



WOLKITE UNIVERSITY
COLLEGE OF SOCIAL SCIENCE AND HUMANITIES
DEPARTMENT OF SOCIOLOGY

**SOCIAL AND ECONOMIC DETERMINANTS OF
AGRICULTURAL EXTENSION SERVICE UTILIZATION IN GURAGE ZONE,
CHEHA WOREDA PARTICULARLY
yefqtereqe KEBELE**
A SENIOR ESSAY SUBMITTED FOR THE PARTIAL FULFILLMENT OF BACHELOR
OF ART DEGREE IN SOCIOLOGY

By: MINTESNOT DAWIT

Advisor: BEREKET. A (MA)

JUNUARY 2013 E.C

Wolkite Ethiopia

College of Social Science and Humanities

Department of Sociology

The research conducted a senior essay on “social and economic determinants for the utilization of agricultural extension service in the Gurage zone cheaha woreda particularly *yefeq tereqe* kebele

Approved by:

Advisor Name

Signature

Date

.....

.....

.....

Examiner Name

Signature

Date

.....

.....

.....

Department head

Signature

Date

.....

.....

.....

Acknowledgement

First I would like to thank God and my family helps from beginning of my education up to this finalized result successful .second I would like to thank my advisor Mr.BereketAlemu. His value in advice my research process from beginning to end of my research success full.

Finally in the last I have heart full gratitude for all of my close friends those who helps me technically, morally, materially, and support in my topic selection encourage on my research issue , in my data collection ,as guide, in writing my research paper and participant of the campus community.

Abstract

The purpose of this study is social and economic determinants of Agricultural extension service utilization in south region Gurage zone of chehaworeda specifically yefeqtereqekebele .

The study was used both primary and secondary source of data. The primary data was obtained from the respondents by distributing survey questionnaires, key informant, and semi structured interview. The secondary source of data was obtained from book, journals, government report internet and other related material. Basically, survey questionnaires were used as a data collection method of the researcher. Generally, this study was assessing the social and economic determinants of agricultural extension service utilization in chehaworeda specifically yefeqtereqekebele .

The questionnaires helped the researchers to ask open-ended and close ended questions to the respondents. Finally, the researchers summarized and concluded the study and provide possible suggestions and recommendations for an intensive promotional activity on agricultural extension service utilization in yefeqtereqekebele and thereby to make them active citizen of the country.

In general this study it cannot say eliminate social and economical barriers by giving awareness and financial shortage by preparing credit opportunity but when we comparing from early it become decrease they become used new agricultural inputs change their economic level.

Key word

Agriculture

Economic

Extension

Farmer

Social

Technology

Service

Utilization

Determinant

Acronym

ATLAS –a power full work bean for the qualitative analysis of large bodes of textual, graphical and video data.

SPSS – statistical product and service solution

| List of table's | page |
|--|-------------|
| Table1: distribution of respondents by sex..... | 17 |
| Table 2: distributions of respondents by age..... | 18 |
| Table 3: distribution of respondents by religions back ground..... | 19 |
| Table 4: distribution of respondents by level of education | 19 |
| Table 5: distribution of respondents by family size..... | 20 |
| Table 6: distribution of respondents by money income..... | 21 |
| Table 7: utilization of new agricultural extension technological service | 22 |
| Table 8: perception of farming towards new extension system | 22 |
| Table 9: willingness to use fertilizers to increase agricultural product and productivity | 23 |
| Table10: the interrelation and cooperation between farmers and extension workers .. | 24 |
| Table 11: Agricultural innovation like fertilizers improved seed improved farm implements new storage of system | 25 |
| Table 12: response of the previous year you may use this new technology system | 26 |
| Table 13: response to encouraging the farmer to use both traditional and modern way of cultivation | 27 |
| Table 14: response to modern technological service delivered for you is beneficial..... | 28 |

| | |
|--|----|
| Table 15: response did you get awareness on the use of new agricultural input..... | 28 |
| Table 16: response factors affecting you to use new agricultural extension service .. | 29 |
| Table 17: factors limiting the farmers from planting more crop in cultivation system | 30 |
| Table 18: response to the social factor affects the utilization of new agricultural service..... | 31 |
| Table 19: response to the economic factor affects the utilization of new agricultural extension service..... | 32 |

Table of contents

| | |
|--|-----|
| Acknowledgement | I |
| Abstract | II |
| key word | III |
| Acronym..... | IV |
| List of table | V |
| CHAPTER ONE | 1 |
| 1. Introduction..... | 1 |
| 1.1 Background of the study | 1 |
| 1.2 Statement of the Problem..... | 3 |
| 1.3 Objective of the Study | 5 |
| 1.3.1 General Objective | 5 |
| 1.3.2 Specific Objective | 5 |
| 1.4 Research question..... | 5 |
| 1.5 Significance of the study..... | 5 |
| 1.6 Scope of the Study | 6 |
| CHAPTER TWO | 7 |
| 2.Review literature | 7 |
| 2.1 An over view of agricultural extension..... | 7 |
| 2.2 The agricultural sector and its importance..... | 7 |
| 2.3 Contribution of agriculture to Ethiopian economy | 8 |
| 2.4 Definition of extension | 8 |
| 2.5 Concept, principle and objective of agricultural extension | 9 |

| | |
|---|-------------------------------------|
| 2.6 Principle of agriculture extension | 9 |
| 2.7 Objective of agricultural extension | 9 |
| 2.8 The attitude of farmer towards agricultural extension system..... | 10 |
| 2.9 Theoretical Framework..... | 10 |
| 2.10 Conceptual frame work..... | 12 |
| CHAPTER THREE | 14 |
| 3. Method Of the study. | 14 |
| 3.1. Description Area..... | 14 |
| 3.2. Reserch Design | 14 |
| 3.3. Target Population..... | 14 |
| 3.4. Sample Size determination | 15 |
| 3.5. Data collection instrument | 15 |
| 3.6 Methods of Data analysis..... | 16 |
| 3.7 Ethical considerations | 16 |
| CHAPTER FOUR..... | Error! Bookmark not defined. |
| 4. Data analysis | 17 |
| 4.1 Characteristics of respondents | 17 |
| 4.2 Socioeconomic characteristics of the respondents | 22 |
| CHAPTER FIVE | 34 |
| 5. Conclusion and recommendation | 35 |
| 5.1 conclusions..... | 34 |
| 5.2 Recommendation | 37 |

References.....39

Appendix.....4

CHAPTER ONE

1. Introduction

1.1 Background of the study

Agriculture is the science of cultivating the soil harvesting crops and raising livestock and the science or art of the production of plants and animals useful to man and varying degrees. This production of such products for man's use and their disposal (Miller Dixon 1990). It also involves the cultivation of plants, animals and other life used to sustain and enhance human life. Agriculture plays an important role in economic growth, enhancing food security, poverty reduction, and rural development. It is the main source of income for around 2.5 billion people in the developing world (FAO, 2003).

Agriculture has reached the limit of available natural resources such that future increase in agricultural production and rural income must drive from intensification of additional natural resources. It is a changing and changing the quantity and nature of the information that farmers need, knowledge, information, skill, technology, and attitudes are to be explored for the sustainable intensification of agricultural and rural development (FAO and World Bank, 2003).

In many developing countries the transfer of technology model has been the prevalent practice for developing nations. Africa depends entirely on agriculture for economic growth and the well-being of its people. One of the characteristics of the economy of most developing countries is the high proportion of the labor force engaged in agriculture. The main focus of agricultural extension work in the past in the dependency period was to increase agricultural production and spread the benefit of improved farming techniques more widely (Piciotten and Arson, 1997).

Agriculture is the backbone of the Ethiopian economy. Agricultural output has fallen short of population growth for over two decades. Despite an increasing productivity through the introduction of improved inputs over the past three decades, due to unavailable provision of

those inputs the average output per hectare of farmland has not shown a significant increase to warrant optimism about the sector in the foreseeable future (Seifu, 2004).

