

**CONTRIBUTION OF FARMERS' NETWORK TO INCOME
POVERTY REDUCTION:
A CASE OF LUDEWA DISTRICT**

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POVERTY REDUCTION:
A CASE OF LUDEWA DISTRICT**

**By
Gervas Alfred Lupembe**

**A Dissertation Submitted to the Institute of Development Studies in Partial
Fulfillment of the Requirements for Award of the Degree of Master of Science in
Development Policy (MSc DP) of Mzumbe University**

2017

CERTIFICATION

I, the undersigned, certify that I have read and hereby recommend for acceptance by the Mzumbe University, a Thesis entitled **Contribution of Farmers' Network to Income Poverty Reduction of Ludewa District**, in Partial Fulfillment of the Requirements for Award of the Master of Science in Development Policy of Mzumbe University.

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DIRECTOR, INSTITUTE OF DEVELOPMENT STUDIES.

DECLARATION

I, Gervas Lupembe, declare that this thesis is my own original work and that it has not been presented and will not be presented to any other university for a similar or any other masters' degree award.

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Lastly, I wish to thank my wife Prisca Mhando, my children, Keith, Gladness and Giovanni, my parents, fellow students 2015/2016 class at Mzumbe University for their input to this study.

DEDICATION

I offer and dedicate this thesis report to my lovely Mum Laiwel Mgunda and my belatedly Father Alfred S. Lupembe, who laid the foundation of my learning. I also offer this effort to all friends, whose presence prayers, moral and material support have been the groundwork and provided enormous powers to this dissertation.

LIST OF ACRONYMS

AIDs	Acquired Immune Deficiency Syndrome
ASDP	Agricultural sector development programs
CDO	Community Development Officer
DANIDA	Danish International Development Agency
FAO	Food and Agriculture Organisation
FNs	Farmers Network
GDP	Growth Domestic Product
GNP	Gross National Product
HIV	Human Immunodeficiency Virus
LDSEP	Ludewa District Socio –Economic Profile
MDGs	Millennium Development Goals
MIVARF	Market Infrastructure, Value Addition and Rural Finance
MP	Multidimensional Poverty Index
NJOCABA	Njombe Community Bank
O&OD	Opportunity and Obstacles of Development
PPA	Participatory Poverty Assessment
SACCOS	Saving and Credit Cooperative Organisation Society
SDGs	Sustainable Development Goals
SPSS	Statistical Package for the Social Sciences
TADB	Tanzania Agriculture Development Bank
UNCDF	The United Nations Capital Development Fund
URT	The United Republic of Tanzania
VEO	Village Executive Officer
WEO	Ward Executive Office

ABSTRACT

Farmers network (FN) have come to be seen as the basic fundamental solution and answers to income poverty reduction and food security in small - scale farmers in rural areas. On the basis of the available information on contribution of farmers' network in income poverty reduction, this dissertation presents the analysis of the extent to which farmers network groups alleviate income poverty to small- scale farmers who are rural poor in the wards and villages in Ludewa district. In this study, an exploratory research design was adopted, involving the administration of structured and unstructured interview as tools for collecting data. A representative sample of 88 respondents was drawn from a sample frame of six selected villages. Purposive sampling was used to select FNs officials, leaders, and extension officers, while simple random sampling was used to select wards and villages. Data collected were statically analysed using Statistical Package for Social Science (SPSS) computer program version 6. Descriptive statistics such as means, frequencies, and percentage were computed and research question was investigated. The findings have revealed that, farmer's network plays a significant role towards income poverty reduction in rural areas for 80%, helps in providing employment to many Tanzanians residing in countryside areas, improves living standards and improves income of the rural farmers.

The study recommends that there is a need for the government through the ministry of agriculture, livestock and fisheries to formulate policies that will be favorable to rural farmers to enable them improve productivity and make sure that; the main option towards reducing income poverty to the rural farmer's network are successfully. Also further studies are proposed to acknowledge and encourage effort made by farmers in Tanzania. Agricultural policies should also focus on developing the agricultural sector by providing access to capital, market farm implements, extension services and markets.

TABLE OF CONTENTS

CERTIFICATION	i
DECLARATION.....	ii
COPYRIGHT	iii
AKNOWLEDGEMENT.....	iv
DEDICATION	v
LIST OF ACRONYMS.....	vi
ABSTRACT	vii
TABLE OF CONTENTS.....	viii
LIST OF TABLES.....	xiii
LIST OF FIGURES.....	xiv
LIST OF APPENDICES.....	xv
CHAPTER ONE.....	1
INTRODUCTION	1
1.1 Background Information	1
1.2 Statement of the Problem	6
1.3 Objectives of the Study	7
1.3.1 General Objectives	7
1.3.2 Specific Objectives.....	7
1.4 Research Questions	7
1.5 Significance of the Study	8
1.6 Organisation of the Thesis.....	8
1.7 Definitions of key terms	9
1.7.1 Farmer	9
1.7.2 Income Poverty.....	9
CHAPTER TWO.....	10
LITERATURE REVIEW	10
2.1 Introduction	10

2.2 The Concept of Networking	10
2.3 The Concept of Poverty	13
2.3.1 Theories on Poverty	14
2.3.2 Poverty as a Label	14
2.3.3 Poverty as Restriction of Opportunities	15
2.3.3.1 Initiatives taken by the Tanzanian Government to Reduce Poverty	16
2.3.3.2 The Role of Network in Income Poverty Reduction	17
2.3.4 Risk Sharing	18
2.3.5 Experimentation and Demonstration	18
2.3.6 Empowerment	19
2.3.7 Extension and Communication	21
2.4 Conceptual Framework	23
CHAPTER THREE	28
METHODOLOGY	28
3.0 Introduction	28
3.1 Description of the Study Area	28
3.1.1 Geographical Location	28
3.1.2 Socio – Economic Activities in Ludewa District	28
3.1.3 Relief and Climate	29
3.1.4 Population and Ethnicity	29
3.2 Study Design	29
3.3 Study Population	30
3.4 Sampling and Sampling Procedure	30
3.4.1 Area Sampling	30
3.4.2 Population Sampling	30
3.4. 3. Sampling Procedure	31
3.5 Types of Data and Collection Techniques	32
3.5.1 Primary Data	32
3.5.2 Secondary Data	32

3.5.3 Tools for Data Collection	33
3.6. Data Processing and Analysis	34
3.6.1. Presentation of the Findings	35
3.6.2 Limitations of the Study	35
CHAPTER FOUR	36
PRESENTATION AND FINDINGS	36
4.0 Introduction	36
4.1 Presentation of the General Information of the Study.....	36
4.2 Background Variables of Respondents	36
4.2.1 Distribution of Respondents by Sex.....	37
4.2.2 Age of Respondents.....	37
4.2.3 Level of Education.	38
4.3 Farmers’ Network issue in Reducing Income Poverty.....	40
4.3.1 Ownership and Uses of Land by Farmers	40
4.3.2 Participation in Seminars and Meetings	41
4.3.3 The Contribution of Network in Income Poverty reduction	42
4.3.4 Sources of Markets Information in the Rural Areas.....	43
4.4 Merits of Being a Member of Farmers’ Network.....	44
4.4.1 Assets and Investment Ownership Resulting from the Network	45
4.4.2 Access to Loans of Farmers Network Members	46
4.5 Economic Activities Performed by Member of Farmers’ Network	48
4.5.1 Distributions of Respondents by type of Activities.....	48
4.5.2 Types of Crops Produced by Members of the Network.	49
4.5.3 Quantity produced per Year.	50
4.5.4 Average Income Earned by Members of the Network in results with their activities.....	51
4.5.5 Other Sources of Income	52
4.6 Income Level Members Before and After Joining the Network	53
4.6.1 Income Level Members before Joining FNs	53

