, 2008). Crop production has been exercised in SNNPR and all Wereda of Wolaita Zone. However, Damote Gale worda is the most representative area in crop production (Maize,

Wheat, and Teff) that it shares of production is 15 percent to zonal production (WZCOPD, 2008). As the information Damote Gale woreda Agricultural office (2017) indicate, in the Wereda there are about 3,899 ha of arable land of which 2,228 ha are covered by crop production in the production year 2016. In this period 10,563 quintal of crop production (Maize, Wheat, and Teff) are harvested and volume of output sold in birr 8,558,140 in the area.

2.14 Demote Gale Woreda Crop Production Trends

The total land covered by crop production year of 2017/18 was more than the two remaining year in case if climate variation. However, in relation to the amount of yield obtained in each year; it is in good progress. This implies that, the farmers' access to farm inputs improved seed varieties are increasing as result their level of productivity is increased. Therefore, supplying the farm inputs and improved seed varieties to farmers enables the farmer to enhance their productivity which interns result in economic improvement of farmers that will have positive contribution to the economy of the country (Damote Gale Agricultural office, 2018).

Different demographical variables can affect the Agricultural output marketing performance of a given organization. In this study, Some of demographic factors are education, ages, gender, occupation and gender.

2.2 Review of Empirical Studies

Different studies conducted by researcher concerning Agricultural Cooperative Societies. Some of the studies assessed as empirical evidence as under here.

Agricultural cooperatives: opportunities, performances and challenges were studied by Birhanu (2011), using sample from primary cooperatives in Adigudom agricultural cooperative union in South Eastern Zone of Tigray. The study result indicated that, lack of equal opportunity in passing decisions, inadequate finance, limited capacity of Board of directors, unhealthy competition of private traders, limited physical resources, lack of education and training were factors which hampered successful performance of the union. Organizational constraints in rural development and causes of different performance among Ugandan cooperatives were studied by Persson (2010), using two sampled cooperatives from

Uganda. The study result showed that, leadership skills and channels for member participation were the most important organizational constraints explaining differences in performance.

Performances and challenges of cooperatives in Ethiopia were studied by Yemane (2010). The study was undertaken by taking sample from primary member cooperative societies in Werie multipurpose cooperative union, and non-members from the residents of the town of Edaga-Arbi, in central Zone of Tigray. The study result pointed out that, embezzlement, limitations in the capacity of management committee, lack of capital, unhealthy competition from private traders, absence of education and training and lack of physical resources are the main constraints of the performance of the Union.

Haile Selassie (2003), found that, the management committee members and focus groups participants were suggested, inadequate capital, unskilled management committee, illiterate membership, unwillingness to serve as committee member, low commitment and disloyalty of members, low level of infrastructure development, and the unhappiness of members with the cooperative services prevented the cooperatives from fully achieving their objectives.

According to Muthyalu (2013), that analyzes the performance of multipurpose cooperatives in Input and Output Agricultural Marketing in Woreda, Tigray Region, Ethiopia. The study comes up with limited trained man power or professionals were important problem to determine multipurpose cooperatives performance in Input and Output Agricultural Marketing. Poor storage and transport facilities, electricity and irrigation facility were among the important problems of infrastructure to affect the performance of Input and Output Agricultural Marketing. The storage or warehouses owned by cooperatives are below the required standard and this problem results cooperative not to purchase agricultural produce from their members' especially perishable agricultural produce. Furthermore, the study indicted, Members participation was highly influenced by awareness of the members' transparency and accountability of the management committee.

Prakash (2003) identified as the main problems faced by agricultural cooperatives are lack of professional and qualified managers; lack of communication/interaction between the managers and committees; lack of communication with the basic members; lack of interaction with and support of national; lack of business linkage; inconsistent government policies and rigid regulations; very low level of flow of market intelligence; low level of appreciation of

value addition through agro-processing. Moreover, Admasu (1998) analyzed the performance of coffee marketing system with the aim of evaluating the overall performance of coffee marketing and concluded that there was marketing inefficiencies prevailing in the system. In the study summary, the price inefficiencies, lack of appropriate information system, lack of standardization in rural market centers, abnormal profits in marketing, and lack of short run integration between central and local prices are the causes of marketing inefficiencies.

Moses, Peter, and Jeremiah (2013) used descriptive statistics to explore the roles of Cooperative Movement in Rural Development in Kenya. The findings indicate that, agricultural cooperatives have played significant roles in reducing unemployment problem in the study area by providing credit and grant based financial support to unemployed people. They also added that, cooperatives have also considerable contribution in empowering poor women by actively participated in minimizing traditional beliefs against women, enshrined principle in gender equity in their bylaws to develop positive outlook on the local people and on the adoption of affirmative initiatives (especial privilege in credit access, training and financial support) in favor of women.

The overall conclusion of previous studies of cooperatives have focused on the performance of agricultural cooperatives and determinants of members' decision, performance of agricultural cooperatives in Input and Output agricultural marketing. There is no empirical study that has been conducted on agricultural cooperatives output marketing performance in the study area. This study, therefore, try to address information gap on the factors affecting agricultural cooperatives output marketing in Damota farmers union, Wolaita Zone, Damote Gale District of SNNPR, Ethiopia.

2.3 Research Gap

The service rendered by cooperatives is seasonal and it is limited to somehow on input distribution (Adisu, 2011). In addition to this some of the critical problems facing Agricultural Cooperative Societies in the study area are lack of financial resources, lack of market information, poor members' participation, and infrastructural problems.

The above mention problems place the farmers as usually price takers due to the fact that they have poor marketing skill and limited bargaining power. There have been attempts made by the government to improve the marketing skill and bargaining power of farmers

through establishment of cooperatives and promoting other group action approaches (Dawit, 2005).

The current study focuses the assess of the effect and analyze the cooperative management factors, poor member participation factors, lack of marketing information factors, lack of financial resources and infrastructural factors on the agricultural cooperatives output marketing performance.