The commonly used modern agricultural input in Ethiopia is chemical fertilizer, improved seeds, and chemicals like pesticides and insecticides to a limited extent (Mulat, 1999). The amount of fertilizer applied by most of the farmer is below the recommended level. After the year 2001/2002, the consumption of fertilizer has shown a declining trend mainly because of the removal of the government subsidy (EEA, 2004).

Factors like fertilizer, pesticides, herbicides, and the like have also contributed a lot to the productivity of growth in different countries. But according to Ellis, (1993), the relative success of such technology depends on an array of natural and social and economic factors, among which the way market works is of critical importance.

The main focus of agricultural extension work in the post-independence period was to increase agricultural production and spread the benefit of improved farming techniques more widely (Piciotten and Arson, 1997).

This study was justified because farmers differ in their access to and utilization of agricultural information from extension services and other sources, such diversity among farmers could be related to very personal, social, economical or institutional factors. Understanding the reasons behind such diversity and farmers' current level of access and utilization of agricultural information is paramount important, to enhance the production and productivity of agriculture, farmers should have access to well organized relevant information and proper and sufficient utilization of agricultural information requires good facilitation. This study is designed to analyze in-depth the farmer's access and utilization of agricultural information in *yefeq tereqe kebele*. As well as to identify influencing factors to make use of full policies' recommendation, to facilitate meaningful interventions in their areas of agricultural extension, so that relevant information is provided in a timely manner.

1.2 Statement of the Problem

The Ethiopian agricultural sector faces serious multifaceted problems in the production and supply of food. This problem has called for various techniques and approaches which were intended to improve the productivity of the sector to break the victims of food insecurity and underdevelopment of the problem of agricultural stagnation (Befikadu and Berhanu, 2000).

Belay,(2002) points out that the farmer make a very marginal contribution in designing and formulating extension activities also note that neither the farmer nor the front line extension agents are consulted in course of policy formulation, over the year, rural farmer depends on endogenous or local knowledge for improved farming systems and animal husbandry. Such endogenous knowledge refers to skill and experience and gained through oral traditional and practice over many generations (Norm, 1988).

Researcher Berihan Selassiearaya, (1985) study on the role of extension service in the development of Ethiopia agriculture at Addis Ababa University and Ministry of Agricultural Development project design in 2000 conducted in relation to rural development in general and agricultural extension system in particular. But by this study see factors that affect the utilization of agricultural extension service has been smallholder farming use of oxen draw and use of local wooden plow. This and other problems motivate the research to find and identify that problem hinder adoption and diffusion of extension in the Kebele and bearing solution that problem by the concerned body.

In this study, there is a problem related to lack of reliable food, incentive prices, favorable weather condition, enough farm inputs, supply complement of farm inputs, and farm tools. Over the years many studies have been conducted on innovation and uptake of new technologies in developing countries. But, there is still a very low utilization of modern agricultural innovation. What is the reason? Is it because the difference in output fully transformed into the cost of production without generating any positive outcome? To answer the above key questions, studies are required to be conducted in the area but as far as the researcher's knowledge allow there is no research is done on this topic in this area to identify

the social and economic determinants of agricultural extension service utilization of the modern agricultural innovation.

A study conducted by Abdi (2002) based on interest how the contributions agricultural extension service has enabled the farmer groups improve on their productivity (yields) farmer institutional development analyze.

A Researcher Gerba Leta (2018) his study examines the participatory extension system from the perspective of governance, participation and evolution of agricultural extension. The main aim of the study is to analyze and describe the Ethiopian agricultural extension system and understand its opportunities and challenges as a development actor. It draws on field research data collected in 2015 and 2016 using a mixed methods approach, secondary data, and literature reviews. Data were documented, coded and analyzed using ATLAS. it and SPSS. The findings of the study show that the Ethiopian state has invested considerable resources in maintaining a strong agricultural extension system. Over the years, the state has developed and issued a series of agricultural policies and strategies to nurture service provision and promote rural development.

Kassa (2002) agricultural extension in Ethiopia :the case of participatory demonstration and training extension system to assess the participation of farmers in the participatory demonstration and training extension system and to identify the most important barriers to the adoption of modern agricultural input.

But this paper was focused on initiated to identify and analyze the determinant of agricultural extension service utilization of the modern agricultural innovation by farmers and to check whether the mentioned factors hold true or not. The study was put forward to suggest the strategy to reduce the social and economic determinant of agricultural extension service utilization constraints in the study area.

1.3 Objective of the Study

The study has both General and specific objectives.

1.3.1 General Objective

The general objective of the study is explore social and economic determinants for the utilization of agricultural extension service in the Gurage zone cheaha woreda particularly *yefeq tereqe* kebele.

1.3.2 Specific Objectives

- To examine the major social determinants of agricultural extension service utilization
- To identify the economic determinants of agricultural extension service utilization
- To study the challenges that farmers in using agricultural extension service utilization

1.4 Research question

1. What are the social determinants of agricultural extension service utilization?
2. What are the socio-economic determinants of agricultural extension service utilization?
3. What are the challenges of those farmers in using agricultural extension service utilization?

1.5 Significance of the study

This study was designed to investigate the social and economic determinants for the agricultural extension service utilization. Thus would significant and administrator of the agricultural intensification as it was provide information and insight into the factor affecting the utilization of agricultural innovation. The study would significant to farmers by providing an opportunity to engage in a discussion on some benefits and constraints they are facing in the utilization and implementation of the system of agricultural

intensification *yefeq tereqe* kebele administration. The study hopes to be signed to researchers and academicians on the phenomenon of the utilization of agricultural innovations and technologies in today's farming and agricultural sector in the country.

1.6 Scope of the Study

Geographically the scope of this study it was limited on Gurage zone cheaha woreda, *yefeq tereqe* kebele farmers where target population of study. and thematically this study it was try to generate data only social and economic factors that affect the utilization of agricultural extension service in *yefeq tereqe* kebele.

CHAPTER TWO

2. Review literature

2.1 An over view of agricultural extension

Agricultural extension is the application of scientific research and new knowledge to agricultural practice through former education agricultural practice such as irrigation corporation application of fertilizer and pesticide and domestication of livestock where developed long ago agricultural extension and rural information and also advisory service is likely to intensify in the foreseeable future. In mature world, agriculture faces the challenge of keeping pace with a rapidly increasing population with few reserves of potentially cultivable land. Agricultural extension has now become recognized as an essential mechanism for developing information and advice as an input into modern farming (Dilepkumar and Khasan sikh 1995). The main focus of agricultural extension work in the post-independence period was to increase agricultural production and spread the benefit of improving farming techniques more widely (Piciotten and Anderson, 1997).

2.2 The agricultural sector and its importance

Development is more closely associated with some form of action or intervention to influence the entire process of social change and has three elements and aspects, economic social and human development. It is a dynamic concept suggests a change in a movement away from the previous situation. This process of development can take different forms and have a variety of objectives (Wakly and Gar Torth, 1995).

In the developing world particularly in Africa economic development is closely associated with agriculture. Agriculture is the most important sector in the whole process of development it provides that food. The bulk of employment and income for the majority of the rural population and earns currency for the national economy. Agriculture is also conceded as an engine of local processing industries because of its role as a source of raw material and market for the output of this industry (Issaace, 1987) .one of the characteristics of most developing countries economies is that high proportion of labor force is engaged in agriculture. Thus increased productivity in the agricultural sector should provide an initial stimulus for the overall economic development. If developing countries are substantially to increase agriculture on a sub stained basis, they provide institutions that make it possible for

farmers to adopt improved practices and incentives that will induce them to do so (Conifer Ashawa, 1987).