4.6.2 Income Level of Members after Joining FNs.....	53
4.6.3 Constraints Faced by Farmers’ Network.....	55
CHAPTER FIVE	57
DISCUSSION OF THE FINDINGS	57
5.1. Introduction	57
5.2 FNs Marketing Strategy and Farm Income	57
5.2.1 Farmers Networking in Education and Training.....	59
5.2.3 Farmers Network Training	59
5.2.4 Stakeholders Views on the Importance Farmers Network.....	60
5.2.5 Farmers’ Perceptions on the Role of Network	60
5.2.6 Farm Demonstrations Exhibitions to FNs Members	61
5.3 Positive Impacts Indicators of FNs in Reducing Income Poverty in Ludewa District	62
CHAPTER SIX.....	64
SUMMARY OF THE STUDY, CONCLUSIONS AND RECOMMENDATIONS	64
6.1 Introduction	64
6.2 Summary of the Study	64
6.3 Conclusion.....	65
6.3.1 Contribution of Capital and Loan Accessibility.....	65
6.3.2 Impacts of Training to Rural Farmers	66
6.4 Recommendations	66
6.4.1 Capital and Loan Accessibility.....	67
6.4.2 Agricultural Inputs Qualities	67
6.4.3 Training on Agro-Practices to Rural Farmers Network	68
6.5 Areas for Further Studies	68

REFERENCES	69
APPENDICES	75

LIST OF TABLES

Table 3.1: The major clusters for the wards was be as follows.....	32
Table. 4. 1: Distribution of Respondents by Sex.....	37
Table 4.2: Distribution of Respondents by Age	38
Table 4.3: Respondents' Level of Education	39
Table 4.4: Distributions of Respondents' in the leadership duration	40
Table 4.5: Distribution of numbers of acres owned	41
Table 4.6: Attendance in annual meetings held per year	42
Table 4.7: Distribution of respondents by changes of income	43
Table 4.8: Distribution of Sources of information	43
Table 4.9: Distribution by status of income level	44
Table 4.10: Distribution of respondents by assets ownership	45
Table 4.11: Distribution of respondents by loan	47
Table 4.12: Distribution of Leaders responses concerning loan	48
Table 4.13: Main economic activity.....	49
Table 4.14: Distribution of respondents by types of crops produced by farmers'	50
Table 4.15: Distribution of respondents by number of bags produced	51
Table 4.16: Distribution of amount of money earned	51
Table 4.17: Distribution of other sources of income.....	52
Table: 4.18. Distribution of respondents by Level of income before joining FNs....	53
Table 4.19: Distribution of respondents by Level of income after joining FNs	54
Table 4.20: Distribution of respondents by constraints of Farmers' Network.....	56

LIST OF FIGURES

Figure: 2.1. Contribution of Farmers' Network in Income Poverty Reduction	24
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LIST OF APPENDICES

Appendix 0-I.....	75
Research Questionnaire Designed For Members of the Farmers Network.....	75
Appendix 0-2.....	77
Research Questionnaire Designed For District Officials, Extension Officers/ Network leaders, Wards and Village officials.....	77
Appendix -0 3.....	79
A check- list for leaders and key informants in assessing the contributions of farmer's network in income poverty reduction in selected ward in Ludewa District Date.....	79
Appendix 0-4.....	80
Map of Ludewa District Showing the Study Area	80

CHAPTER ONE

INTRODUCTION

1.1 Background Information

Poverty is now gradually more recognised to be the multidimensional conception that encapsulates deprivations in several magnitudes that perimeter opportunities for a joyful, healthy and productive life. The key deprivations include income poverty, hunger, malnutrition, gender bias, social exclusion, and lack of access to education, health services and housing (The World Bank, 2006). There has been a shift away from focusing only on income or expenditure towards defining poverty as a multidimensional condition and developing adequate ways of measuring it over time and across nations. The Multidimensional Poverty Index (MPI) launched in 2010 by the United Nations Development Programme (UNDP) at the University of Oxford is the latest among several multidimensional measures of poverty (Gentilini and Webb, 2008).

Poverty is still a comprehensive issue. For instance, China still faces substantial poverty reduction challenges, with more than 254 million people alive in poverty (Hugé and Hens, 2007). Nearly one-third of China's rural inhabitants were found to be expenditure deprived at least between 2001 and 2004 (ibid). About 1.2 billion people live in extreme poverty in developing countries (World Bank, 2001). Approximately 50 percent of Sub-Saharan African (SSA) countries are breathing underneath the poverty line up, defined as subsisting on less than one US dollar a day (Mwaniki, 2006).

About 70% of Africa's poor are rural (Cleaver, 1997). Since the 2000s there has been a general decline in income poverty in Tanzania, but it remains prevalent predominantly in rural areas. About 17 million people, half the population live below

the poverty line of US dollar 1.2 per day (URT, 2003). Approximately 80 percent of the poor exist in the country areas where concerning 70 percent of the inhabitants live (URT, 2001). From 2000/01 to 2010/11, overall food poverty declined from 22 to 19 percent while basic needs poverty declined from 39 to 36 percent. Despite these improvements, Tanzania is sheathing in its progress towards its targets on reducing income poverty and food insecurity and in achieving the Millennium Development Goals (MDGs) target of halving poverty by 2015 (URT, 2005a).

Ludewa District was among the best 20 districts in Tanzania Mainland with the least number of citizens breathing below the poverty line. At the regional level, it is considered to be one of the best districts according to the 2005 Poverty and Human Development Report (by that time Ludewa was a district under Iringa Region). The Report indicates that only 24 percent of Ludewa District residents were under the essential requirements scarcity line.

Farmers' network can be one of the initiatives which can prop up rural slanting sectors and therefore prop up the National Strategy for Growth and Reduction of Poverty. Farmers' Network have a potential to empower the rural populations to increase their productive capabilities and as a result, reduce poverty. The organisation of rural population in local development efforts such as networking of farmers groups is not a new phenomenon in rural development. Formal organisational structures such as cooperatives and unions were among the first structural imports into rural areas of the third world countries in order to provide various inputs, marketing and education services to farmers (Wambura and Rutatora, 2001). Farmers Network is a social setting in which people positively indulge in dialogue, be encouraged to exchange ideas and experiences, urged to take a time to listen to each other and to work towards a new way of understanding old problems.

Moreover, a number of studies provide experiential support to the view that farmers network has been a major driver of income poverty reduction in the developing world. Ravallion and Datt (1996), for example, found that expansion in farming network and the rural economy had been highly advantageous to dropping rural poverty in India, China, and South Africa. Similarly, Irz, X., Lin, L., Thirtle, C., and Wiggins, S (2001) reported that there are significant relationships between productivity growth and both poverty and nutrition; and that agriculture had a greater impact on income poverty than the other sectors. FAO (2004) conducted a study in Indonesia found that farmers network growth reduced the depth of poverty by 50% in the rural areas.

The contribution of the farming sector to reduction can also be witnessed in the historical patterns of economic development and poverty reduction in African countries. In the early years of independence, most of the African economies relied heavily on farming to boost economic development and provide income and employment opportunities to the masses (The World Bank, 2003). Agriculture in Sub-Saharan African countries engaged a large percentage of the labor force in the 1970s and 1980s whereby it caused an amplify in farming productivity, given that sell to other countries earnings, mainly from primary products, sustaining the livelihoods of millions of people and giving direct employment to more than half of the labor force in these countries (Eclac and UNDP, 2002). Therefore, in order to reduce income poverty, many African governments have realised the need to increase making in the farming sector. Since the majority African countries have appealed to their international expansion partners to assist in developing the agricultural sectors of their economies. Even though rural economies in developing countries are becoming more diversified, the majority of the people still engaged in farmers networking activities. If rural dwellers are given the chance to cultivate the land, access to credit, technical assistance, and markets for their produce, it will be

possible for them to overcome their income poverty and make a sustainable contribution to national development.