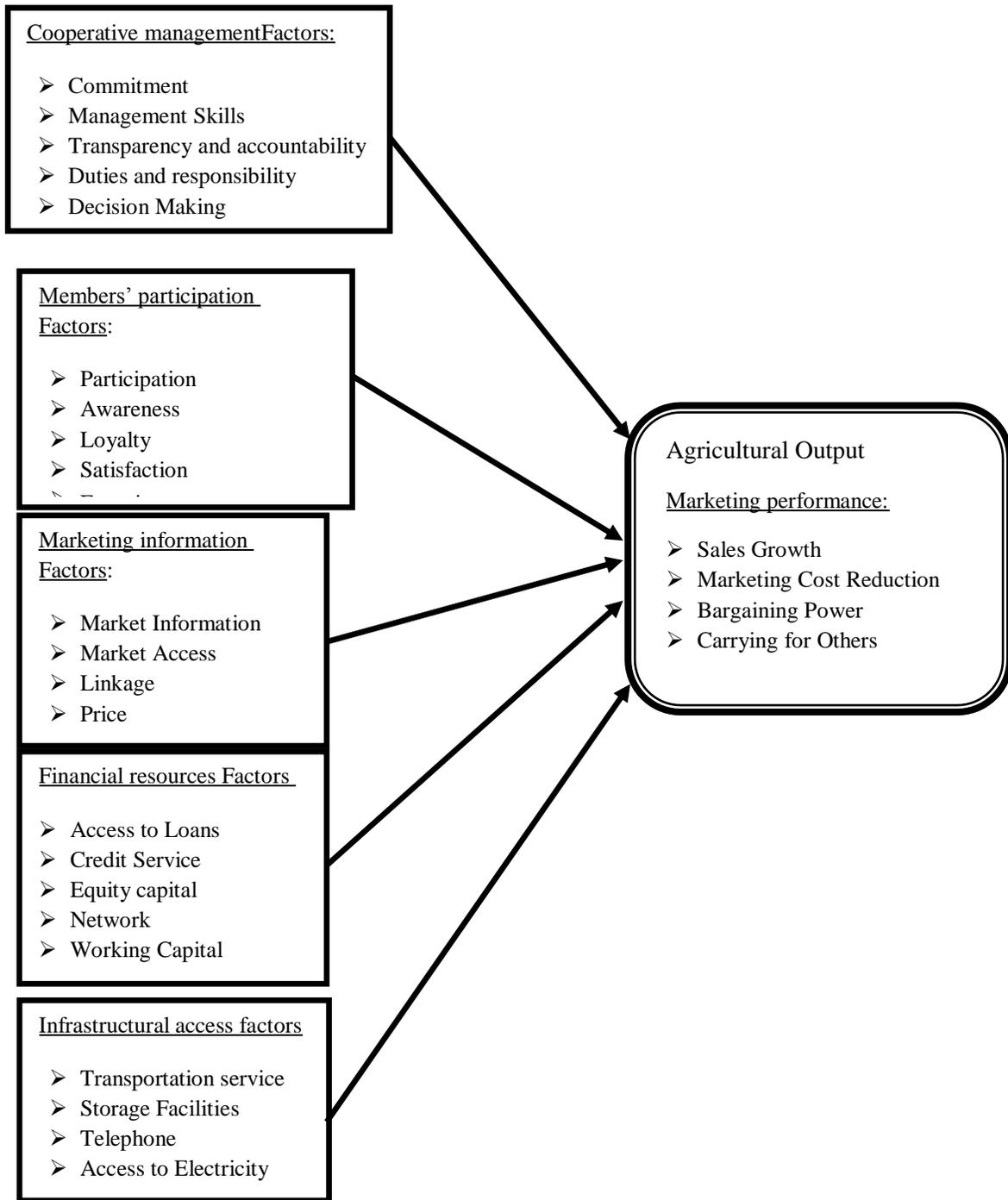
2.4 Conceptual Frame work of the Study

Agriculture marketing system in developing countries composed of two major sub-systems i.e. output marketing and input marketing. An efficient agricultural output marketing sub-system is an important means for raising the income levels of farmers and satisfaction of the consumers (Sorokhaibam & Devi, 2011). Output marketing sub-system have significant role in improving agricultural output marketing services to smallholder farmers. The sub-system also plays a significant role in insuring sustainable income and assurance of market access to the smallholders.

Moreover, the sub-system has potential to influence goals, strategies, and resources and thus bring about changes in policies, programs, and other related agricultural issues. Agricultural cooperatives are one of the factors in the output marketing sub-system. To reduce uncertainty in agricultural output market and promote commercialization of agricultural products, identifying factors in the functioning of agricultural output marketing through cooperatives is essential to design purposeful intervention planning for betterment of the farming community.

According to different sources and the real world situations, agricultural output marketing performance through cooperative is influenced by Cooperative Management, Poor Members Participation, Marketing information, and Financial Resources and Infrastructural factors. Therefore, this study, tries to analyze the influence of independent variables on the dependent variable, and the study also tries to identify the influential factors on agricultural cooperatives output marketing performance in the area under study.

Figure 2.1: Conceptual Frame Work



Source: Researcher's Own Construct based on Literature(2019)

Table: 1 Conceptual Framework Variables

Type	Variables	Index
Independent Variables	Cooperative Management	X1
	Members' participation	X2
	Marketing information	X3
	Financial Resource	X4
	Infrastructure access	X5
Demographic Variables	Age, Gender, Education and Occupation	D _{AGEO}
Dependent Variable	Agricultural Output Marketing performance	Y
Uncontrollable Variation	Error Term	e _r

Developed for the Research Purpose ‘

CHAPTER THREE

3 RESEARCH METHODOLOGY

3.1. Description of the study area

This chapter expressed the methodological approach for the study and it comprised the research design, target population sampling design, research instruments, data collection procedure and data analysis methods and other related concepts for the study.

The study has been conducted in Wolaita Zone, which is located 390 km Southwest of Addis Ababa following Tarmac road that passes through Shashemane to ArbaMinch. Alternatively, it is located 330 km southwest of Addis Ababa following Tarmac road that passes through Hosanna to Arbaminch. Wolaita Sodo is the town of the zone. It has a total area of 4,541km² and is composed of 16 weredas and six registered towns. It is approximately 2000 meters above sea level and its altitude ranges from 700-2900 meters. The population of Wolaita zone is about 2,030,366 million of which male 1,003,145 and 49.4 percent is male and female 1,027,221 and 50.6 percent are female. Out of this 11.7 percent live on towns and 88.3 percent live in rural areas. The annual population growth rate of zone is 2.9 percent. It is one of the most densely populated areas in the country with an average of 290 people per km². The area is divided into three ecological zones: Kola (lowland <1500m), Woina Dega (mid-altitude 1500-2300m) and Dega (highland >2300m). Most of the area lies within the mid altitude zone. Rainfall is bimodal, with an average amount of about 1000mm (lower in the low lands and higher in the high lands). Mean monthly temperature varies from 26°C in January to 11°C in August. Soils (mainly Vertisols and Nit soils) vary in pH from 5-6. Primary

occupation of the zone is farming (CSA, 2007).

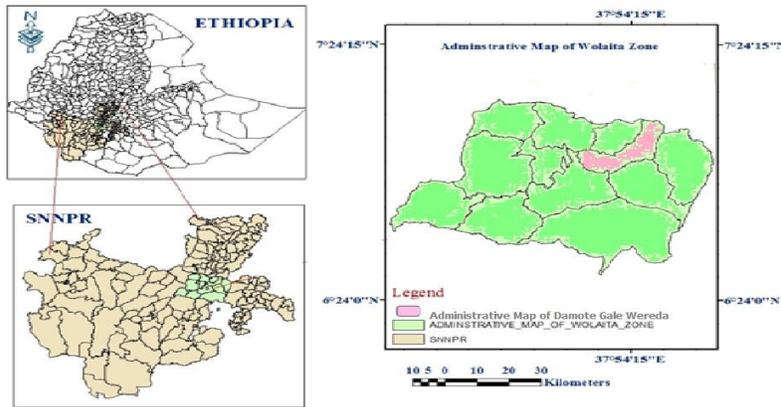


Figure 3.2 Map of the study area

3.2.Target Population

Since the study concentrated on the determinants of agricultural cooperative output marketing performance, the target population of this study was Damota farmers cooperative union in Wolaita Zone from different corners. All of the Wolaita Zone Farmers' union customers about different issues and plans of the farmers' union strategic plans (works). Because every farmer and union plans, participates, requests, inspects the required outputs at the time of delivery, evaluates based on the criteria before financial evaluation, goes to market together with sellers for onsite inspections to approve that output meets the required quality as per the requisites of the demand sections... these all participations in union activities could give rational perceptions towards agricultural cooperative output marketing performance about Damota Farmers Union market as justified in the theoretical background of the study

3.3.Research Design

The study was focused on finding about union perception towards agricultural cooperative output marketing performance. So, cause and effect relationship is required to be conducted. Therefore, Causal Research Design was applied.

3.4.Data Sources and Types

The study used primary data that could be collected through self-designed questionnaires which could be qualitative or quantitative in types.

3.5. Data Collection Methods

Primary data on determinants of agricultural cooperative output marketing performance at Damota farmers cooperative union in Wolaita Zone was gathered from respondents through sample survey to collect data from the sample at the same time.

3.6. Instruments and Scale

Data collection instruments were self-designed structured questionnaires with 5-point Likert's scale.