In a typical agrarian economy of most developing countries agriculture itself must make a substantial contribution which will enable national economic growth to take place on a wide front, as produce to industrialization specifically it should increase food production considerably. In quality and currency and support industrial development (Issace, 1987)

2.3 Contribution of agriculture to Ethiopian economy

As it is a cause in many developing countries, the Ethiopian economy is highly dependent on agriculture. The agricultural sector, in turn, depends on unpredictable and erratic rainfall and it is basically subsistence in its nature, but the agriculture contributes to the Ethiopian economy is so immense that the GDP will fluctuate following the boom and burst in agricultural production. It contributes in the way of as a source of exchange, export, labor opportunity, source for survival. Even if a long time perspective the contribution of the agricultural sector to the national GDP was 74% in the year 196, 62% in 1978, 50% in 1988 and 45.1% in 2001. It also by promoting agricultural productivity increases food security, improve rural livelihood and promote as an engine of pro-poor economic growth (Abdella, 2002).

2.4 Definition of extension

There is no widely accepted definition of agricultural extension the examples given below aware taken from an ember of books on extension published over a period of more than 50 years.

1949 The central task of extension is to help rural families help themselves by applying science, where physical or social to the daily routines of farming home working and family and community living. Brunner, E and Hsin Pao Yang, E. (1949). 1965 Agricultural extension has been described as a system of out of school education for rural people. Saville, A.H. (1965). 1973 extension is a service or system which assists people through education producers in improving farming methods and techniques, increasing production efficiency and income bettering their standard of giving and lifting social and educational standards. Maunder, A. (1973). 1982Agricultural extension assistance to farmers to helps them identifying and analyze their production problems and became aware of the

opportunities for improvements. Adams, M. (1982). 1999 the essence of agricultural extension is to facilitate interplay and nature synergies within a total information system involving agricultural research, agricultural education and a vast complex of information providing businesses. Neuchatel Group, (1999)

2.5 Concept, principle, and objective of agricultural extension

Concept of agricultural extension:- agricultural extension is assistance to farmers to help them, identify and analyze their production problem and become aware of the opportunities for improvement. Agricultural extension service and training is a key instrument in the development of agricultural extension sector. An important task for the extension service to promote agricultural practice that decreases erosion and ensures the safe and efficient use of pesticides and fertilizer (Gihish Chopra and Verima, 2006).

2.6 Principle of agriculture extension

Extension work has evolved basic working principles that are necessary for an extension worker to follow in planning and practicing extension activities. Some of the agricultural extension principles are mention below.

The extension work should be based on knowledge, skill, custom, tradition, belief, and value of the people. Extensions encourage people to take action and work out their own solutions to their problems rather than receiving a ready-made solution. Extension work should be based on the need and interests of the people. It also based on the full utilization of local leadership (Oreg/Wiki/agriculture in Ethiopia).

2.7 Objective of agricultural extension

The objective of agricultural extension can be expressions of the end towards which our efforts are directed. Even the fundamental objective of extension is the development of people's awareness. The species that have been developed overtimes in the history of extension can be categorized as follow.

The dissemination of use full knowledge and information relating to agriculture including the use of improving technology improved and improve cultural practice in a variety of farming practices. The other objective of extension is to improve all aspects of rural people live within the framework of the national development policy and people's need for development (Horne affair com/ extension service the driver of Ethiopia).

2.8 The attitude of farmer towards agricultural extension system

Farmer's attitude to extension service is negatively related to the type of crop grown. This is to say that farmers attitude are most may be negative if the service provided by extension agent are not relevant to the type of crop grown by the farmer (AdenikeRebecca, 2004).

The interaction between the extension agent and farmer is the extent to which farmers perceive extension agents as use full to them is paramount to bringing about change in agricultural output. Attitude generated by the top dome transfer of technology paradigm has precluded learning endogenous knowledge of farmers. The farmer's attitude according to age, experience, education level, and frequency and also type of contact with public extension were also negative. The negative attitude of participate farmers towards the public agricultural extension service means that the farmer was not satisfied with this service, attitudes are considered the mean constraint to the adoption rate of agricultural technology by the farmer and consequently, agricultural production is affected by this negative attitude (Hindi, 2009).

2.9 Theoretical Framework

Modernization theory

The social-economic factors for the agricultural extension service utilization can be explained by modernization theory (Rostow, 1964). According to this theory, urban problems are created by massive influx of migration of people from rural to urban areas and the accompanying urban population explosion. Accordingly, the theory attributes rapid industrialization and urbanization as a primary factor associated with the marked increase. in the number of the social and economic problems of agricultural service internationally over the past few decades.

In many developing countries situated in different stages of industrialization, agricultural extension service utilization work on the rural people because their country's formal economy is unable to absorb their labor as well as the labor of their parents. In the lowest social and economic stratum, marginalized families are often excluded from the formal economy, thus seeking employment opportunities in the informal economy. As an unregulated and often invisible labor realm, the children of these and other poor families find fertile ground for precarious employment as well (Filho and Neder, 2001; Klees et al., 2000). Similarly, migrant families, which often settle in squatter communities on the

outskirts of urban centers, are also frequently excluded from the formal economy on the basis of their legal status, educational levels, employment skills and even ethnicity (Rosemberg, 2000; Sandoval Avila, 1999)

Diffusion of Innovation Theory

The social-economic factor for the agricultural extension service utilization in Diffusion of Innovation (DOI) Theory, developed by E.M. Rogers in 1962, is one of the oldest social science theories. It originated in communication to explain how, over time, an idea or product gains momentum and diffuses (or spreads) through a specific population or social system. The end result of this diffusion is that people, as part of a social system, adopt a new idea, behavior, or product. Adoption means that a person does something differently than what they had previously (i.e., purchase or use a new product, acquire and perform a new behavior, etc.). The key to adoption is that the person must perceive the idea, behavior, or product as new or innovative. It is through this that diffusion is possible.

Adoption of a new idea, behavior, or product (i.e., "innovation") does not happen simultaneously in a social system; rather it is a process whereby some people are more apt to adopt the innovation than others. Researchers have found that people who adopt an innovation early have different characteristics than people who adopt an innovation later. When promoting an innovation to a target population, it is important to understand the characteristics of the target population that will help or hinder adoption of the innovation. There are five established adopter categories, and while the majority of the general population tends to fall in the middle categories, it is still necessary to understand the characteristics of the target population. When promoting an innovation, there are different strategies used to appeal to the different adopter categories.