Since independence in 1961, the government of Tanzania adopted poverty eradication as its main goal. In the country, the cause of rural income poverty has been attributed to low output especially in the agricultural sector, the sector which employs about eighty percent of the economically active rural population (URT, 2004). The agricultural sector plays an important role in the socio-economic development of a country. In 2001, the sector employed over 70% of the rural labor force, contributed about (36%) to (GDP) and reported for over 57% of the overseas barter income (The World Bank, 2003). The low output levels result from many factors including erratic weather, poor farming practices, the high cost of inputs, infertile lands, low levels of education and skills for production and management, credit, poor infrastructural development, as well as market and storage facilities. In response to these problems, the country prepared and adopted many development programs and strategies to combat poverty. Among of strategies was the establishment of farmer's cooperatives. According to Rutatora and Mattee (2001), as one form of farmers' organisations has existed in Tanzania since 1932. Therefore, despite a series of development strategies and programs adopted, the level of income poverty is still high and does not show any sign of significant decline. Evidence indicates that overall income poverty has not significantly declined and it continues to be large of both rural and urban areas. In the due course, the government recognised this mistake and started to revive cooperative principles through the establishment of Cooperative Act of 1991. It was during this time when Farmers Networking was being formed with the aims of bringing small-holder farmers together in solving problems they encountered. Farmer's network can be one of the initiatives which can prop up countryside slanting segments through empowering the countryside inhabitants to enlarge their prolific abilities. This, as a result, reduces

income poverty and therefore supports the National Strategy for Growth and Reduction of Poverty (Sizy, 2001).

The organisation of rural population in local development efforts such as networking of farmers groups is not a new phenomenon in rural development. Formal organisational structures such as cooperatives and unions are among the first structural imports into rural areas of the third world countries in order to provide various inputs, marketing, and education services to farmers (Wambura and Rutatora, 2007). Farmers Network is a social setting in which people positively indulge in dialogue, encouraged to exchange ideas and experiences, urged to take the time to listen to each other and to work towards a new way of understanding old problems. According to Oerlemans and Assouline, (2004), farmers' network can be an effective means to contribute to the sustainable agricultural development and hence reduce income poverty. Therefore, this study intended to assess the impact of smallholder farmers' membership in agricultural network on household income poverty in Ludewa District.

Ludewa district council as a case study has a total of 26 wards and 77 villages. Out of these, only Mlangali Ward (whose villages are Ligumbiro and Itundu), Milo Ward (whose villages are Milo and Mavala) and Lupanga ward (whose villages are Lupanga and Lusala) have farmers network operating (MVIWATA, 2016; unpublished data). According to MVIWATA, only 1301 farmers have farmers' network. This study thus seeks to gain insights into the contribution that the farmers' network has on income poverty reduction in Ludewa district. Farmers' network, according to MVIWATA, aims at bringing farmers together in order to solve market problem in Ludewa district to provide loans to farmers, quality seeds on time, to formulate farmers' SACCOS, to enable farmers to be recognized by financial institutions to allow lobbying and advocacy and to bridge a gap between the government and farmers. The aims of MVIWATA in Ludewa district are fascinating

to the extent that the investigator was encouraged to carry out this learning in order to conclude the donation that farmers network has brought in income poverty reduction in Ludewa district as a case study.

1.2 Statement of the Problem

According to the Tanzania Development Vision 2025, half of the Tanzanian population lives below the poverty line at USD 1.2 a day. Grassroots initiatives are therefore needed to properly address the problem of rural poverty, and the farmers' organizations such as Food Security Groups Network are an ideal position to carry out income poverty eradication initiatives (International Federation of Agricultural Producers and United Nations Capital Development Fund, 2005). In view of the liberalized market economy and globalization agenda farmers are seeking new ways of organizing themselves so that they can become dependable, effective, and efficient in an endeavor to improve their welfare. Since farmers network are social capital in the area it important to make use of the resource so as to reduce income poverty among people of Ludewa.

Farmers' network can be one of the initiatives which can support rural oriented sectors and therefore support the National Strategy for Growth and Reduction of Poverty.

Networking has been recognized by research and development institutions such as International Federation of Agricultural Producers (IFAP), Agricultural Seed Agency(ASA) and as well as funding agencies such FAO and International Fund Developments such as MIVARF, TADB as an important way of improving the effectiveness of extension communication and agricultural research leading to poverty reduction. Since the time Farmers Network Groups were created in Ludewa District to-date no study has been conducted to assess their role and effectiveness in as far as income poverty reduction is concerned. This creates the need for the study

so as to come up with relevant recommendations for improving farmers' network leading to an eventual poverty reduction process on a sustainable basis.

1.3 Objectives of the Study

1.3.1 General Objectives

The general objective was to evaluate the role of farmers' network to income poverty reduction in selected wards of Ludewa District.

1.3.2 Specific Objectives

The study was specifically meant:

- i. To evaluate the role of farmers' network in income poverty reduction in Ludewa
- ii. To explore types of crops produced by members of the farmers' network in Ludewa
- iii. To examine the income of members of the network after joining into the farmers' network in Ludewa
- iv. To discover problems facing farmers network in Ludewa

1.4 Research Questions

The research questions of this study are in line with the study objectives:

- i. How effective does farmers' network contribute to income poverty reduction?
- ii. What are the types of crops produced by members of the farmers' network in Ludewa?
- iii. How has Farmers' Network influenced farmers' income?
- iv. What are the problems facing Farmers Network?

1.5 Significance of the Study

The study aimed at providing the information on the contribution of (FN) to income poverty reduction. The study enabled the researcher to learn various methodologies of conducting an assessment study on the position of farmers' groups' network in income poverty reduction of which new skills in addressing various farmers' problems were acquired.

Additionally, the study helps the researcher to gain new insights on the responsibility of farmers' network in income poverty reduction. Also, the findings of the study complement the existing body of knowledge to an extent that it may be a reference to other studies. The study also provides opportunities for other researchers to fill the gaps which are identified by the researcher.

The documented information through this study will assist farmers, policy makers and development agents to identify locally available resources, required support as well as recommending strategies aimed at improving the local infrastructure. It also assists government policy makers to design related policies and programs which may help other people to take on this method as an instrument for development. The study, also recommends better strategies to increase the success of farmers' network in carrying out agricultural activities in Tanzania.

1.6 Organisation of the Thesis

The study is organised into six chapters including; Introduction which entails statement of the problem, objectives, research questions, significance of the study; Literature review; Research methodology; Findings of the study; Discussion of the findings and summary conclusions and policy implications.

1.7 Definitions of key terms

1.7.1 Farmer

A farmer (also called an agriculturer) is a person occupied in agriculture, raising livelihood organisms for foodstuff or raw materials. The word usually applies to inhabitants who do some amalgamation of raising field crops, orchards, vineyards, poultry, or other livestock (Maliyamkono, 2006)

A farmer is someone who works under the umbrella of agriculture, producing a variety of food products for human and animal consumption. There are some kinds of farmers ranging from farmers who elevate animals to farmer who produce crops (Bhardwaj, 2009 and National Strategy for Growth and Reduction of Poverty, 2005).

1.7.2 Income Poverty

According to Maliyamkono (2006) income poverty is defined in terms of the income required to provide basic necessities or a decent standard of living. In calculating Income poverty, the baseline used to be developed, by taking the cost of one's basic food requirements and compare it with one's income. For those who have the income that can meet these requirements are considered not to be poor, while those who are below are considered to be poor.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

In the recently years, farmers' network has been used as a tool for reducing income poverty in rural areas, especially to farmers. This chapter reviews the literature on different aspects related to the concept of poverty, networking, how Farmers Network (FNs) evolved, current and earlier initiatives were taken by the Tanzanian government to reduce poverty and the role of networking in income poverty reduction in Ludewa Districts.

2.2 The Concept of Networking

Alders *et al.* (1993) have defined networking as any group of individuals and/or organisations who, on a voluntary basis, exchange information or goods or implement joint activities and who organise themselves for the purpose in such a way that individual autonomy remains intact. Farrington and Nelson (1994) have defined networking as the motor of the work of groups with a common goal or need; it exists solely to provide organisational structure in addition to providing information and inciting groups to act.

Different authors have described several types of farmers' network. Haverkort *et al.* (1991) classified network according to the pattern of flow of information. For example in a hierarchy type of network information flow is controlled by the top while in a horizontal network information flows directly between members. They also classified network according to membership composition and activities involved. In this case, network can be formed by farmer's organisations, researchers, and extension workers, with a variety of activities (e.g. information exchange, training and awareness rising). Pluknellet *et al.* (1990) gives a classification

based on operational styles. Other network classifications are based on the scope of geographical coverage and subject matter focus (Pluknellet *al.*, 1990).