3.7. Sampling Design

In order to get representative number of agricultural cooperative members, a multi-stage sampling technique was used to generate the required primary data. At the first stage, Damote Gale woreda was selected from sixteen rural and six urban districts was selected purposively because, the largest numbers of multipurpose cooperatives which are working on agricultural outputs marketing services found in this woreda. In the second stage, out of 57 multipurpose cooperatives in Damote Gale woreda, four multipurpose cooperatives was selected using simple random sampling technique due to time and resource constraints to cover all cooperatives. In the thrids tage, Probability Proportional to Size (PPS) method was applied to get the proportional size of respondents from each selected agricultural cooperatives. Accordingly 99 members from wandara cooperative, 90 members from Jage cooperative, 27 members from Gacheno cooperative and 31 members from Buge cooperative. In the last stage, individual respondents from each selected agricultural cooperatives will select using systematic random sampling technique.

Since the sample frame was categorised on small population proportion. So, a random sampling technique was used. Therefore, to select the random samples from the population and random sampling techniques was applied to select respondents who are directly or indirectly in Agricultural Cooperative output marketing performance at Damota Farmers Cooperative Union in Wolaita Zone.

Table: 2 Sample Frame and the Sample Members from Selected Multi-Purpose Cooperatives (MPCs) of Selected District.

District Name	Name of MPCs	Total members of MPCs	
		Population	Sample
Damote Gale	Wandara	256	99
	Jage	235	90
	Buge	80	31
	Gacheno	71	27
	Sub-Total	642	247

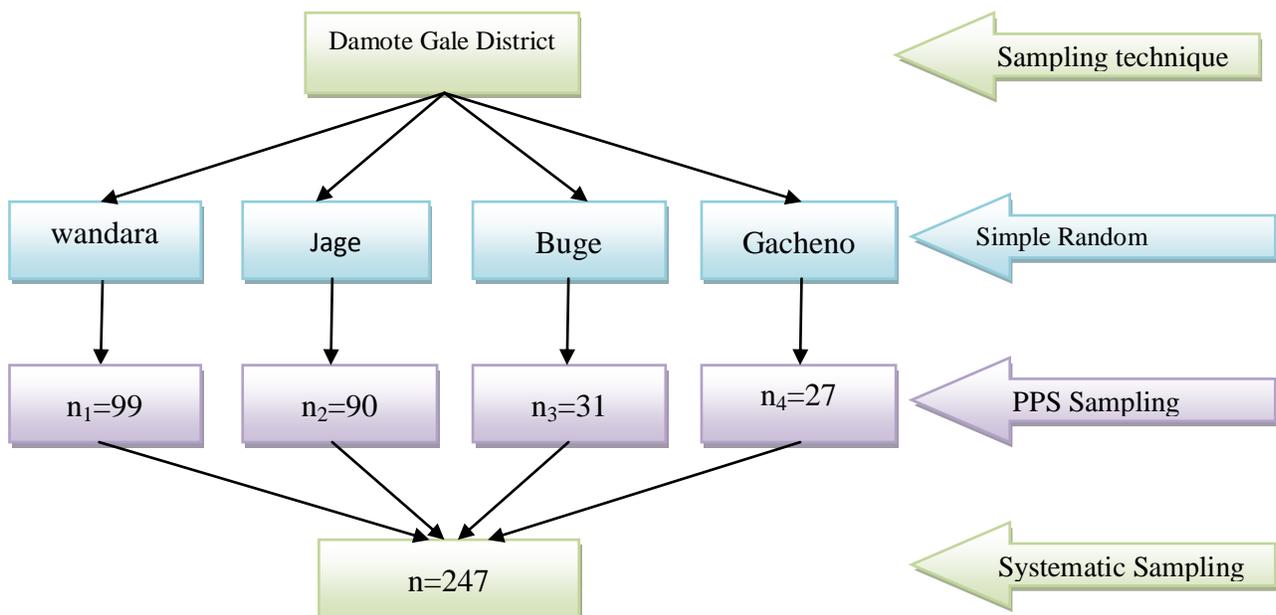
Source: Damote Gale District of Cooperative Office (2019).

To get the stratum the following formula was used. $n_i = N_i \times n/N$, for example Wandara = $256 \times 247 / 642 = 99$

3.8.Sampling Frame

A sampling frame is a list of all items where a representative sample is drawn for the purpose of the research. Since the study concentrated on the determinants of agriculture cooperative output marketing performance at Damota farmers cooperative union in Wolaita Zone, the sampling frame of this study was Wolaita zone farmers union.

Figure 3.3 Sampling Frame



Source: Damote Gale District of Cooperative Office (2019)

3.9. Sample Size determination

According to Damote Gale woreda of Cooperative Office (2018), about 642 multi-purpose agricultural cooperative members was selected four primary cooperative members. Therefore, this data used as a benchmark to calculate the sample size. Accordingly, the representative sample size was determined by using the formula developed by Yamane as cited in Amsalu and Wondimu (2014) purposively based on its appropriateness for the study.

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

Where: n = Sample size

N = Total Population

e = Sampling Error

Based on this formula, the total sample size of the study is determined as follows

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

$$n = \frac{642}{1 + 642(0.05)^2}$$

$$n \approx 247$$

3.10. Mathematical Framework

Mathematical frame work is used as a tool to answer questions that students really and quantitatively answer it. Students examine a problem and formulate a mathematical model (an equation, table, graph, or the like), quantify an answer or rewrite their expression to reveal new information, interpret, justify and validate the results, and report out the solutions.

This part presents methods of statistical analysis of relationships between two variables. The relationship between variables lies at the heart of empirical reviews of the study. In this study there are two types of variables.

3.10.1. Dependent Variable:

This variable which is determined by independent variables (predictors) and it is denoted by ‘‘Y’’.

3.10.2. Independent Variables:

The determinants or predictors of the dependent variables and which are denoted by ‘‘X’’.

Here, the researcher can use the linear regression to express the identified variable in the study. Because linear regression is an approach for modelling the relationship between the dependable variable y and one or more independent variables which are denoted X.

$Y=a+bx$general concept of linear equation for the model used.

$$\hat{y} = \beta_0 + \beta_1x_1 + \beta_2x_2 + \beta_3x_3 + \beta_4x_4 + \beta_5x_5 + D_{AGEO} + e_t$$

$$\hat{y} = \beta_0 + \sum_{i=1}^5 \beta_i x_i + D_{AGEO} + e_t$$

Where;

β_0 = Constant

e_t = error term

β_i = Coefficients of regression for the independent variables

X_i (for $i = 1, 2, 3, 4, 5$)

Independent Variable

Cooperative Management Factors= X_1

Members’ participation factors = X_2

Marketing information factors= X_3

Financial Resource Factors= X_4

Infrastructure access Factors= X_5

D= Demographic Variables (AGEO)

Dependent Variables,

Y= Agricultural Output Marketing performance

3.11.Data Processing and Analysis

3.11.1. Data Processing

To identify the determinants of Agricultural Cooperative output marketing performance at Damota Farmers Cooperative Union in Wolaita Zone contributed towards processing, the data was encoded and tabulated in MS Excel and IBM SPSS software.

3.11.2.Data Analysis

The data was analysed through Descriptive and inferential statistics. Since the study focused on mean, STD deviation, multivariate analysis and Multiple Regression Analysis were used.

3.12.Pilot Study

The small sample of data was pretested to ensure reliability and validity of the instrument which was collected to identify the determinants of Agricultural Cooperative output marketing performance at Damota Farmers Cooperative Union in Wolaita Zone.

Validity is the degree to which an instrument can measure what it should measure. The purpose of the validity is predominantly to capture the essence of the phenomena and extract data that is rich in content validity (Collis & Hussey, 2009).