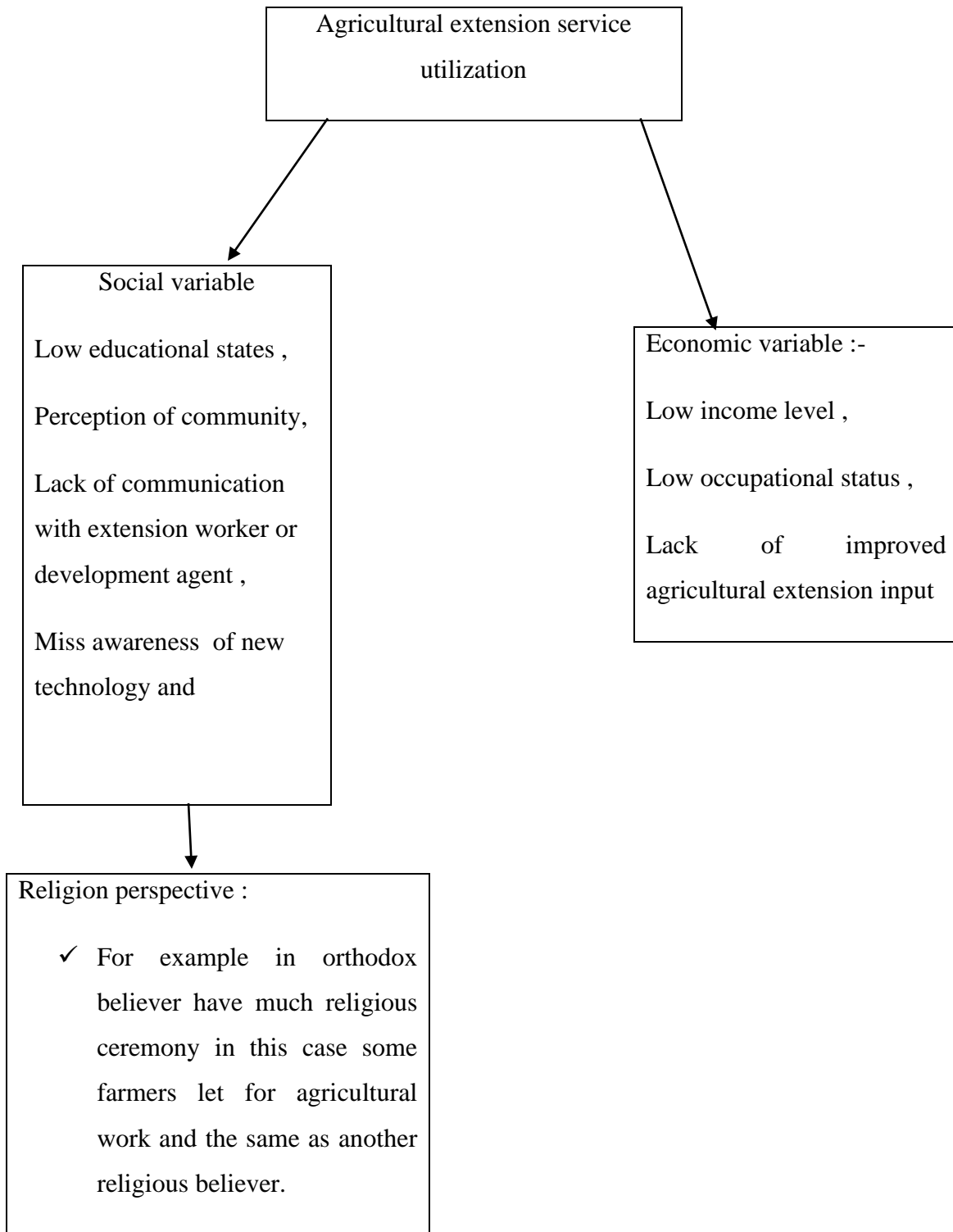
1. Innovators - These are people who want to be the first to try the innovation. They are venturesome and interested in new ideas. These people are very willing to take risks, and are often the first to develop new ideas. Very little, if anything, needs to be done to appeal to this population.

2. Early Adopters - These are people who represent opinion leaders. They enjoy leadership roles, and embrace change opportunities. They are already aware of the need to change and so are very comfortable adopting new ideas. Strategies to appeal to this population include how-to manuals and information sheets on implementation. They do not need information to convince them to change.
3. Early Majority - These people are rarely leaders, but they do adopt new ideas before the average person. That said, they typically need to see evidence that the innovation works before they are willing to adopt it. Strategies to appeal to this population include success stories and evidence of the innovation's effectiveness.
4. Late Majority - These people are skeptical of change, and will only adopt an innovation after it has been tried by the majority. Strategies to appeal to this population include information on how many other people have tried the innovation and have adopted it successfully.
5. Laggards - These people are bound by tradition and very conservative. They are very skeptical of change and are the hardest group to bring on board. Strategies to appeal to this population include statistics, fear appeals, and pressure from people in the other adopter groups.

2.10 Conceptual framework

Among those factors social and economic determinants are the major factors of agricultural extension service of utilization method .by considering this it focuses on social and economic determinants of agricultural extension service utilization. Accordingly, the dependent variable is agricultural extension service utilization and the independent variables reflect social and economic determinants

Figure 1 A diagram showing the relationship between independent and dependent variables



Source: Rearview literature

Chapter Three

3. Research methodology

3.1. Description of the study area

The study conducted on Gurage zone in the Ethiopia southern nations, nationalities, and people region (SNNPR) at a distance of 158 kilo meters far south of Addis Ababa and 174 kilo meters from the regional capital city (HAWASSA). This zone is bordered on the southeast by Hadiya and Yem special woreda, on the west, north and east by the oromia regional and on southern by Silt'e. most of this zone are heavily eroded, which required farmers to protect their enset field with stone and solid bunds. During the 1930s about 20% of the land in Gurage was covered with natural forests, which have since been almost completely cut down; the removal was especially fast during the years 1991 and 1992. Based on the 2007 census conducted by the central statistical agency of Ethiopia (CSA), this zone has total population of 1,279,646 of whom 622,078 are men and 657,568 women; with an area of 5,893,40 square kilometer.

Current woredas of Gurage zone are: Abeshge, Butajiratown, Cheha, Endegane, Inorandemar, Ezha, Gyeta, Gwamare, Kebena, Meskan, Mwahr Na Aklil, Soddo, Welkite Town, former woredas are: Goro Meskanena Mareko, Ezhana Wolene. Study area cheha woreda particularly *yefeq tereqe* kebele. Central statistical agency of Ethiopia (CSA) 2005 national static archived.

3.2. Research Design

The research was cross-sectional study design. It utilized both qualitative and quantitative methods. The quantitative data collection it was conducted through survey method which means using and collecting relevant information via questionnaire from the respondents. The qualitative data collection method, on the other hand, was conducted through case study and interview from the selected key informants.

3.3. Target Population

The population of this study were people or farmers in agricultural in *cheha* woreda specifically in *yefeq tereqe* kebele. In this kebele the total population accounts as 66 this

total population 10 were female and 56 male and from this total population the researcher would selected by using simple random sampling.

3.4. Sample Size determination

The total population of *yefeq tereqe* kebele kebele farmers were 66 people and among this were selected 21 respondent from the total farmers who live permanently in *yefeq tereqe* kebele of cheha woreda by using simple random sampling technique.

$$n = N/1 + N/ (e)^2 \quad \text{yeman's (1967)}$$

n = sample size

$$n = 66/1 + 66 (0.1)^2$$

N= number of target population

$$n = 66/1 + 66 * 0.01$$

e= error

$$n = 66/1 + 2.1$$

1= constant

$$n = 66/3.1$$

$$n = 21.2$$

$$n \sim 21$$

3.5. Data collection instrument

The information require for the study was collected from both primary and secondary source of data.

Primary source of data

Primary source of data was collected through survey Questionnaire, key informant and Focus Group Discussion, semi-structured interview. But shortage of time and access, corona virus difficult to meting from farmers so only use survey Questionnaire and interview.

Secondary source of data

Secondary source of data was collected through like book, journals, government reports, internet, and other related materials related to the topic.

3.6 Methods of Data analysis

Data analysis is the process of looking at and summarizing the data with the aim to extract important or useful information from the developed questions. The researcher was used both qualitative and quantitative methods of analysis. . Frequency distribution, percentage, descriptive static s. Table and percentage use to presented quantitative data that can obtain from questionnaire. A qualitative data would analyze in a statement from obtained from focus group discussion and interview.

3.7 Ethical considerations

As this study utilizes human participants certain issues can be address. The consideration of these issues is very necessary for ensuring the privacy as well as the security of the participants. These issues were identifying in advance to prevent future problems that can rise during the research process. Gaining consent Securing permission and gaining the consent of the participants for this study is an important ethical consideration. In order to do so, the researches relay the aims of the research clearly among all select participants. Each participant was asking to accomplish a consent form, stating in detail all the activities involved as well as the purpose of the study. In the consent form, the research have been discuss in detail all the treatments or procedures that was done during the research process. Building rapport and gaining the trust of the participants were considered as essential throughout the research process. These help in ensuring the cooperation and willingness of the participants to give dependable and sufficient data that is relevant to the. The research practiced openness and honesty all throughout the study to assure the research respondents that their security and safety is of utmost priority. All of these factors to gain the consent of the research participants were discussed in the most comprehensive manner based on their level of understanding Confidentiality.