According to Monriqueet *al.* (1993) in Alders *et al.* (1993), there are three phases from which a network evolves. The first phase is known as planned activism, the second phase is the development of a shared conceptual framework and finally the creation of a network. Planned activism is a phase in which the first exchange of ideas takes place. Planned activism is facilitated by the existence of concrete activities of the stakeholders who recognize the value of sharing and support. One member or a small group of enthusiastic members promote the idea of networking and plan for meeting with prospective network members. The result is generally a workshop or a meeting where the idea of forming a network is discussed and evaluated. Other issues of immediate interest to members are also discussed (Korten, 1990). Once groups have established a sound economic base, it is important to promote their consolidation into network. About two or three years after the small groups are formed, it is advised to encourage them to meet with each other. This creates ties and linkages that help in the formation of inter-group associations - federations of 10 to 15 small groups that join together to tackle a common interest or need. Inter-group associations organise the bulk purchase of inputs, the marketing of farm produce and the preparation of requests for bank loans. They may also play a political role, by acting as a spokesperson for groups in discussions with local government administrators and development services (FAO, 2004; Matteeet *al.*, 1998).

Development of a shared conceptual framework is more difficult yet is an essential task. A shared conceptual framework facilitates the exchange of ideas, experiences and knowledge. According to Kolman (1993), the first year of preparation always results into the formulation of unrealistic goals resulting from extensive theoretical discussions. A study conducted in 1993 by Kolman in Peru revealed that the

extensive theoretical discussions are necessary for the following ways: a) they overcome ignorance and the lack of information on the topic of interest amongst prospective members; b) they integrate social ways of thinking with insight into technical processes; c) last but not least they explain to development agents and other stakeholders as well as the actual needs of rural people. The process of exchanging so as to create a shared conceptual framework, it consumes more yet it seems as an essential ingredient of networking. In a way, it helps to transform a diverse set of people and organisations with “ill-defined” sense of purpose into a “like-minded” group with many interlocking relationships and a shared perspective, thus enabling them to effectively learn from each other.

The formation of a network comes last. Once a network is created, it is important to formalise it. For the network to be sustainable it has to be registered according to the law of a particular country. It has to be institutionalised. Every individual and organisation builds relationships with others, in networking. Most of these activities remain informal and rather incidental. However, some of the activities become so relevant to the life and/or work of these individuals and organisations that they decide to institutionalise them in order to guarantee the sustainability of the relationship.

According to Gilla, A.S. and Nombo, C (1994), a network which remains informal is compared to people who eat but never build a kitchen. It is important for the network to be formalised so as to fully utilise their potentiality in the fight against poverty. An example of a successful network which followed the model is MVIWATA. The Sokoine University of Agriculture has been successfully in formalising a network of farmers known as MVIWATA), a Kiswahili acronym meaning Tanzania Network of Farmers Groups (Matteeet *al.*, 1998; CTA Seminar, 2001).MVIWATA was formed during a workshop organised at The Sokoine University of Agriculture, where farmers’ representatives decided to institutionalise the exchange of information

between farmers, farmers' groups and researchers and extensionists, throughout the country.

The network aims at facilitating communication among small-scale farmers all over the country. It also makes efforts in organising and empowering farmers in Tanzania so as to become strong enough to influence policy decisions and promote their development on a self-reliance basis.

MVIWATA ensures effective representation, of farmers' interest, to facilitate learning and training, to enhance communication and advocacy strategies with a purpose of defending and promoting their interests. Currently, MVIWATA represents over 60000 small-scale farmers in Tanzania. MVIWATA operates through network of grassroots farmer groups. At present, MVIWATA comprises 75 networks of grassroots farmers (Mattee, 1998; Gilla and Nombo, 1994; Paliscio and Madaha, 2006). The network membership is derived from the representatives of farmers groups and local network. This condition indicates the importance of forming local network by various groups existing in rural areas. Without local network, it implies that groups will not be members of the National Network-MVIWATA; hence they would fail to access the support or incentives offered by the network.

2.3 The Concept of Poverty

Poverty may be defined as a state of a deprivation and prohibitive of decent human life that result from many mutually reinforcing factors, including lack of productive resources to generate material wealth, illiteracy, prevalence of diseases, discriminative social-economic and political systems and natural calamities such as drought, floods, HIV/AIDS and wars (URT,1999:1).World Bank (2001:1) summarises that the poor people in rural areas lack adequate food and shelter, education and health and have deprivations that keep them from living the kind of life that everyone values. Moreover, they are often exposed to ill-treatment by

institutions of the state and society and are powerless to influence key decisions affecting their lives. However, since poverty is a multidimensional and location specific phenomenon, describing it is easier than defining it, and the best way to determine it is through Participatory Poverty Assessment (PPA) exercise. Poverty is considered a multi-facet phenomenon that includes vulnerability and powerlessness, deprivation, isolation, lack of decision making power, lack of assets and insecurity (Chambers, 1998). Poverty is a worldwide problem, particularly in the third world countries where it should be reduced and eradicated as soon as possible. Tanzania is classified as one of the poorest countries in the world; this is based on a wide range of monetary indices such as Gross Domestic Product (GDP) and Gross National Product (GNP) per capita per year, and USD per capita per day (Chambers, 1998)

2.3.1 Theories on Poverty

Theories on the causes of poverty are the foundation upon which poverty reduction strategies are based (https://en.wikipedia.org/wiki/Theories_of_poverty). While in developed nations poverty is often seen as either a personal or a structural defect, in developing nations the issue of poverty is more profound due to the lack of governmental funds. Some theories on poverty in the developing world focus on cultural characteristics as a retardant of further development. Other theories focus on social and political aspects that perpetuate poverty; perceptions of the poor have a significant impact on the design and execution of programs to alleviate poverty. The first two theories are for developed countries such as the United States and the other three theories are for developing countries. Maia Green (2006). The most relevant theories are for developed countries such as Tanzania where this study is conducted.

2.3.2 Poverty as a Label

Various theorists believe the way poverty is approached, defined, and thus thought about, plays a role in its perpetuation. Maia Green (2006) explains that modern development literature tends to view poverty as agency filled. When poverty is the

prescribed agency, poverty becomes something that happens to people. Poverty absorbs people into itself and the people, in turn, become a part of poverty, devoid of their human characteristics. In the same way, poverty, according to Green, is viewed as an object in which all social relations (and persons involved) are obscured. Issues such as structural failings (see earlier section), institutionalised inequalities, or corruption may lie at the heart of a region's poverty, but these are obscured by broad statements about poverty. Arjun Appadurai writes of the "terms of recognition" (drawn from Charles Taylor's 'points of recognition'), which are given the poor are what allows poverty to take on this generalised autonomous form. The terms are "given" to the poor because the poor lack social and economic capital, and thus have little to no influence on how they are represented and/or perceived in the larger community. Furthermore, the term "poverty", is often used in a generalised matter. This further removes the poor from defining their situation as the broadness term covers differences in histories and causes of local inequalities. Solutions or plans for the reduction of poverty often fail precisely because the context of a region's poverty is removed and local conditions are not considered. This theory is also relevant to this study since people of Tanzania have a mindset that they are poor. This is also a continental belief that Africa is poor and as such its countries are also poor especially countries south of Sahara. Tanzania is such one of the countries where the countries are labelled as poor and their people feel that they are poor.

2.3.3 Poverty as Restriction of Opportunities

The environment of poverty is one marked with unstable conditions and a lack of capital (both social and economic) which together create the vulnerability characteristic of poverty. Because a person's daily life is lived within the person's environment, a person's environment determines daily decisions and actions based on what is present and what is not. Chakravarti (2006) argues that the poor's daily practice of navigating the world of poverty generates a fluency in the poverty-environment but a near illiteracy in the environment of the larger society. Thus,

when a poor person enters into transactions and interactions with the social norm, that person's understanding of it is limited, and thus decisions revert to decisions most effective in the poverty environment. Through this, a sort of cycle is born in which the dimensions of poverty are not merely additive but are interacting and reinforcing in nature. This theory is also relevant to this study since the country for a long time has failed to fully utilise its resources and has not developed its industries due to lack of capital, and that, farmers in Ludewa district also lack the capital to process their products.