Reliability: Consistent results or data after repeated trials (Mugenda & Mugenda, 2003) in order to test the reliability of the instrument used in this study, pretesting 10% of questionnaire is very important to get consistent responses from the respondents. The reliability can be pretested and accepted if the result is 0.70 and above by using appropriate statistical method cronbach alpha according to Zinbarg, M. (2005). Therefore all the research variables have the cronbach alpha values are greater than 0.70 and the tested research data is reliable to proceed the analysis.

Table: 3 Pilot Test of Reliability for the Study

Variables	Construct	Cronbach's Alpha
DV	Agricultural Cooperative Output Marketing Performance	0.891
X1	Cooperative Management	0.966
X2	Members' participation	0.927
X3	Marketing information	0.910
X4	Financial Resource	0.938
X5	Infrastructure access	0.896

Source: own survey, 2019

3.13.Ethical Considerations

The respondents' identities were kept secret and the opinion provided by them was used for academic purposes only. All the people/ organization/ Sources of data were given due credits and acknowledgment.

CHAPTER FOUR

4. Result and Discussions

4.1.Data Analysis Methods

This study used different statistical techniques aided by IBM SPSS to identify the determinants of Agricultural Cooperative output marketing performance at Damota Farmers Cooperative Union in Wolaita Zone. This chapter expresses the analysis of data followed by the research findings and those findings are related to the research questions that guided the study. The chapter of this study begins with the analysis of the response rate and then capable of explaining the determinants of Agricultural Cooperative output marketing performance at Damota Farmers Cooperative Union in Wolaita Zone. Reliability analysis was carried out using Cronbach alpha which is a coefficient of reliability that gives an unbiased estimate of data generally.

4.2.Descriptive Statistics

4.2.1.Respondents' Rate

The study population consisted of 642 union members in Wolaita zone. Questionnaires were self-structured to samples of 247 union members. Out of the 247 questionnaires were filled and returned 230 the individual respondents.

Therefore, the response rate of 93.12% and non-response rate was 6.88%. This was high response rate to facilitate gathering sufficient data that could be generalized to identify the impact of damota farmers cooperative union. This was consistent with Orodho (2009) that a response rate above 50% contributes towards gathering of sufficient data that could be generalized to represent the opinions of respondents.

4.2.2. Demographic Profile of the Respondents

This part indicated the demographic profile of the respondents those were asked self-structured questionnaires to generate data for this research purpose.

Table: 4 Age

Age group	Frequency	Percent (%)
Below 18 years	11	4.8
18-36	118	51.3
36-45	52	22.6
above 45	49	21.3
Total	230	100.0

Source: Developed for the research (2019)

The age distribution among the respondents is as shown in Table 4, a majority of respondents (118) were between ages of 18 to 36 years (51.30 %). The next dominant age group was fall under 36 to 45 years with 52 respondents (22.60%), the next age group was 49 respondents were the age group above 45 (21.30%) and the remaining 11 respondents were the age group below 18(4.80%).

Table: 5 Gender

Gender	Frequency	Percent (%)
Male	154	67.0
Female	76	33.0
Total	230	100.0

Source: Developed for the research (2019)

The frequency and percentage of gender is shown in Table 5, among the 154 respondents, 230 out of them were males (67.0%) while 76 of them were females (33.0%).

Table: 6 Education Level

Education Level	Frequency	Percent (%)
Did not attend formal education	25	10.86
Primary first cycle(1-4)	35	15.21
Primary first cycle(5-8)	120	52.17
Secondary and above	50	21.73
Total	230	100

Source: Developed for the research (2019)

Table 6 showed that 25 respondents were Did not attend formal education (10.86%), Primary first cycle (1-4) were 35(15.21%), Primary first cycle (5-8) were 120(52.17%) and 50 respondents were Secondary and above with percentage of 21.73% and respondents were did not attend formal education is the smallest group in the education level.

Table: 7 Occupation of the respondents

Occupation	Frequency	Percent (%)
Farmer	140	60.9
Craft man	30	13.0
Trader	40	17.4
Employee	20	8.7
Total	230	100.0

Source: Developed for the research (2019)

Table 7 showed that a majority of respondents (140) were farmers (60.90 %). The next dominant age group was fall under trader with 40 respondents (17.40%), the next occupation group was 30 respondents were the craft man group (13.0%) and the remaining 20 respondents were the occupation category of employee with the percentage of (8.70%).

4.2.3. Descriptive Analysis of Constructed Variables

In the table 8, the mean, mode and standard deviation values of each variable were discussed accordingly.

Table: 8 Descriptive Analysis of Constructed Variables

Variables	N	Mean	Std Dev	Mode	Minimum	Maximum
Cooperative Management (X_1)	230	2.478	0.5596	2.2	1.20	4
Members' participation (X_2)	230	2.397	0.6074	2.25	1.25	4
Marketing information (X_3)	230	2.42	0.6210	2	1.00	5
Financial Resource (X_4)	230	2.45	0.6738	2	1.40	5
Infrastructure access (X_5)	230	2.436	0.5027	2.3	1.30	3.8
Agricultural Cooperative Output Marketing Performance (Y)	230	2.506	0.7136	2.25	1.25	4

Source: Developed for the research (2019)

4.2.3.1. Cooperative Management (X_1)

Cooperative Management affected the effective implementation of Agricultural Cooperative Output Marketing Performance in the Damota Farmers Union. The use of Cooperative Management in the Union has not been effectively implemented since most of the responses were subjected to the mode value of 2.2 (higher side of disagree) and standard deviation is less than 1 that is 0.5596. Hence responses indicated the opinion of the respondents towards nearly disagrees and less deviated. The findings for it were presented in the table 8.

4.2.3.2. Members' participation (X_2)

Members Participation affected the effective implementation of Agricultural Cooperative Output Marketing Performance in the Damota Farmers Union. The use of Members Participation in the Union has not been effectively implemented since most of the

responses were subjected to the mode value of 2.25(higher side of disagree) and standard deviation is less than 1 meant it is 0.6074. Most the responses indicate the opinion of the respondents towards nearly disagrees and less deviated. The findings for it were presented in the table 8.

4.2.3.3. Marketing information (X3)

Marketing Information has the impact on effective implementation of Agricultural Cooperative Output Marketing Performance in the Damota Farmers Union. The use of Marketing Information in the Union has not been effectively implemented since most of the responses were subjected to the mode value of 2(disagree) and standard deviation is less than 1(0.6210). Responses indicated the opinion of the respondents towards exactly disagrees and less deviated. The findings for it were presented in the table 8.

4.2.3.4. Financial Resource (X4)

Financial Resource affected the better implementation of Agricultural Cooperative Output Marketing Performance in the Damota Farmers Union. The use of Financial Resource in the Union has not been effectively implemented since most of the responses were subjected to the mode value of 2(disagree) and standard deviation is less than 1(0.6738). Responses indicated the opinion of the respondents towards exactly disagrees and less deviated. The findings for it were presented in the table 8.

4.2.3.5. Infrastructure access (X5)

Infrastructure Access affected the effective implementation of Agricultural Cooperative Output Marketing Performance in the Damota Farmers Union. The use of Infrastructure Access in the Union has not been effectively implemented since most of the responses were subjected to the mode value of 2.3(higher side of disagree) and standard deviation is less than 1 that is 0.5027. Hence responses indicated the opinion of the respondents towards nearly disagrees and less deviated. The findings for it were presented in the table 8.

4.2.3.6. Agricultural Cooperative Output Marketing Performance (Y)

Agricultural Cooperative Output Marketing Performance has good relationship or impact relationship with all five independent variables in the study. Since Agricultural

Cooperative Output Marketing Performance has also the responses were subjected to the mode (mean) value of 2.25(2.506)(higher side of disagree) and standard deviation is less than 1(0.7136). Responses indicate the opinion of the respondents towards nearly disagrees and less deviated as the findings were presented in the table 8.