The above research materials that have listed in the table are very essential to carry out the proposed research. The reason is that without such entities the researcher gets difficult to conduct and accomplish his or her task effectively and efficiently

CHAPTER FOUR

Data analysis and interpretation

4.1 characteristics of respondents

In this section of the study, the respondent's sex, age, religion, level of education, family size, and money income were dealt.

Table 1: distribution of respondents by sex

| Sex | No of respondents | Percentage |
|--------|-------------------|------------|
| Male | 16 | 76.1% |
| Female | 5 | 23.9% |
| Total | 21 | 100.0 |

Source: Survey through questionnaire, 2013.

As shows in the above table out of the total sample size of 21 respondents 16(76.1 %) were males and 5(23.9 %) were females. In other word, female constitute one-third of the total sample size of respondents. By and large, this gives an indication that the majority of agricultural extension service utilization is likely to be mostly males. This is due to the fact that Parents believed that male should be stronger and engage in outdoor activities than female. They also assume that girls are less strong as compared to male. Consequently, female are forced to stay in home working domestic chores where as male are frequently allowed to engage in some outdoor activities such as agricultural activities, and in some other labor intensive activities. To speak sociologically, cultural beliefs and customs hold by family as an institution is contributory for the number of male is agricultural to exceed in rural areas.

Table 2: distributions of respondents by age

| Age[year] | No of respondents | percentage |
|-----------|-------------------|------------|
| 30-38 | 8 | 38.09 % |
| 39-46 | 8 | 38.09 % |
| 47-54 | 2 | 9.5 % |
| 55-62 | 1 | 4.8% |
| 63-70 | 1 | 4.8% |
| 70-78 | 1 | 4.8% |
| Total | 21 | 100.0 |

Source: Survey through questionnaire, 2013.

From the above table we can observe that out of the total number of 21 respondents 30-38, 8(38.09 %) 39-46, 8(38.09%), and majority were found in the age group. Whereas medium age group 47-54, 2(9.5%). 55-62, 1(4.8%), 63- 70, 1(4.8%), 70-78, 1 (4.8%) lower age group. It also indicates that majority of agricultural extension service utilization in farmers were categorized under the age cohort of 38-46 out of the total number of 21 agricultural farmer people.

The finding of this study is in agreement with People of the same age usually have similar interests and attitudes. Young people tend to have different values, attitudes and aims in life from those of older people. In many societies, elderly people are treated with great respect, and their advice is listened to carefully. An extension agent needs to learn the particular aims, expectations and restrictions of different age groups in the society in which he works.

Table 3: Distribution of respondents by religions back ground

| Religion | No of respondents | Percentage |
|------------|-------------------|------------|
| Muslim | 9 | 42.9% |
| Orthodox | 8 | 38.1% |
| Protestant | 4 | 19.04 |
| Total | 21 | 100.0 |

Source: Survey through questionnaire, 2013.

Based on the above table 9(42.9%) respondents are Muslim, 8 (38.1%) are orthodox Christianity and 4(19.04%) protestants. It indicates that the majority of respondents with 9(42.9%) are believers Muslim and 8(38.1) are orthodox Christianity. This is due to the fact that above 90% of the source population in which respondents drawn are followers of Muslim and orthodox Christianity.

The finding of this study is in agreement with Members of religious groups have common beliefs and attitudes, and these may influence their willingness to work closely with people of other religions. Religious differences can create tensions in a rural community: the extension agent should be aware of these. Some religions impose patterns of behavior which may affect extension. Certain times of day, particular days of the week or seasons of the year may be devoted to religious a ceremony, which means that farmers are not available for farm work or for extension activities.

Table 4: distribution of respondents by level of education

| Level of education | No of respondents | Percentage |
|--------------------|-------------------|------------|
| Illiterate | 3 | 14.2% |
| Literate | 14 | 66.6% |
| 1-4 | 4 | 19.04% |
| Total | 21 | 100.0 |

Source: survey through questionnaire, 2013.

Based on the above table 3 (14.2%) illiterate, 14(66.6%) literate and 1-4 are 4(19%). The majority of agricultural extension service utilization is literate people to live in rural areas. So inadequate information about new agricultural technology and lack of awareness are decreases the productivities’.

The finding of this study is in agreement with many of the previously conducted studies. A study conducted by Katungi (2006), reveal that, educated farmers have more information access. Pipy, (2006), also found that, significant difference between different educational level in poultry production sources of information and utilization of information. Others like (World Bank 1980, 48 as cited in Tweeten, 1997) found that, as the level of education increase, the utilization of agricultural input also increase. Similarly, Tesfaye (2001) have reported positive and significant relationship of education with adoption. Therefore either directly or indirectly understanding levels of farmers have role in agricultural development.

Table 5: distribution of respondents by family size

| Family size | No of respondents | Percentage |
|-------------|-------------------|------------|
| 3 | 2 | 9.52% |
| 4 | 2 | 9.52% |
| 5 | 6 | 28.57% |
| 6 | 5 | 23.8% |
| 7 | 5 | 23.8% |
| 8 | 1 | 4.76% |
| Total | 21 | 100.0 |

Source: survey through questionnaire, 2013. As shown the above table the respondents are family size of three and four parents 2(9.52%), family size of five are 6(28.57%) and family size of six and seven are parents of respondents in 5(23.8%) are majority, family size of eight parents of respondents in 1(4.7%). According to extension worker majority of respondents are large number of family size are consider as a benefits for support in agricultural activity and other activates.

Table 6: distribution of respondents by money income

| Annual level of income | No of respondents | Percentage |
|------------------------|-------------------|------------|
| Below 10.000 | 3 | 14.2% |
| 11.000-20.000 | 8 | 38.1% |
| 21.000-30.000 | 4 | 19.04% |
| 31.000-40.000 | 1 | 4.76% |
| 41.000-50.000 | 1 | 4.76% |
| Above 50.000 | 4 | 19.04% |
| Total | 21 | 100.0 |

Source: survey through questionnaire, 2013.

As indicated in the above table 3(14.2%) below 10.000, 4(19.04) are 21.000-30.000 and above50.000 are equal, the majority of respondent annual income are 8,(38.1%)11.000-20.000, 1(4.76%)are 31.000-50.000. This indicates that majority of agricultural extension service utilization are 8, (38.1%) 11.000-20.000 annual income people. The other people were lives in medium and poor in agricultural extension service utilization. In general explore recognize that family dysfunction is one of the socioeconomic determinants for agricultural extension service utilization.

Generally level of income differences affect the type of advice and support that an extension agent should offer each category of farmer. Such differences determine the standard of living that people can achieve and they also affect a farmer's relative economic and political influence. Large farmers are more likely to be given credit than small farmers, and merchants and traders will give them better terms because they buy and sell in larger quantities. Planners and political leaders often listen to them more readily. Extension agents may also find it more attractive to work with the larger farmers. But if smaller farmers are to be helped, extension agents should be aware of these divisions and look for ways of

supporting those farmers who are keen to improve their farms but have not much political or economic influence

4.2 social and economic characteristics of the respondents

Table 7: the respondents of response do you utilize new agricultural extension technological service

| Items | Alternative | No of respondents | Percentage |
|--|-------------|-------------------|------------|
| Do you utilize new agricultural extension technological service? | Yes | 14 | 66.6% |
| | No | 7 | 33.3% |
| | Total | 21 | 100% |

Source: survey through questionnaire, 2013

As indicated in the above table 14 (66.6%) respondents have utilize new agricultural extension technological service 7 (33.3%) have not utilize new agricultural extension technological service. This were many people use to new agricultural extension technological service .But some people were not to use technological service. That indicates motivated factor are so low new agricultural technology.