2.3.3.1 Initiatives taken by the Tanzanian Government to Reduce Poverty

This section highlights initiatives taken by Tanzania to reduce poverty and assist the poor. It describes the National Poverty Eradication Strategy (NPES) launched in 1997, Development Vision 2025 launched in 1999, and National Strategy for Growth and Reduction of Poverty launched in 2005 as a follow up to the Poverty Reduction Strategy Paper of 2001 and finally organisation of rural population in local development efforts.

Since independence in 1961, the government of Tanzania adopted poverty eradication as its main goal. In addressing the key challenge of strategizing to reduce poverty Tanzania has prepared and adopted National Poverty Eradication Strategy (NPES) in 1997, which brought out a vision for the society with abject poverty and improved social condition (URT, 2005). The overall goal of NPES was to provide a framework, to guide poverty eradication initiative in order to reduce absolute poverty by the year 2025. For achieving the goals of NPES the government identified five key sectors: education, health and nutrition, water, agriculture and rural roads. The NPES identified three areas of strategic interventions namely: creating an enabling environment for poverty eradication, building the capacity for poverty eradication and eradicating poverty. The strategy has also spelt out roles at

various levels for poverty eradication initiatives. The impact of farmers' organisation initiatives to reduce rural poverty varies according to the level of resources availability, support and infrastructure. The withdrawal of Government from controlling major means of production and globalisation necessitates the need for farmers' organisations so as to empower farmers (UN, 2003; GFAR, 2004).

2.3.3.2 The Role of Network in Income Poverty Reduction

A study conducted by Kaburire and Ruvuga (2006) in Tanzania concentrated on networking for agricultural innovation only. To a large extent, public financing for research and extension is being made conditional on a strong collaboration with farmers and farmers' organisation. Many organisations including farmers' network have emerged that are attempting to help address the multiple challenges faced by farmers – in agricultural and livestock production in general, and the need for innovation in particular. Nevertheless, there continues to be inadequate farmer participation in decision-making, whether these innovations are technical, organisational or institutional. The study by Kaburire and Ruvuga (2006) revealed that farmers organisation have the significant additional potential to make the research and extension agenda more relevant to farmers' needs and their environment, and indeed in bringing about the desired changes in agricultural productivity, incomes, and sustainability. Thus the study calls for a need to conduct a research on farmer network in relation to income poverty reduction.

A study conducted by Masandika and Mgangaluma (2006) concentrated on linking farmers' network with various agricultural services. Farmers' network such MVIWATA, which works at the national level, cannot render all services required. The study revealed that there is a need for intermediate-level network in order to reach affiliates at the working class level. Such transitional networks are normally created at the provincial or district level. The two studies were limited and could not give adequate details on the role of networking which has led to a need of studying

networking in the context of income poverty reduction. Networking provides the opportunity for reflection, for breaking down barriers and stimulating creativity (Engel, 1990). Farmers' networking plays the following roles in poverty reduction:

2.3.4 Risk Sharing

A basic function of farmers' networking is to build confidence among member farmers and to provide support and encouragement. Compton and Joseffson (1993 as cited in Alders *et al.*, 1993) contend that younger farmers can learn from older farmers and farmers without experience can learn from experienced ones and so avoid the unnecessary repetition of mistakes done by older farmers in the past. By so doing new and inexperienced farmers can engage in production successfully and henceforth increase agricultural production. In Sri Lanka, farmers' groups have established an extensive network of inter-group associations called village boards, each representing an average of 10 groups.

The village boards, in turn, have created two district-level federations with the total membership of about 2000 farmers. The inter-village boards collect money to purchase agricultural implements such as fertilisers and seeds in bulk and provide them at a lower cost. They also organise training programs through extension agencies and other line agencies. This is highly promoted because the small farmers have to take over management of the activities after termination of the project. In fact, quite a number of village boards are taking over the group promoter's functions. In one district, where there were 24 group organisers, now only one is needed. If agricultural production is increased then income poverty is reduced as farmers can get food and increase their income through the sale of surplus produce.

2.3.5 Experimentation and Demonstration

According to Compton and Joseffson (1993), cited by Alders *et al.* (1993) experiments conducted by farmers' network can effectively and efficiently serve to develop farming practices that are compatible with local conditions.

Experimentation avoids duplication of practices and enables farmers to investigate proposed new practices more completely and more quickly. Also, they take into consideration the risk, labor requirement and community values, which are rarely considered by extension workers. Network allows participating farmers to discuss and analyse each other's observations and experiences. This process results in valuable research questions. When forwarded to agricultural research organisations, these questions and requests should presumably, carry more weight, because they are put forward by a network rather than individual farmers.

Good examples are the Seed Producers Societies (SPS) network of Mvumi Makulu, Bahama, Dabala and Nhinhi villages in Mvumi Division. They aimed at engaging in quality seeds production and seed multiplication training. The seed producers engage in experimentation and demonstration aimed at producing quality seeds (Paliscio & Madaha, 2006). The use of quality seeds has enabled the farmers to access quality seeds at the cheaper cost. Quality seeds have led to an increase of production (for example the production of maize has increased from 7.43 bags of maize to 24.75 bags of maize per ha) and as a result, poverty has been reduced among farmers who use them.

2.3.6 Empowerment

Farmer empowerment is a process that increases the capabilities of smallholder farmers and farmer groups to make choices and to influence collective decisions towards desired actions and outcomes on the basis of those choices. According to Madaha (2006), at the individual level; Empowerment has been defined in terms of factors that give greater control over one's life. Factors include an individual's knowledge base, resources, rights, and assets. Reference is also made to the sense of well-being in terms of status and self-esteem that are both facilitated and give further support to the capacity to control key aspects of one's life.

In the recent years, empowerment has assumed a prominent role in rural and agricultural development with support to farmer groups, network and organisations entering the dialogue between donors and governments in Asia and Africa. A central argument used by donors for supporting farmer empowerment is that there is a strong relation between farmer empowerment and such development outcomes as poverty reduction; improved agricultural opportunities for growth, and better governance. Today farmer empowerment is held to be important for developing demand-driven advisory services; farmers that can better analyse their situation and can then better articulate demand; linked to farmer group organisation this can make safely improved tune-up stipulation and the more efficient use of public resources. In the pursuit of the latter two, farmer empowerment embraces to varying degrees ideas of farmers as citizens who should play a central role in securing improvements in the functioning of government and of markets through their actions at the local level. The logic is a powerful one in today's development context.

Members of Ludewa farmers have been empowered through training, access to information and access to loans. According to Madaha (2010), Farmers' Network Groups play a very significant role in improving both agricultural production and food security for the household members. Farmers' network allows group members to communicate and exchange ideas with others group members. The exchange of ideas allows members to be creative and have a sense of recognition. On the other hand, a network service has been reaching the farmers in Network Groups and provides extension services to them easily. The practice of providing intensive assistance to a small number of progressive farmers and expecting that the effect of such assistance will reach other farmers directly by diffusion is not realistic and leads to increased social and economic inequality. That is why development agencies find it easy to work with groups instead of a few farmers (Mattee& Lassalle, 1994).

A study conducted by Madaha (2010) revealed that the members of the Farmers network receive a variety of services including technical support (training on agronomic practices), financial aid (loans, credits, and accessibility to revolving fund) and material support (food loan and agricultural implements e.g. water pump, high-quality seeds, draught animals, carts, plough, and rippers). The services aim at building the capacity of the Network Groups leading to their sustainability. In addition, group members get an opportunity to communicate and exchange ideas with other group members. This fosters cooperation, joint effort and hardworking which are seen as key elements in the sustainability of groups.

The Farmers Network in the area has been extended aimed at making the project intervention sustainable. The extension will be used to empower the network members and facilitate registration of Farmers network. Currently, the implementing agents concentrate on finding different ways of making the Farmers network sustainable. This has created a need for research focusing on strengthening the Farmers network which is expected to take the role of the implementing agents. The efforts of the implementing agents in networking farmers are supported by studies conducted by Alders *et al.* (1993) and Munanka (2008) which revealed that as farmers join together and begin to support and learn from each other; a network develops strength and can easily address poverty issues. As a network grows it becomes increasingly able to promote the common interests of its members and of the larger community. Practical outcomes can be collective purchasing of supplies, collective selling, and marketing of produce. Well- established network can become effective advocates of policy change such as those aimed at poverty reduction and claim improved access to public services.