According to Table 8, the mean values of each variable were in the range between 2.397 and 2.506. This indicated that most target respondents were chosen more towards higher side of disagree or lower side of neutral. The highest mean (2.506) falls under dependent variable Agricultural Cooperative Output Marketing Performance(Y) whereas the lowest mean (2.397) falls under Members' participation (X_2).

Finally, most of the respondents' opinion towards disagree (2) according to the mode and mean values and that indicated the responses were lower side of the neutral point (3) is the center of the self-designed and structured questionnaire) in the 5-point likert scale

4.2.4.Variables Analysis

According to Table 8 from above discussion, the mean values of both dependent (Y) and independent(X) variables were in the range between 2.397 and 2.506. This indicates that most target respondents were chosen more towards higher side of disagree from the center in the scale. This indicates there are better inter-variables explanatory issues (one depends up on the other) for both dependent and independent variables. Therefore, it led the researcher to use the inferential statistical test of the data.

4.2.5.Normality Tests to Use Parametric Tests.

Reliability was already checked in pilot study through cronbach alpha and validity was also tested based on the content of questionnaires in pilot test.

Normality test had been conducted to check that the data were normally distributed. It is very important that this assumption was satisfied when conducting parametric tests (Drezner et al., 2010). In this research, skewness and kurtosis were used to determine the normality of the data. Data is considered normally distributed if the values of skewness and kurtosis were all within the acceptable range, which is ± 2 (Garson, 2012). The normality of the data was expressed in the following table by using Skewness and Kurtosis.

Table: 9 Normality Tests of Variables

Variables	Items	Skewness	Kurtosis
Cooperative Management (X₁)	X ₁	0.620	-0.106
Members' participation (X₂)	X ₂	0.488	-0.159
Marketing information (X₃)	X ₃	1.177	1.462
Financial Resource (X₄)	X ₄	1.190	1.064
Infrastructure access (X₅)	X ₅	0.655	0.067
Agricultural Cooperative Output Marketing Performance (Y)	Y	0.789	0.766

Source: Developed by own survey, 2019)

The results of normality test in skewness and kurtosis conducted from statistical test is shown in Table 9 The items in each variable have a skewness and kurtosis value of ± 2 , which is considered as acceptable and normal (Garson, 2012).

4.3. Inferential Statistics

The Inferential analysis was used to investigate the relationship between Independent Variables (X_i) and Dependent Variable(Y). In this research, Pearson's correlation coefficient and linear regressions methods were applied as the statistical analysis tool. With the aid of these statistical techniques, conclusions are drawn with regard to the sample and decisions are made with respect to the research hypotheses tests.

4.3.1. Pearson's Correlation Analysis

Pearson correlation analysis was conducted to determine the direction, strength, and significance of the relationships between the independent variables (Cooperative Management, Members' participation, Marketing information, Financial Resource and Infrastructure access) and dependent variable (Agricultural Cooperative Output Marketing Performance) were explained below the **table 10**. Pearson's correlation was preferred

because it could assess the linear relationship between two variables by using a single number that falls within the range of ± 1 (Barrett, K. (2004).

Table: 10 Expression of Correlation Coefficient Barrett, K

Values	Correlations
-1	Perfect negative correlations
0	No correlation
+1	Perfect positive correlations

Source: Barrett, K. (2004).

Table: 11 Correlation of IVs(Xi) with Agricultural Cooperative Output Marketing Performance(Y).

Variables		Marketing Performance(Y)
Agricultural Cooperative Output Marketing Performance(Y)	Pearson Correlation	1
	Sig. (2-tailed)	
Cooperative Management (X ₁)	Pearson Correlation	0.772
	Sig. (2-tailed)	0.000
Members' participation (X ₂)	Pearson Correlation	0.746
	Sig. (2-tailed)	0.000
Marketing information (X ₃)	Pearson Correlation	0.801
	Sig. (2-tailed)	0.000
Financial Resource (X ₄)	Pearson Correlation	0.745
	Sig. (2-tailed)	0.000
Infrastructure access (X ₅)	Pearson Correlation	0.840
	Sig. (2-tailed)	0.000
Correlation is significant at the 0.01 level (2-tailed).		
Source: (own survey 2019).		

Table 11 showed the level of correlation between the dependent variable (Agricultural Cooperative Output Marketing Performance) and Independent variables (Cooperative

Management, Members' participation, Marketing information, Financial Resource and Infrastructure access).

Agricultural Cooperative Output Marketing Performance is positively and strongly related to the predictor Cooperative Management with a Pearson correlation coefficient of $r = 0.772$ and Sig is 0.000 which is < 0.05 hence, there is a strong relationship between Agricultural Cooperative Output Marketing Performance and Cooperative Management.

Agricultural Cooperative Output Marketing Performance is positively and strongly related to the predictor Members' participation with a Pearson correlation coefficient of $r = 0.746$ and Sig is 0.000 which is < 0.05 hence, there is a strong relationship between Agricultural Cooperative Output Marketing Performance and Members' participation.

Agricultural Cooperative Output Marketing Performance is positively and strongly related to the predictor Marketing information with a Pearson correlation coefficient of $r = 0.801$ and Sig is 0.000 which is < 0.05 hence, there is a strong relationship between Agricultural Cooperative Output Marketing Performance and Marketing information.

Agricultural Cooperative Output Marketing Performance is positively and strongly related to the predictor Financial Resource with a Pearson correlation coefficient of $r = 0.745$ and Sig is 0.000 which is < 0.05 hence, there is a strong relationship between Agricultural Cooperative Output Marketing Performance and Financial Resource.

Agricultural Cooperative Output Marketing Performance is positively and strongly related to the predictor Infrastructure access with a Pearson correlation coefficient of $r = 0.840$ and Sig is 0.000 which is < 0.05 hence, there is a strong relationship between Agricultural Cooperative Output Marketing Performance and Infrastructure access.

All the independent variables of this study are strongly related or correlated with dependent variable and that the variables have better linear relationships. Therefore, the effect size of each independent variable is greater on the Agricultural Cooperative Output Marketing Performance. Since the variables are significantly and strongly correlated each other ($r \geq 0.745$ and $\text{sig} \leq 0.05$) for all variables in the Pearson correlation coefficient.

4.3.2. Regression analysis

The collected data were summarized and analyzed using descriptive statics (which measure central tendency), and inferential statistics in which multiple regression analysis Model is employed to investigate the predictors of Agricultural Cooperative output marketing

performance at Damota Farmers Cooperative Union in Wolaita Zone. Based on the type and objective of relationship between variables. Data were gathered through questionnaires is coded, entered into computer and analyzed and presented in the form of tables by using SPSS version 20 Software. Inferential statistics is used to measure the study, appropriate analytical tools and statistical software is also employed.

The study further applied regression analysis to establish the statistically significance relationship between the independent variables notably, Cooperative Management, Members' participation, Marketing information, Financial Resource and Infrastructure access on the dependent variable which was Agricultural Cooperative Output Marketing Performance and discussed below the **table 12**.

Table: 12 Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.898	0.807	0.802	0.317

Source: (Own Survey, 2018)

The above regression mode table shows (R) the correlation between dependent variable (Agricultural Cooperative Output Marketing Performance) and independent variables (Cooperative Management, Members' participation, Marketing information, Financial Resource and Infrastructure access). As shown in the above table, R of 0.898 represents a situation in which the strong correlation of independent variables with dependent variable.

Coefficient of determination or correlation coefficient squared (R^2) tells that how much of the variance in Agricultural Cooperative Output Marketing Performance is expressed by the regression model from sample of 230 respondents and which measures the amount of Agricultural Cooperative Output Marketing Performance's predictors (Cooperative Management, Members' participation, Marketing information, Financial Resource and Infrastructure access) which each factors were shared the relation each other.