Table 8: The response of respondents of the perception of farming towards new extension system

| Items | Alternative | No of respondents | Percentage |
|--|-------------|-------------------|------------|
| the perception of farming towards new extension system | Yes | 17 | 80.95% |
| | No | 4 | 19.04% |
| | Total | 21 | 100.0 |

Survey through questionnaire, 2013.

As shown in the above table 17(80.95%) respondents have the perception of farming towards new extension system and where as 4, (19.04%) farmers of respondents were not new extension system.

Table 9 : The response of respondents have you willingness to use fertilizers to increase agricultural product and productivity

| Items | Alternative | No of respondents | Percentage |
|--|-------------|-------------------|------------|
| Fertilizers increase agricultural product? | Yes | 15 | 71.4% |
| | No | 6 | 28.5% |
| | Total | 21 | 100.0 |

Source: Survey through questionnaire, 2013.

The above table clearly show that 15, (71.4%) of majority of willingness to use fertilizers and 6, (28.5%) respondents were not willingness to use fertilizers.

Table 10 : the respondents of response to the interrelation and cooperation between farmers and extension workers

| Items | Alternative | Number of respondents | Percentage |
|---|-------------|-----------------------|------------|
| How do perceive cooperation between farmers and extension worker? | Good | 5 | 23.8% |
| | Very good | 6 | 28.5% |
| | Medium | 4 | 19.1% |
| | Less | 6 | 28.5% |
| | Total | 21 | 100.0 |

Source: Survey through questionnaire, 2013. Based on the above table about 5(23.8%) good, 6(28.5%) very good, 4(19.1%), medium and 6(28.5%) less. It indicates that majority 6(28.5%) of very good and less are equal the interrelation and cooperation between farmers and extension workers. The farmers were very good and less interrelation and cooperation between farmers and extension workers in agricultural extension service utilization.

Information on environmental impacts is often confused and presumed cause-effect relationships are uncritically accepted even in the absence of scientific data. For example, it is common to hear affirmations such as "the diminishing fallow period, declining crop yields, increasing rice deficiency, poverty, soil erosion and deforestation will accelerate and lead to ecological and social disaster in the north, unless changes are made" (Hoey et al., 1987, cited in Hundloe, 1994).

In many rural societies, the extension agent will have little success unless he first gains the support of the traditional leaders. Only then will he be able to win the trust and confidence of the members of the community.

Table 11: The response of respondents of agricultural innovation like fertilizers improved seed improved farm implements new storage of system?

| Items | Alternative | No of respondents | Percentage |
|--|--------------|-------------------|------------|
| What is the extent of agricultural innovation like fertilizer, improved seed, improved farm implements and new storage system? | Very good | 5 | 23.8% |
| | Occasionally | 14 | 66.6% |
| | never used | 2 | 9.5% |
| | Total | 21 | 100.0 |

Source: Survey through questionnaire, 2013.

Concerning the agricultural innovation like fertilizers improved seeds, improved farm implements storage of system 5(23.8%), were very good farmers to use fertilizers , occasionally 14(66.6%),and were never used 2(9.5%) farmers. These farmers engaged an occasionally economic return. It also indicate that majority of respondents were used fertilizers occasionally. In general, farmers of agricultural input to use in fertilizers are one of the socioeconomic determinants for the increase in productivity.

Farmers will need to produce the same amount of food over the next four decades that produced over the past 8,000 years. Consequently, farmers need access to better tools and farm practices that enable them to produce more with less.The food system of the future will look different than it does today. People are increasingly moving away from where food is grown and are less aware of how it is grown. By 2050, an estimated 70 % of people will be living in urban areas, creating the need for processing and storage technology, sound infrastructure, efficient distribution channels and open trade policies. The uneven

distribution of arable land around the globe means that farmers will need to freely and efficiently move food and access markets to be successful. Climate change and increasing weather volatility will drive demand for new seed technology adapted for harsher conditions and stressed land. As a result, the need has never been greater for innovative solutions that will lead to significant improvements in our food and nutritional security, including greater investment in science and technology. Tanja Folnovic (2020)

Whereas advances in technology, farmers can more efficiently produce more with less manpower, aiming increased yields while using fewer inputs.

Table 12: the respondents of response to the previous year you may use this new technology system?

| Items | Alternative | No of respondents | Percentage |
|---|-------------|-------------------|------------|
| The previous year you may use this new technology system? | very good | 4 | 19.1% |
| | Good | 13 | 61.9% |
| | Less | 0 | 0 |
| | Unknown | 4 | 19.1% |
| | Total | 21 | 100.0 |

Source: Survey through questionnaire, 2013. The data in the above table show that 4(19.1%) very good, 13(61.9%) good, 0 less, and 4(19.1%) unknown respondents. In general, most of farmers were use previous of new technological systems are good. But the others were used very good and unknown and the income level is high and very low. In other word the lower the income parents of respondents had the higher their children become vulnerable to comprehensible and the higher proper use of method of improving agricultural product. This reflects the fact that poverty contributes to the root cause of the problem of the rural people

Table 13 : the respondents of response to encouraging the farmer to use Both traditional and modern way of cultivation.

| Items | Alternatives | No of respondents | Percentage |
|---|--------------|-------------------|------------|
| Extension workers encouraging the farmer to use both traditional and modern way of cultivation? | Modern | 19 | 90.5% |
| | Traditional | 2 | 9.5% |
| | Total | 21 | 100.0 |

Source: Survey through questionnaire, 2013. As clearly observed in the above table 19(90.5%) respondents encourage their farmers to work on the modern way of cultivation and 2(9.5%) were used to traditional agricultural extension service .in order to support the farmers of respondents do not encourage their kind of engage in economic activities. It indicates that majority of farmers 19(90.5%) were motivated by their own traditional way of economic activities.

Table 14. Do you think that modern technological service delivered for you is beneficial?

| Items | Alternative | No of respondents | Percentage |
|---|-------------|-------------------|------------|
| Modern technological service delivered for you is beneficial? | Yes | 18 | 85.7% |
| | No | 2 | 9.5% |
| | Total | 21 | 100.0 |

Source: Survey through questionnaire, 2013.

Based on the above table 18(85.7%) were modern technological service delivered for you is beneficial and encouraged by their parents to engage in some economic activities. Whereas 2(9.5%) were not modern technological service delivered are Beneficial because their parents do not have sufficient income, the data indicates that above 85.7% of the respondent's farmers motivate their beneficial for economic activities.

Table 15: the respondents of response did you get awareness on the use of new agricultural input

| Items | Alternative | No of respondents | Percentage |
|---|------------------|-------------------|------------|
| Did you get awareness on the use of new agricultural input? | Neighbor | 2 | 9.5% |
| | Family | 1 | 4.7% |
| | mass media | 1 | 4.7% |
| | Extension worker | 17 | 80.9% |
| | Total | 21 | 100.0 |

Source: Survey through questionnaire, 2013. As shown in the above table the majority of respondents 17(80.9%) are extension workers, 1(4.7%) mass media to get awareness on the use of new agricultural inputs. Others of neighbor 2(9.5%) and family 1(4.7) were gives awareness to the minimum.

Table 16 which social factor affects the utilization of new agricultural extension service?

| Items | Alternative | No of respondents | Percentage |
|--|-------------------|-------------------|------------|
| Social factor affects the utilization of new agricultural extension service? | Religion | 0 | 0 |
| | Climate | 8 | 38.1% |
| | Lack of awareness | 9 | 42.8% |
| | Family | 2 | 9.5% |
| | Other | 2 | 9.5% |
| | Total | 21 | 100.0 |

Source: Survey through questionnaire, 2013. The figure in the above table show that majority of respondents 9(42.8%) lack of awareness, 8(38.1%) climate, 0 religions and 2(9.5%) family and others social factor are equal percent .respondents affects the utilization of new agricultural extension service utilization to respectively.