2.3.7 Extension and Communication

Farmers' networking can obtain and disseminate agricultural information from outside the network. According to Carney (2004), network have often emerged in

response to the absence of adequate extension services. Yet the existence of such network can facilitate the work of extension workers and researchers provided that these accept the network for what it is. For example, local network in Ludewa district organise and hold meetings on a monthly basis in which members interact and exchange ideas with one another about their activities, potentials, and difficulties. Sometimes, the network proposes field visits to other areas or specific groups where an important lesson could be learned. The meetings and field visits enable them to utilise the skills learned and henceforth increase agricultural production. According to Mattee (1998) farmer network facilitate effective communication of extension messages between farmers and change agents, and among farmers themselves. The change agents can communicate extension messages to farmers in farmer network more quickly than individual farmers. The argument implies that although farmers' group's approach is recommended in developing countries, local network are essential for the success of both members and non-members of farmers groups as they help in technology dissemination. The dissemination of technology helps farmers to gain modern techniques and thus boost agricultural production leading to poverty reduction.

A study conducted by Mushi (2000) in Kilosa has revealed that the rate of technology dissemination to the community is low, mainly due to lack of capital and local network. This is a recent phenomenon in Tanzania and little research has been done in this area. It is recommended that local network should be formed in all areas where farmers groups exist. Local network have proved to be very successful in technology transfer and adoption of new agricultural innovations. Furthermore, the study by Mushi (2000) revealed that networking among groups creates a sense of self-awareness of the members and tends to stimulate a continuous emergence of groups without any other impulse. In addition, a study conducted by Nombo (1995) in the Uluguru Mountains in Morogoro Tanzania, revealed that communication between members is enhanced through the local network and national network

meetings. The representatives of farmers groups forming the local network at division level or district level come together and exchange useful experiences. Furthermore, the representatives of the local network come together and exchange experience at a national level. The impact of the mentioned initiatives is that network have proved to be very successful in technology transfer and adoption of new agricultural innovations, this leads to increase in agricultural production and income and as a result, poverty is eradicated.

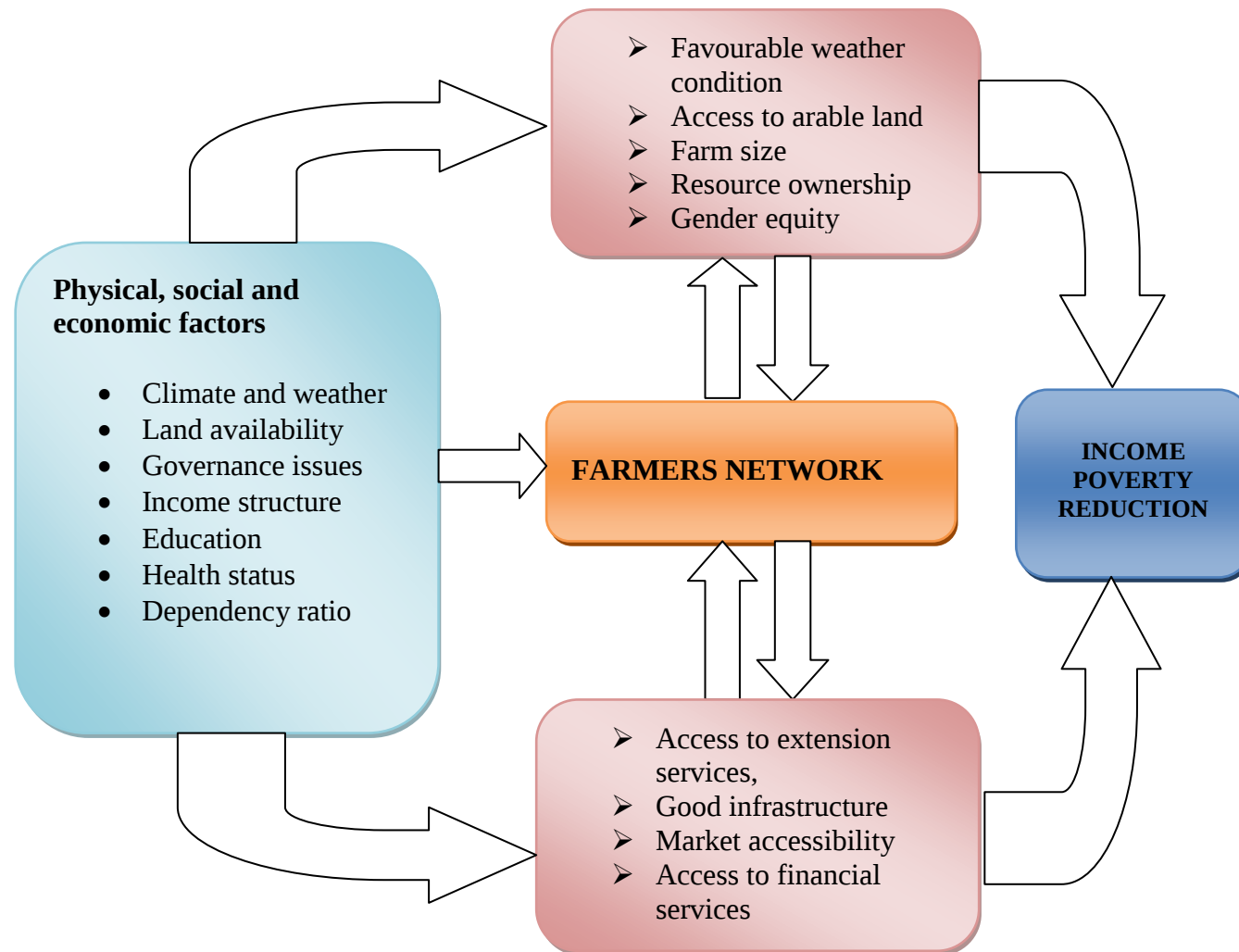
A literature review has accessed various sources to describe the concept of networking, how Food Security Group Network evolved, capacity building for networking, current and earlier initiatives were taken by the Tanzanian government to reduce poverty and the role of networking in poverty reduction.

Therefore in order to reduce the weakness and improve Farmers Networking Group (FN), and hence income poverty to be reduced, the government should do the following; to assist groups in dealing with food storage and establishment of cereal banks, improve Farmers Networking Groups in the area by offering various extension services and high - quality seed production, assist in the management and supervision of farmers groups, assist small agricultural projects.

2.4 Conceptual Framework

A conceptual frame work is the logical construction of the meaning which gives a description of the study and relationship of variables. It contains the main theme of the study which is Farmers' Network and income poverty reduction. The relationships are shown in figure 2.1 below.

Figure: 2.1. Contribution of Farmers' Network in Income Poverty Reduction



Source: Researcher's own construct (2017)

It is assumed that the variables indicated in the conceptual framework (Figure 2.1) have the significant relationship and dependence on each other. Farmers in Ludewa District are scattered and not in groups or network except in few wards. The challenges are that individual farmers are not assisted by the governments and others development partners in accessing various issues like good seeds, extension services, loans, and markets compared to farmers in network or organisation which can be easy to access services and other support from either government, donors or other services providers.

Infrastructure is acting as a significant position in improving farming yield and foodstuff safety, principally in terms of transporting food from surplus to deficit areas in the country. Poor infrastructure to farmers creates challenges to farmers in acquiring markets of their goods produced. Good infrastructure will enable farmers to transport their products and get another service such as communication, the warehouse easily. Markets are not available to all farmers as they are situated in specific areas where services to the societies in those areas may not be available. Farmers Network assists in solving the problems of the poor rural roads and others infrastructure since the network has the power to force the governments and others development partners to build infrastructure. This will help to minimise the charge of transporting products, increasing the net income of farmers' inputs provider and buyers, sellers and hence minimise income poverty to them.