As it was put on the table 12 the Square of correlation coefficient of each factors' share is 80.70% of Agricultural Cooperative Output Marketing Performance's predictors. Therefore, the researcher found that (Cooperative Management, Members' participation, Marketing information, Financial Resource and Infrastructure access) shared 80.70% of

Agricultural Cooperative Output Marketing Performance at Damota Farmers Cooperative Union in Wolaita Zone. This means that 19.30% of the Agricultural Cooperative Output Marketing Performance predictors cannot be explained by these predicting variables (Cooperative Management, Members' participation, Marketing information, Financial Resource and Infrastructure access) factors alone. Therefore, there must be also other variables which were not included in this study which have an influence on Agricultural Cooperative Output Marketing Performance in the study area.

The adjusted (R^2) value indicates the loss of predictive power or shrinkage, the adjusted value tells us how much variance in the Agricultural Cooperative Output Marketing Performance would be accounted for if the model had been derived from which the population that the sample was taken for this study. The adjusted R^2 gives some idea of how well our model generalizes and ideally its value to be the same, or very close to, the value of R^2 .

In the table 12 the difference for the model summary was small (the difference between the values is $(0.807 - 0.802) = .005$ (about 0.5 %). This shrinkage (loss of the prediction) means that if the model was derived from the population rather than a sample it would account for approximately 0.5 % less variance in the output marketing Performance) by identified predictors (Cooperative Management, Members' participation, Marketing information, Financial Resource and Infrastructure access). Therefore, the regression model resulted in significantly better prediction of the dependent variable (Agricultural Cooperative Output Marketing Performance) in this study.

4.3.3. Analysis of Variances

Table: 13 ANOVA

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	94.079	5	18.816	187.017	0.000
Residual	22.537	224	0.101		
Total	116.615	229			

Source : (Developed for the research, 2019)
a. Dependent Variable: Agricultural Cooperative Output Marketing Performance
b. Predictors: five independent variables

F ratio is used to assess the overall fitness of the regression model. F value, 187.017 is

large by a small significant p-value of <0.0001(0.000) which is less than 0.05. This indicates that the Agricultural Cooperative Output Marketing Performance (DV) was predictable by Cooperative Management, Members' participation, Marketing information, Financial Resource and Infrastructure access (IVs). In other words, the regression model was considered as good fit.

4.3.4. Regression Model Result for Beta Coefficients

Which indicated the coefficient of the independent variables to express the explanation of the impact of each independent variables on dependent variable Agricultural Cooperative Output Marketing Performance and described below the Table 14

Table: 14 Regression Model Result for Beta Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	T	(Calculated P-Values) Sig.
	B	Std. Error	Beta		
(Constant)	-0.624	0.110		-5.671	0.000
X ₁	0.179	0.068	0.140	2.643	0.009
X ₂	0.017	0.079	0.015	0.218	0.828
X ₃	0.217	0.073	0.189	2.974	0.003
X ₄	0.192	0.058	0.181	3.323	0.001
X ₅	0.678	0.106	0.477	6.368	0.000

Source: Developed for the research (2019). Dependent Variable

The regression coefficient β represent the change in the outcome resulting from a unit change in the predictor and that if predictors (independent variables) are having significant impacts to predict the outcome (dependent variable) then this β should be different from 0 and big in relation to its standard error.

As indicated in the above table 14 t-statistics can be derived to test whether a β -value is significantly different from 0. The *t*-tests measures whether the predictor is making a significant contribution to the model or not. Therefore, the *t*-test associated with a β -value is significant if the value of *Sig.* is less than 0.05(given) then the predictor is making a significant contribution to the model.

The p-value is less than 0.05 for all the independent variables. Thus it indicates that the 5 independent variables are significant predictors of Agricultural Cooperative Output Marketing Performance (dependent variable).

Therefore, the β is different from 0 and the researcher found that the predictor variables make a significant contribution in predicting Agricultural Cooperative Output Marketing Performance were Cooperative Management(X_1) $\beta_1 = 0.179$, Members' participation(X_2) $\beta_2 = 0.017$, Marketing information(X_3) $\beta_3=0.217$, Financial Resource(X_4) $\beta_4=0.192$ and Infrastructure access(X_5) $\beta_5=0.678$. Therefore, variables are statistically significant to predict the Agricultural Cooperative Output Marketing Performance at Damota Farmers Ccooperative Uunion in Wolaita Zone.

As it was put in the table above, each of the beta values has an associated standard error indicating to what extent these values would vary across different samples and then standard errors are used to determine whether or not the β -value differs significantly from zero.

To express the impact and relationship of independent variables on the dependent variable (Agricultural Cooperative Output Marketing Performance), the regression function is as follows:-

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + e$$

$$Y = -0.624 + 0.179X_1 + 0.017X_2 + 0.217X_3 + 0.192X_4 + 0.678X_5 + 0.317$$

The β - values tells to what extent each predictor affects the outcome if the effects of all other predictors are held constant. The linear equation above indicates that there is a positive relationship between the above predictors and Agricultural Cooperative Output Marketing Performance.

This can be explained as for every better implementation of Infrastructure access, Marketing information, Financial Resource, Cooperative Management and Members' participation would improve the Agricultural Cooperative Output Marketing Performance at Damota Farmers Ccooperative Uunion In Wolaita Zone by 67.80%, 21.70%, 19.20%, 17.90% and 1.70% respectively.

In addition, the effectiveness of each independent variable in affecting the dependent variable is determined by the standardized coefficients beta value. From the Table 14 it is found that Infrastructure access($\beta = 0.678$) is the most influential factor followed by

Marketing information($\beta = 0.217$), Financial Resource($\beta = 0.192$), Cooperative Management($\beta = 0.179$) and Members' participation($\beta = 0.017$) was the least influential factor in determining Agricultural Cooperative Output Marketing Performance at Damota Farmers Cooperative Union In Wolaita Zone.

4.3.5. Test of Collinearity by Using Tolerance and VIF

The accepted the five independent variables did not exhibit collinearity amongst themselves. A situation in which there is a high degree of association between independent variables is said to be a problem of multi-collinearity which results into large standard errors of the coefficients associated with the affected variables.

In a regression model that best fits the data, independent variables are correlated highly with dependent variables but correlate, at most, minimally with each other. If there is this problem it can be solved by ensuring that there was a large enough sample as multi-collinearity is not known to exist in large samples and by deleting one of the highly correlated variables and re-computing the regression equation

Table: 15 Tolerance and Variance Inflation Factor

Variables	Tolerance	VIF
Cooperative Management	0.306	3.267
Members' participation	0.192	5.210
Marketing information	0.214	4.665
Financial Resource	0.290	3.446
Infrastructure access	0.153	6.517

Source: (Developed for the research, 2019)

Table 15 showed that the value of tolerance of each independent variable is within the range of 0.153 to 0.306 and the value of variance inflation factor was within the range of 3.267 to 6.517. According to O'Brien (2007), the tolerance value for all independent variables which were less than 1 and variance inflation factor which were lesser than 10 were considered acceptable. Hence, the results indicate no multicollinearity (no data redundancy) problem.

4.3.6. Testing Research Hypothesis

The five independent variables (Cooperative Management, Members' participation, Marketing information, Financial Resource and Infrastructure access) of the study were correlated with the dependent variable Agricultural Cooperative Output Marketing Performance at Damota Farmers Ccooperative Union in Wolaita Zone whereby H₁, H₂, H₃, H₄ and H₅ were supported by this research model. Based on the table 16, by using Regression Model hypothesis of the study was tested and stated with significant level of the hypotheses.