Generally The structure of a society is the way it is organized into families, tribes, communities and other groupings or divisions. A person's attitudes, and people's expectations of that person, are influenced by the groups to which he or she belongs; so too is the individual's access to opportunities jobs and land.

Table 17: the respondents of response factors limiting the farmers from planting more crops in cultivation system

| Items | Alternative | No of respondents | Percentage |
|--|----------------|-------------------|------------|
| Factors limiting the farmers from planting more crops in cultivation system? | Land | 2 | 9.52% |
| | Financial | 7 | 33.3% |
| | Our attitude | 5 | 23.8% |
| | Labor shortage | 7 | 33.3% |
| | Other | 0 | 0 |
| | Total | 21 | 100.0 |

Source: Survey through questionnaire, 2013. Concerning the 7(33.3%) of respondents said that we have labor shortage in the season of Cultivation. And 7(33.3%) of respondents said that we have financial shortage in farming process, others 5(23.8%) of respondents said that they have socioeconomic thinking, 2(9.5%) land and 0 percent of other factors. But respondent of factors limiting the farmers from planting more crops in cultivation systems. Generally the majority of the respondents said that we have financial shortage because of high cost of new inputs .they said we can eliminate other problem if we have enough money.

Table 18 : the respondents of response factors affecting you to use new agricultural extension service

| Items | Alternatives | No of respondents | Percentages |
|--|--------------|-------------------|-------------|
| Factors affecting you to use new agricultural extension service? | Social | 5 | 23.8% |
| | Economic | 16 | 76.1% |
| | Total | 21 | 100.0 |

Source: Survey through questionnaire, 2013. 16(76.1%) economic respondents were the major factors affecting you to use new agricultural extension service of financial or economic problem. Whereas 5(23.8%) social problems were not major problems to factor to affect use new agricultural extension services.

Table 19 : the respondents of response to the economic factor affects the utilization of new agricultural extension service

| Items | Alternatives | No of respondents | Percentage |
|--|---|-------------------|------------|
| Which economic factor affects the utilization of new agricultural extension service? | lack of money | 15 | 71.4% |
| | lack of technology | 2 | 9.5% |
| | lack Of improved agricultural extension input | 4 | 19% |
| | lack agricultural extension work | 0 | 0 |
| | Total | 21 | 100.0 |

Source: Survey through questionnaire, 2013. Based on the above table about 15(71.4%) ,lack of money , 2(9.5%) lack of technology , 4(19%) lack of improved agricultural extension input and 0% lack agricultural extension work . It indicates that majority 15(71.4%) lack of money were the economic factors affect the utilization of new agricultural extension service.

In addition to open and close ended questioner the researcher also used key informant interview.

Regarding to in what way do you pay the price of inputs respondent says most prices of agricultural inputs such as fertilizer, pesticide, improved yield seeds, and chemical are paid in cash or by giving full money. other few respondents says that we make payment are cover the price of agricultural inputs by borrowing institution like omo micro-finance or credit and for disable farmers, low living standard community are get agricultural inputs

without any payment or supported from NGO's like Agricultural transformation(AT), Agricultural Growth Project (AGP), Concern Ethiopia(CE). (Extension developmental office)

Response on shortage of labor during the season of cultivation if there is how, majority of respondents said that agriculture by itself is abroad field which wants much of human labor to processed or facilitate its function within time. So the new extension service is more went labor in the cultivation system process especially cropping t off by using new farming system it went for labor in one pair of oxen.

As the researcher interviewed extension worker (farmer who is power in adoption and diffusion of new agricultural input) now a day most of farmers were accepted or exercised new agricultural inputs or procedures practically. But there were some farmers that do not apply correctly the information and system that delivered for them because of shortage of awareness, finance and their labor and lack of trust on using new agricultural inputs. From this individual now a day some become user of the extension service by government involvement and create good awareness.

According to kebele extension worker (team leader farmer) the major factor which restrict from planting more crop in the study area there is land shortage, financial shortage, their own weakness and shortage of labor in the season of cultivation but from this listed financial shortage of farmer is the major factor which restrict them from planting more crop in the cultivation seasons. The other factor can be eliminated by using their finances. By considering the capacity of farmer government prepare using inputs by less credit and half payment and government use other alternative to participate all farmers in the consumption of modern technology.

As the researcher interviewed extension worker about what barriers are major social, and economic restrict the farmer from using new agricultural extension services the kebele extension team leader said that farmer have fear of using unknown and untied new seed as well as new inputs and also they fear criticism raise from other when they do new thing and farmer think that extension worker do anything for benefiting them self's this thinking is came from their socio cultural way of life.

When we see financial shortage now a day if there is their own interest to change government in some extent prepare many alternatives to benefit the farmer. In general we cannot say eliminate social and economical barriers by giving awareness and financial shortage by preparing credit opportunity but when we comparing from early it become decrease they become used new agricultural inputs change their economic level

Chapter five

5. Conclusion and recommendation

5.1 conclusions

Ethiopian agriculture is the dominant sector in economy both in terms of employment and output. Agriculture of Ethiopian economy face serious multi faced problem in the past decade the ministry of agriculture has attempted to solve the problem and to improved productivity through the utilization of various extension approach and designate development program.

The generalization made in the study was based on the study of sample of 21 farmers who were selected through simple random sampling technique. And the researcher used 21 farmer by questionnaire, Extension worker for key informant and semi - structured interview they have total 21 respondents. Questionnaire prepares as close and open ended.

The provision of agriculture extension service to rural small holder farmers stated many decade ago the extent of dissemination of the knowledge. respondent of sex, level of income ,use fertilizer willingness to increase agricultural productivity ,encourage the farmer to use both traditional and modern way of cultivation , uses new agricultural extension service are significance . Whereas the factor affecting agricultural system ,modern technological service delivered for beneficial , respondent of religion , number of family , use of technological system are insignificance .

In the analyzed part in terms of sex and age majority of researchers respondents was male account that 16(76.1%) and the remaining 5(23.8) are female in terms of age majority of respondents are the age group of 30-38, 8 (38.1%) and 9 (42.8%) majority of were Muslim religion followers when you go to in part two regarding to the attitude of farmers towards new extension programs majority of the respondents said that it is necessary for us.

When we seen response of the respondents on new extension system majority of them are it is very good for our economic change. In the correlation between farmer and extension worker the majority 6,(28.5%) very good of them said that there is high coloration. The way of communication that farmers and extension workers or delivers the technology through

using models farmers us we observe 14,(66.6%) and also the trends of farmer's participation in the system was increasing from year to year. Some respondents said that extension worker encourage farmer to use traditional and modern system together. majority of their response is to use modern extension system and the system that delivered fir them are appropriate as 19(90.5%)said yes.

The major factor that limit farmer from planting more crops in 2011 and 20112 were financial shortage means that there in high price of agriculture input and low price of agriculture output (products) like tiff, maze, and other. Majority of the respondents pay the price input is by payment full money and the remained is supported by NGOs such as AGP, AT, concern Ethiopia.

Agriculture by itself is broad filed and it went more labor to facilitate activity in time especially the modern extension system went more and more labor like to cultivate tiff it wants four labors in one pair of oxen.

The data that collected by using questionnaire and interview were even if the question raised for them are in some extent different from one another both gained information (respondents) have the same attitude towards the usage, necessity and other related information about the modern agricultural extension services. As the majority of respondents said that the major barrier that restrict farmer from planting more crop is that the first is economical inefficiency of farmer to use new inputs or having high cost and the second one is cultural and social limitation like farmer assume that extension worker works for them benefit not us.