Farmers in rural areas are characterised by insufficient levels of commercial skillfulness and incapability to deal with market dynamics and loan, banking services are focused on the high valued end of the market in urban centres due to financial viability considerations. The responsibility of farmers' association in providing financial services particularly in the selected areas is more imperative than before in reducing income poverty. Therefore access to financial institutions will

give chance to farmers to get loans and savings of their money and hence make investments to other sectors.

Access to extension services will help farmers to get services on time and hence improve production. A lot of smallholder farmers produce products which they have been producing traditionally/locally and consequently continue wounding for markets of their products, even when the market requires improved or entirely different products. Marketing concerns usually come into view afterwards when the quantity produced has by now been realised due to insufficient agricultural marketing extension services.

Access to an arable land and the good climate in the area is the main factor which makes the people engage in the agricultural activities which will result in income poverty reduction, The farm size also is another variable which can lead either to reduce income poverty or increase income poverty, once a farmer is able to access a big farm and control it, that will help to a get more product compared to one who will have a small size of a farm. A farmer who cultivates one Hectar is not the same with one with 20 and above hectors.

Education to farmers will help members of the network on best practice in farming production, to cultivate and plant on time, choose better seed and use modern technology in production, to find the loan and how to find the market for their produce. Lack of education will prove failer to them in agricultural activities; hence accelerate income poverty.

Access to good health will make people deal with production activities compared to communities which faced with poor health services, the availability of health service and good planning of health in the areas will result to have healthier people who will deal with economic activities such as agriculture and petty business.

This study assumes that women's empowerment within a society or household level serves as a poverty reduction initiative and will lead to improvement of household income and the general status of a woman through transforming economic, political, legal, social and cultural oppressive structures that insubordinate women to men. This is done by giving women power, resource and voice for fighting the root cause of poverty by removing social barriers and bias on the starting point of gender differences and thus enabling a woman to receive merits of chances for economic and community advancement desirable to pick up them not at home of poverty. Where the family is being headed by women the level of income poverty is high since there are not owning land, therefore production is low.

2.5 Research Gap

A number of researches on agricultural issues have been conducted in different parts of the country and Ludewa in particular. . However, there is scarce information that explores the contribution of farmers' network in reducing income poverty. Kaburire and Ruvuga (2006) studied on networking for agricultural innovation only attempting to address multiple challenges faced by farmers in agricultural and livestock production in general. Masandika R., and Heemskerk, W. (2007) concentrated on linking farmers' network with various agricultural services where it revealed a need for intermediate-level network in order to reach members at the grass-roots level as they are normally created at the provincial or district level. None of them provide adequate details on the contribution of farmers networking to income poverty reduction. This has led to the need for studying networking in the context of income poverty reduction and this make this study to be important.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter introduces and describes the methodology which used to carry out this study. It includes description of the study area, research design, sampling procedures, data collection methods and data processing and analysis.

3.1 Description of the Study Area

The study was carried out in Ludewa district of Njombe region in Tanzania. Ludewa district was chosen because of the existence of networking groups of farmers which are geographically close to each other; easily accessible hence eased data collection. Specifically, the study was covering 6 villages in 3 wards namely Lusala and Lupanga (Lupanga ward), Itundu and Lugumbiro (Mlangali ward) Milo and Mavala (Milo ward).

3.1.1 Geographical Location

Ludewa is located approximately $34^{\circ}10'E - 35^{\circ}21'E$ and $09^{\circ}30'S - 10^{\circ}36'S$ in Njombe region, South West Tanzania along Lake Nyasa in East Africa Rift Valley System (LDSEP, 2013). The district covers $8,397\text{km}^2$ with water bodies occupying $2,072\text{km}^2$. Arable land covers $1,595\text{km}^2$ while settlements cover $4,656\text{km}^2$. It has five divisions, 26 wards, and 77 villages.

3.1.2 Socio – Economic Activities in Ludewa District

The main activities of Ludewa residents are subsistent agriculture, livestock keeping and fishing which constitute 78% of the total population (LDSEP, 2013). Most of the residents in the district produce foodstuff crops such as maize in upland and cassava in lower land, which were main food crops, round potatoes, paddy, finger millet, beans, groundnuts, and wheat.

The cash crops grown in Ludewa district are coffee, tea, and pyrethrum. 11.5% of the residents in the district involved in various business activities, 6.5% were civil servants and private sector employees and 4% of the residents engage in other economic activities such as lumbering (LDSEP, 2013).

3.1.3 Relief and Climate

Ludewa district has three climatic zones lowlands, midlands, and highlands. The highlands zones at an altitude of 2,400 meters above sea level with an average temperature of 16⁰C, the Midland zone with an average temperature of 25⁰C and the lowlands zone which lies at an altitude of 900 meters above sea level and an average temperature of 27⁰C(LDSEP, 2013). The District receives rainfall of between 900mm and 1,600mm annually, falling between the months of October or November and April or sometimes May and a dry season from May to September or October (DSEP, 2013).

3.1.4 Population and Ethnicity

According to the 2012 National Population Census, Ludewa district has a total population of 133,218 compared to 128,155 inhabitants counted in 2002. (NBS, 2003) The habitants of Ludewa belong to three main ethnic groups namely: Pangwa, Manda, and Kisi but also there is Ngoni minority in the area. Information on the population growth rate of Ludewa district is 0.8%, though Njombe as a region recorded an average annual growth rate of 0.8%, which is the lowest in Tanzania (LDSEP, 2013 and NBS 2003).

3.2 Study Design

The study employed an exploratory design. Exploratory research design aims to uncover a new fact to generate new ideas. In this context, the researcher had little or no knowledge or unfamiliar with the problem under investigation. In-depth

interview, key informants and open-ended questionnaire were being applied in this research design.

3.3 Study Population

The study population is an aggregation of elements from which a sample is actually selected (Adam and Kamuzora, 2008; Babbie, E. R. (1989). According to Yin (1994), a study population is a collection of an element that shares specific characteristics; it can be people or objects from which a sample is to be drawn. In this case, the study population comprises farmers in the respective areas where Farmers Network is found. In total, the population of farmers who are members of the network was 705 in study area.

3.4 Sampling and Sampling Procedure

3.4.1 Area Sampling

Area sampling was conducted in two stages. At the first stage, purposive sampling was applied where all wards in which the Farmers' Network was found were considered during the study. At the second stage, snowball sampling was employed. Each village was written in a separate piece of paper, folded and dropped in a container. The container was vigorously shaken for 30 seconds, and then one piece of paper was picked. The shaking process was continuing until the needed sample was obtained. Each piece of paper was having an equal chance of being picked. At least 10% of the villages were used as study sample.

3.4.2 Population Sampling

Systematic sampling was used to select the population sample. A sampling frame of the target population (comprising community members of farmers' network residing in the selected villages) was prepared in each village. From the list, each 5th member was picked for the sample. A complete sample size was based in Ludewa district

particularly the selected villages where Farmers network exist. Three wards of Lupanga, Milo, and Mlangali were included in the study which was under network and was selected by using a purposive technique.

3.4. 3. Sampling Procedure

Probability sampling technique was used to select respondents from each village through simple random sampling. A total of 88 farmers, both male and female, were involved. During the study, the researcher dealt with active members of the network. The sampling unit was the members of the network in the study. Farmer's network facilitators were purposively selected based on the position in the network. 26 key informants from the network were selected by using snowball sampling technique. After interviewing the respondent, they had to introduce or recommend other respondents who were considered to be knowledgeable on the study.

The sample size was determined using the formula by Yamane (1967).

Where; n = required sample size;

N = Population size; and

e = level of precision

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

The study population at Mlangali, Milo and Lupanga wards was estimated to be **705**; whereby Mlangali population is **297**, Milo **233** and Lupanga **175** (URT, 2015). By using the above formula at 0.1 level of precision, the sample size was eighty- eight respondents (88)

Table 3.1: The major clusters for the wards was be as follows

S/n	Ward	Number of respondents by wards
1	Mlangali	37
2	Milo	29
3	Lupanga	22
Total of respondents		88

3.5 Types of Data and Collection Techniques

Both qualitative and quantitative data collection techniques were employed during the data collection process. The reason behind using both techniques was to ensure that, the study explicitly explores various ways in which farmers' network apply in reducing poverty. Hence a single data source was not sufficient to provide enough data to address all issues under study.