Hypothesis	Hypotheses Types	Given P-value	(Sig) Calculated p-value	Comparison to accept or reject	Conditions
H ₁	Cooperative management factor has significant effect on the performance of agricultural output marketing	0.05	0.009	0.009<0.05	H ₁ is accepted
H ₂	Members' participation factor has significant effect on the performance of agricultural output marketing	0.05	0.828	0.828>0.05	H ₂ is Rejected
H ₃	Marketing information factor has significant effect on the performance of agricultural output marketing	0.05	0.003	0.003<0.05	H ₃ is accepted
H ₄	Financial Resource factor has significant effect on the performance of agricultural output marketing	0.05	0.001	0.001<0.05	H ₄ is accepted
H ₅	Infrastructure access factor has significant effect on the performance of agricultural output marketing	0.05	0.000	0.000<0.05	H ₅ is accepted

Table: 16 Tests of the Hypotheses

Source: (own survey, 2019)

Four the research hypotheses were accepted because the four independent variables and dependent variables are significantly correlated at **P-values<0.05 for H₁, H₃, H₄ and H₅**. In

other round one hypothesis was rejected because the Members' participation independent variables and dependent variables is not significantly correlated at **P-values/0.828>0.05 for H₂**.

CHAPTER FIVE

5. Conclusion and Recommendation

5.1. Conclusions

The main objective of the study was to investigate main reasons to affect the Agricultural Cooperative Output Marketing Performance at Damota farmers cooperative union In Wolaita Zone. The study specifically identified the impact of Cooperative Management, Marketing information, Financial Resource and Infrastructure access on Agricultural Cooperative Output Marketing Performance at Damota farmers cooperative union In Wolaita Zone and Members' participation has insignificant or no impact as identified in the model. The major findings summarized from the four significant independent variables are as follows:-

The study determined the impact of Cooperative Management on Agricultural Cooperative Output Marketing Performance at Damota farmers cooperative union In Wolaita Zone. The study found out that Cooperative Management has a significant influence of $0.179(\beta_1)$ on Agricultural Cooperative Output Marketing Performance at Damota farmers cooperative union In Wolaita Zone. Increasing strong commitment to implement management duties and responsibilities by applied cooperatives laws by a unit would increase the levels of effectiveness of Agricultural Cooperative Output Marketing Performance by 0.179. The study further showed Agricultural Cooperative Output Marketing Performance related issues like defined awareness, knowledge and skill to manage, assigning transparent and accountable committee, participatory decision making in marketing performance developments and equity in the management of Agricultural Cooperative Output Marketing Performance to solve the identified problem in the zone.

This study was to find out the Determinants of Agricultural Cooperative Output Marketing Performance at Damota farmers cooperative union In Wolaita Zone. Based on the findings, Marketing information has a significant influence of $0.217(\beta_3)$ based on the model. Adequate levels of Marketing information like creating appropriate linkages, providing clear and competitive price and utilization of media resources in Damota farmers cooperative union In Wolaita Zone would have a significance improvements or impact on Agricultural Cooperative Output Marketing Performance at Damota farmers cooperative union In Wolaita

Zone.

The study was to investigate how Financial Resource affected the Agricultural Cooperative Output Marketing Performance at Damota farmers cooperative union In Wolaita Zone. The study findings revealed that Financial Resource had a significant influence of 0.192(β_4) on Agricultural Cooperative Output Marketing Performance. Providing adequate access to members loan, Creating proper network with financial resource, Utilizing working capital efficiency and Keeping record /documentation system in Financial institution would highly improve the levels of Agricultural Output Marketing Performance at Damota farmers cooperative union by 19.20%.

It was identified that the impact of Infrastructure access on Agricultural Cooperative Output Marketing Performance at Damota farmers cooperative union . Based on this finding, Infrastructure access had a significant a significant influence of 0.678 on Agricultural Cooperative Output Marketing Performance at Damota farmers cooperative union. Improving levels of Infrastructure access issues like Using adequate storage, Providing transportation service and accessing communication service by a unit would increase the levels of effectiveness of Agricultural Cooperative Output Marketing Performance by 67.80%.

These can also be concluded as for every better implementation of Cooperative Management, Marketing information, Financial Resource and Infrastructure access will improve the Agricultural Cooperative Output Marketing Performance at Damota farmers cooperative union by their respected beta values in general.

5.2.Recommendations

The researcher recommended some alternative ways to solve the problems those were identified as main reasons (factors) to affect the Agricultural Cooperative Output Marketing Performance at Damota farmers Cooperative Union . Therefore, the researcher provided the followings possible and constructive recommendations from the study findings for **four each significant** factors specifically.

The managing bodies of Damota farmers Cooperative Union should improve the use of Cooperative Management the issues like strong commitment to implement duties/responsibilities, awareness, skill and skill to manage cooperative union activities, providing transportation and accountable committee, making participatory and adequate

decision relationship to avoid which have direct impact on Agricultural Cooperative Output Marketing Performance at Damota farmers cooperative union .

The management of Damota farmers cooperative union In Wolaita Zone should use adequate Marketing information by providing clear and competitive price, creating appropriate linkage, utilization of media resource and equity in opportunity of publics and efficient use of Agricultural Cooperative Output Marketing Performance at Damota farmers cooperative union In Wolaita Zone.

The management of Damota farmers Cooperative union In Wolaita Zone should apply adequate Financial Resource by providing adequate access to members loan, creating proper network with financial institutions, utilization of working capital efficiency and keeping financial records/documentation system of Agricultural Cooperative Output Marketing Performance at Damota farmers Cooperative Union In Wolaita Zone.

Finally, the management of Damota farmers Cooperative Union in Wolaita Zone should identify the exact and appropriate Infrastructure access by applying the issues like exact level and size of storage, providing adequate transportation services and accessing good communication procedures to solve Agricultural Cooperative Output Marketing Performance problems or reasons of Damota Farmers Cooperative Union in Wolaita Zone.

5.3 Further Research

This study can be a base for further research in the topic of the determinants of Agricultural Cooperative OutPut Making Performance at Damota Farmers Cooperative Union In Wolaita Zone and especially in public institutions like Corporation and Agricultural Centers.

The findings demonstrated the important factors to identify the Impact of Agricultural Cooperative Out Put Making Performance at Damota Farmers Cooperative Union In Wolaita Zone including Cooperative Management, Members' participation, Marketing information, Financial Resource and Infrastructure access. Therefore the current study should be conducted in future in order to identify determinants of Agricultural Cooperative Out Put Making Performance and legal and technological programs of better output marketing performance practices in the different institutions, business organizations, sectors and Agricultural institutions of the country.

Another possible research would be to change the sample size and sample frame for the study by increasing the sample size and number of independent variables the express the impact in better ways.

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APPENDIX I
JIMMA UNIVERSITY
COLLEGE OF BUSINESS AND ECONOMICS
DEPARTMENT OF MANAGEMENT
MBA PROGRAM
QUESTIONNAIRE PREPARED FOR DAMOTE GALE WOREDA
COOPERATIVES' MEMBERS

Dear respondent,

I am a graduate student in the Department of Management, Jimma University. Currently, I am undertaking a thesis entitled *“Determinants of Agricultural Outputs marketing performance , a case of Damota Farmers’ Cooperative Union, Wolaita Zone”*. You are one of the respondents selected to participate on this study. Please give correct and complete information. Your participation is entirely voluntary and the questionnaire is completely anonymous. Finally, I confirm you that the information that you share will be kept confidential and used for academic purpose only.

Thank you in advance for your kind cooperation.

General Instructions to Enumerators

- a) Make brief introduction to the respondent before starting the interview, get introduced to the farmers (greet them in the local way) get her/his name , tell your name, the institution you are working for, and make clear the purpose and objective of the study that you are undertaking.
- b) Please ask the question clearly and patiently until the farmer understands (gets your point)
- c) Please fill up the interview schedule according to the farmers reply (do not put your own opinion)
- d) Please do not try to use technical terms while discussing with farmer and do not forget to record the local unit
- e) During the interview circle the number under the given choice or Put "√" mark in proper cell or fill answer in provided space.