Farmers get information and system of using new technologies from extension worker as majority of respondents indicate, because of many reason extension worker give chance to farmer for using both new technology and traditional system of production. Service that delivered for them is appropriate as majority of respondents said. In the usage of modern extension service there is barrier one is that high cost of agricultural input and also shortage of labor in the production process. The other barrier is that farmers have fear of using unknown or untried agricultural input.

The trend of using modern agricultural extension service is now a day become increasing because of measures taken by government bodies like created good awareness about the effectiveness of that input, using obligation as measures and by model farmer for first time as experiment.

Regarding to in what extent do you use the provision of basic facilities in the study area farmer use provision of basic facilities occasionally because of many reason like there is imbalance with in our capacity and cost of that input, and also there is shortage of supply from government in terms of borrowing and the other is the nature of land obligate to use indigenous crops.

In addition to the economical level of farmer their culture also affects the growth of agriculture by, they dose not woke in holly day; they used the farming system of their ancestress.

5.2 Recommendation

Based on the study in Gurage zone cheaha worda, *yefeq tereqe* kebele farmers and analysis carried out on the of the farmer the following intervention measures could be recommended in order to make the agricultural extension provision to rural farmer more efficient and to enable farmers in the use of new agricultural extension service utilization .

In order to make the extension system more effective and efficient it has to be designing by capable professional (economic, extension personnel, sociologist) etc who have the knowledge and experience about the issue, for the successful achievement of agriculture.

Government and other institution should be participated like ministry of health to protect farmer's health, ministry of transport should connect or intervene the former's output and market and ministry of finance should prepare credit for poor farmers.

Local knowledge or traditional system of cultivation should get recognition in the available time and price and also they have higher value to increase frame land fertility.

The extension system in Ethiopia is highly mixed with politics and it is often used to achieve government policy goals which are not in the best interest of most farmers. These cause farmers to lose confidence in the extension agents, often making the extension

ineffective for solving problem. There is the extension system should be free from any politics in order to make it more effective.

References

- Abdi Yusuf Ibro (2002) the contribution of agriculture extension service.
- Adams, M. (1982) *Agricultural Extension in Developing Countries*, Longman
- AshriAman, (1996).impact of innovation technology and production.
- BefekaduDefew and BrihanuNega, (200).Ethiopian economic association annual report on
- Brunner, E. and Hsin Pao Yang, E. (1949) *Rural America and the Extension Service*, Columbia University
- Ethiopian economy and innovation in northern Ethiopia Ohio state university UAS.
- Berihanaraya .(1985) .the role of agriculture extension services in the development of Ethiopian economy. Addis Abeba University.
- Brunner, E. and Hsin Pao Yang, E. (1949) *Rural America and the Extension Service*, Columbia University
- Central statistical agency of Ethiopia (CSA) 2005 national static archived.
- December, (1993). Characteristics of an oral culture in discourses on the agricultural net. Pennsylvania.
- DegeneAredo, (1992).development aid and agricultural development policy in Ethiopia from 1987 and for African development in 1992, VOLXVIL.
- Dileep Kumar and Khajan, (1995) . *Agricultural extension, innovation and dimensions*.
- Esthete chole and Stefan Brune ,(1990) . option for rural development.
- Gerba leta (2018) the Ethiopia agriculture extension system and its role.
- Gihish Chopra and Verima, 2006).
- Hundloe, T. 1994. Conservation farming in northern Thailand. In D. James, ed. *The application of economic techniques in environmental impact assessment*, p. 143-181. Dordrecht, the Netherlands, Kluwer Academic.
- Issace Arone, (1987) .*Modernization of agriculture in developing countries resource potential and problems*.Hebrew university Jerusalem..
- Kassa Belay (2002) *agricultural extension in Ethiopia the case of participatory demonstration and training extension system*. Haramay university

Katungi E, 2006. Gender, Social Capital and Information Exchange in Rural Uganda IFPRI and Melinda Smale, IFPRI (International Food Policy Research Institute) CAPRI Working Paper No. 59, University of Pretoria. Uganda. [On line]. Available on <http://www.capri.cgiar.org/pdf/capriwp59.pdf>. Accessed March 31, 2008.

KIFFLU dame, (1987).strategies and policy of agricultural development. Addis Abeba Ethiopia

Majid Husain, (2003). agricultural geography. India.

Maunder, A. (1973) Agricultural Extension: A Reference Manual (1st Edition), FAO

Mesfin ,(1991). suffering under Gods environment and vertical study of the Predicament

Neuchatel Group,(1999) Common Framework on Agricultural Extension

Tanja Folnovic (2020) Improvements in Agricultural Technology Increase Farm Yields

Woldemariam of farmer. Wall Worth publishing company US.

Schwarz verima and Jacob kampn, (1992) .agricultural extension in east Africa World bank technical paper.

Solomon Asefa, (1996). the need for agricultural research .Mega printing press Ethiopia.

Saville, A.H. (1965) Extension in Rural Communities: A Manual for Agriclural and Home Extension Workers. Oxford University Press

UNDP ,(1991). agricultural extensional programs advisory note. New York; United Nation development program

Wakley and Garforth, (1995) .agricultural extension training.

Yeman's (1967) stastisticas an introductory analaqyses new York harper and raw publication.

Appendix
WOLKITE UNIVERSITY
College of Social Science and Humanities
Department of Sociology

Dear respondents

The objective of these questionnaires is to collect data for the senior essay research focus on social and economic determinants of agricultural extension service utilization in cheaha woreda, *yefeq tereqe* kebele. Please try to your best filling on the proper answer to each of the following question. I would like to thank you in advance for time and effort you devote to answer these questions.

Direction

Fill the box for the following question

Part One: Background Information

1. Sex: a) Male b) Female
2. Age _____
3. Religion: a) Muslim b) orthodox c) protestant d) If others please specify
4. Level of education: A) illiterate B) read and write) C) 1-4 D) 5- 8 E) 9-10
5. Family size _____
6. Money annual income _____

Part two: Question related to attitude of farming in agricultural extension program

7. Do you utilize new agricultural extension technological service?

- A) Yes B) no

8. Have you every discussing about the attitude of farmer towards new extension system?

A) Yes B) no

If you say "no" why? Please specify the reason?

9. Have you willingness to use fertilizers to increase agricultural product and productivity?

A) Yes B) no

10. How about the interrelation and cooperation between farmers and (DA) development agent?

A) Good B) very good

C) Medium D) less

11. What is the extent of agricultural innovation like fertilizer improved seed improved farm implements and new storage system?

A) Very good B) occasionally C) never used

12. Now in the previous year you may use this new technological system why in which or by volunteer so how is its output to compare with early?

A) Very good B) good C) less D) unknown

Part three: Question related to social factors in agricultural extension service

13. Are extension workers encouraging the farmers to use both traditional and modern way of cultivation? A) Yes b) no

14. If say yes to question number 13, how?

15. Do you think service delivery system is appropriate? A) Yes b) no

16. Do you think that modern technological service delivered for you is beneficial?

A) yes B) no

17. From where did you get awareness on the use of new agricultural input?

- A) Neighbor B) family C) mass media D) extension worker
- E) If others please specify

18. Which social factor affects the utilization of new agricultural extension service?

- A.) family B) Religion C) Climate D) lack of awareness E) lack of education

Part Four: Question related to Economic Factors in agricultural extension service

19. Which factors limit the farmer from planting more crops in cultivation system?

- A) Land B) financial C) our attitude D) labor shortage
- E) other _____

20. In what way do you pay the price of input?

- A, by giving full money B, by giving half money and the half UN-paid C, by credit.

21. During the cultivation season do you experience shortage of labor? How? -----

22. What kind of economic variable affect use of new agricultural inputs? -----

23. Which factor affects you to use new agricultural extension service?

- A) Social B) economic

24. Which economic factors affect the utilization of new agricultural extension service?

- A) Lack of money B) lack of technology C) lack of improved agricultural extension input D) lack of agricultural extension workers.