Date of Questionnaire _____

Identification number (Code e)

Name of enumerator _____ Zone _____ Wereda _____ P.A (Kebele)

Name of cooperative _____ Type of Cooperative _____ Kebele the cooperative is currently found/locate _____

PART I: GENERAL BACKGROUND OF THE RESPONDENTS

Instruction: Please put "√" mark in proper cell and fill answer in provided space.

D1	Age (Years)	Below 18	18 – 35	36 – 45	Above 45
D2	Gender	Male <input type="radio"/>		Female <input checked="" type="radio"/>	
D3	Education Level	Did not attend formal education	Primary first cycle(1-4)	Primary first cycle(5-8)	Secondary and above
D4	Occupation	Farmer	Craftman	Trader	Employee

Part II: Independent Variables

Responses of respondents on constraints of Marketing Agricultural Outputs through Cooperatives

Directions: The following questions are asked specifically about some possible factors that may influence agricultural output marketing by cooperatives. Please, show your level of agreement on items related to your cooperatives by indicates one number beside each statement, using the following key: **1= strongly disagree (SD) 2 = Disagree (D) 3 = Neutral (N) 4 = Agree (A) 5 = strongly agree (SA).**

1. Cooperative Management Factors= X_1

In this section, questions are specifically about cooperative management factors that may influence marketing agricultural outputs.

No	Item	Responses				
		1	2	3	4	5
X ₁₁	Cooperative committee members have strong commitment to implement its duties and responsibilities by apply cooperatives laws.					
X ₁₂	Cooperative committee members have awareness, knowledge, and skill to manage their cooperative.					
X ₁₃	Cooperative committees are transparent and accountable for their activities.					
X ₁₄	There is clear division of duties and responsibilities among different committees.					
X ₁₅	Management Body of cooperatives has applied participatory approach decision making techniques.					

2. Members' participation factors = X_2

In this section, questions are asked specifically about Members' participation factors that may influence marketing agricultural outputs of cooperatives.

No	Item	Responses				
		1	2	3	4	5
X ₂₁	Members' actively participant in cooperative affairs.					
X ₂₂	Members have awareness about their cooperatives.					
X ₂₃	Members are loyal customers to their cooperatives.					
X ₂₄	Members have proper decision on annual plan, budget,					

3. Marketing information factors= X₃

In this section, questions are asked specifically about marketing information factors that influence agricultural cooperative output marketing performance.

No	Item	Responses				
		1	2	3	4	5
X ₃₁	Cooperative proved market information to members.					
X ₃₂	Cooperative has market access to sale members' products.					
X ₃₃	A cooperative has created appropriate linkage with Unions and other cooperatives.					
X ₃₄	Cooperative has offered clear and competitive price for members' supply.					
X ₃₅	Cooperative has utilized the appropriate medias to promote its services.					

4. Financial Resource Factors= X₄

In this section, questions are asked specifically about financial resource factors that may influence marketing agricultural output of cooperatives.

No	Item	Responses				
		1	2	3	4	5
X ₄₁	Cooperative society has adequate access to members loans.					
X ₄₂	Cooperative provides credit service to its members.					
X ₄₃	Cooperative has created proper net work with financial					
X ₄₄	Cooperative has utilized working capital efficiency.					
X ₄₅	Cooperative has good record keeping and documentation system.					

5. Infrastructure access Factors= X_5

In this section, questions are asked specifically about infrastructural factors that may influence marketing agricultural outputs of cooperatives.

No	Please mark () how much you agree or disagree with the following statements.	Responses				
		1	2	3	4	5
X ₅₁	Adequate storage facilities available.					
X ₅₂	Availability of Transportation services.					
X ₅₃	Access of electricity.					
X ₅₄	Access to communication service.					

Part III. Dependent Variable

1. Market Performance of Agricultural Output= Y

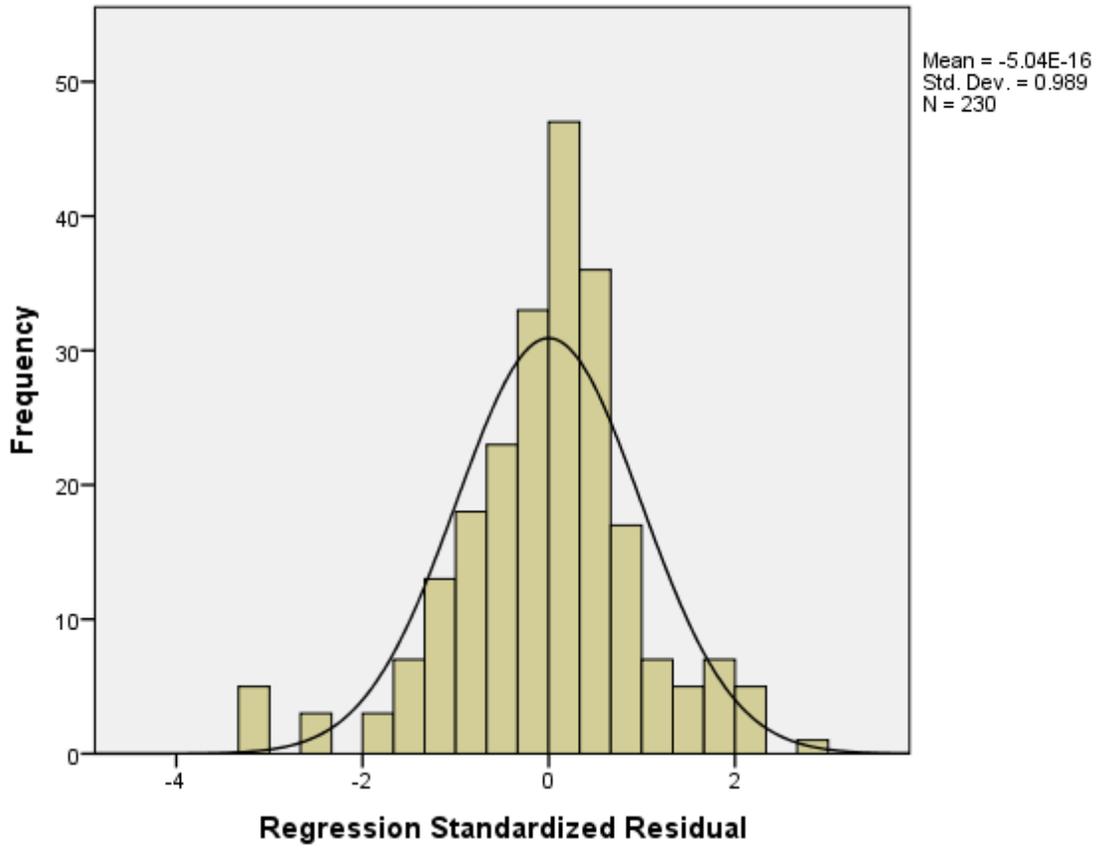
Directions: the following questions are asked specifically about marketing agricultural output. Please, show your level of agreement on items related to your marketing agricultural output by cooperatives.

No.	Please evaluate your marketing agricultural output by cooperatives over the past 6 years by putting this mark ()	Responses				
		1	2	3	4	5
Y ₁	The sale growth of Cooperatives is better than the year before.					
Y ₂	Cooperatives has experienced of minimizing marketing cost by reducing the cost of storage, handling, and marketing					
Y ₃	Cooperatives has acquired (Bargaining power) the ability to negotiate with agents, brokers, private merchants, and with other customers to sale members' product with reasonable price.					
Y ₄	A cooperative has worked to stabilize market fluctuation of the local community market.					

APPENDIX II

Histogram

Dependent Variable: Y



APPENDIX III

Normal P-P Plot of Regression Standardized Residual

Dependent Variable: Y