3.5.1 Primary Data

Primary data were collected directly from the field. Three methods were used to collect primary data. These methods are observation, key informants and questionnaire survey. The data were obtained from Farmers Network members, District Extension Officers, Community Development Officers, Farmer Network leaders, VEOs, WEOs, Ward Councilors, and other community members in the targeted area of study.

3.5.2 Secondary Data

Secondary data refers to the information which is collected and compiled by others for another purpose (Babbie, 1989). Secondary data from this study were mainly obtained from both print and electronic sources such as books, thesis, dissertations, brochures and electronic records from their website, online database, online scholarly article different report, journals, reports, as well as search engines such as Google Scholar and other documents from the district office.

3.5.3 Tools for Data Collection

Data were collected through key informants, interviews with key informants, questionnaire survey and observation.

Key informants Interviews

A total of twelve key informants participated in-depth interviews so as to supplement or confirm information obtained from structured questionnaires. This was done so as to examine in detail some of information which appeared to raise concern with regard to study objectives and especially those which were superficially addressed in the interview schedules. At least four key informants from each village were interviewed. In-depth Interviews were expected to capture, among other things, the following information:

- The role of FNs in income poverty alleviation and improvement of the livelihood of their members.
- Ways in which FNs have contributed towards poverty reduction
- Strategies in which FNs can be strengthened.

Non-Participant Observation

Key issues to be observed were put in a list for the researcher to cross check data obtained from other instruments such as FGD and interview. The researcher was a non-participant observer during data collection. The technique helped the researcher to cross check data obtained from other instruments such as FGD and interview (Grady, et al., 1991). A diary was kept for record all observations such as quality of houses, and clothing, assets owned other business performed by members as well as possession of livestock such as pigs, chicken, and goats during the study. Once an observation was made the researcher confirmed by asking the owner how he or she got such possessions. Possession of good quality houses, assets like car, motors cycle, investments in hotels and livestock indicated the extent to which FNs have contributed towards income poverty reduction. The observations focused on finding

information about the extent to which FNs have contributed towards income poverty reduction.

Interview schedule

Interviews using schedule and a structured questionnaire were used to collect primary data from farmers, leaders of networking groups, extension officers and other members. Structured - interview was used as a data collection tool in obtaining such data.

Semi - structured Questionnaire

Family unit based survey was used to gather data from Farmers' Network members and nonmembers. This helped to investigate the problem in the real setting. The questionnaire entailed open and closed- ended questions. Open- ended questions helped respondents to freely provide in – depth responses to issues under study and mostly was provided to leaders. Close-ended question helped to get standardised data from the members of the network that were tabulated and frequencies are drawn upon.

3.6. Data Processing and Analysis

The analysis is the heartbeat of research (Henning et al., 2010). Data was prepared for analysis and summarise information from the questionnaires and researcher's diary (observations). Data were originally collected in Kiswahili and then transcribed into English and paraphrased while preserving the original details and meaning as accurately as possible. Quantitative data obtained was organised, described, coded and analysed. The Statistical Package for Social Science (SPSS 6) and Microsoft Excel were used to derive descriptive statistics such as percentages, averages, frequencies and cross tabulations. Qualitative data was analysed using content analysis methods. This involved extracting information from narratives to obtain relevant data. Themes and meanings extracted from reported data were analysed based on the contexts that produced the evidence.

3.6.1. Presentation of the Findings

Data is categorised, tabulated, and recombined to address the study objectives; the quantitative data was analysed descriptively in form of frequencies and percentages and presented by using tables, graphs showing differences, relations and opinions of respondents in which the discussion of the results are based.

3.6.2 Limitations of the Study

The researcher faced some limitations when carrying out the study; the following are some of the limitations faced.

Farmers awareness on the important of providing information; some of the farmers are not aware of the importance of giving such information hence were reluctant in providing data. There were also some delays in the return of questionnaires; some of the respondents took too much time to return filled questionnaires hence data analysis was a bit delayed. Therefore the researcher takes more effort to follow the respondents in their homes and same time calling through mobile phones in order to save time. The study was challenged by illiteracy of some of the respondents; few respondents were unable to read and write. This resulted in the recruitment of more enumerators which increased the cost of conducting research.

Moreover, these limitations did not affect the study as the researcher managed to reach the intended respondents in time. Through explaining the importance and objective of the study to the respondents who finally understood the significance of collecting information and therefore, they provide the needed information voluntarily.

CHAPTER FOUR

PRESENTATION AND FINDINGS

4.0 Introduction

This chapter presents and discusses the major findings of the study. Findings are explained in line with specific objectives and the theoretical concepts discussed in chapter two. Some selected quotes from respondents are included for the purpose of providing further clarification and support to the interpretation of findings. Some data collected are tabulated and computed into percentage as per observations, interviews, and questionnaires as revealed by the respondents focusing on the questions that answer the research questions.

4.1 Presentation of the General Information of the Study

During the study, the researcher aimed to know various opinions from various groups of the respondents. There were two groups of respondents, members of the network and leaders including WEOs, VEOs, Extension Officers, District Agriculture, Irrigation and Cooperative Officer, Community Development Officers and network leaders in their respectively villages. These groups were further clustered on the basis of gender, the age of the respondents, the level of education and experience in farming activities. Such demographic information is presented hereunder:

4.2 Background Variables of Respondents

This section presents the background information of respondents. Variables discussed here include age, sex and education level.

4.2.1 Distribution of Respondents by Sex

Sex is one of the basic and crucial characteristics of population information in planning and administration purposes. The study drew a total of 88 respondents, both men and women. Men comprised 44.3% while women comprise 55.7% of all respondents. The researcher was interested to know how each category participates in the network. Hence, of the 88 respondents who were all given the questionnaire to fill. The report indicates that women formed the majority of the respondents, constituting 55.7% compared to 44.3% of the male respondents. The result from network promoters and a leader shows that, of the 26 respondents, 72% are men and 28%are female; this means that men dominate in leading FNs.

Table. 4. 1: Distribution of Respondents by Sex

Sex	No. of frequency	Percentage (%)
Male	39	44.3
Female	49	55.7
Total	88	100.0

Source: Researcher's construct (2017)

The reasons of looking for sex of the respondents was to know which sex engage more in network and at the end will help me to recommend, as it was seen that female are the more than male in number in the network.

4.2.2 Age of Respondents.

The age of an individual can affect production; especially when the farmer is too old the ability to produce decreases. In this variable, the question aimed to know the age of respondent so as to determine the age group that mostly engages in farmer's network group. Greater parts of respondents (39.8%) belong to the age group of 31-40 years, whereas marginal (17.0%) are of the age group of 21-30 years. About 23.9% were between 41and 50 years, 19.3% belong to the category 51and 60 years and 17.0% are the age between 21 and 30 years.

The majority of leader respondents 48.0% were originated in the age of 31 and 40, 21 and 30 were 16%, 41 and 50 were 32% and marginal 4.0% were in the age group of 51 and 60. In the case of leaders, it means the network is leading, motoring, controlling, managing, and supervised by younger once.

Table 4.2: Distribution of Respondents by Age

Age	No. of frequency	Percentage (%)
21-30	15	17.0
31-40	35	39.8
41-50	17	23.9
51-60	21	19.3
Total	88	100.0

Source: Researcher's construct (2017)

It is said that the young and too old groups contributes less to production, therefore the study needed to know the ages of respondents who contributing more to farmers network.

The researcher found that, in farmers' network, there are different age compositions among the constituents of the network and the leaders of the network. The most probable reason is that the middle-aged group is more active in agricultural activities in countryside whereas had more know-how and ability which allowed them to effectively and efficiently convey in rank concerning farmer's network. This was similar to the study by Leonard (2009) in Iramba district who observed that younger ages between the 30 and 40 engaged into the network compared to other age composition.

4.2.3 Level of Education.

The level of education is a significant factor in dealing with income poverty and particularly dealing with hazard and reservations associated with farming making. Regnaret *al.* (2002) considered the eventual objective of education as to enlarge labour output and thus it is a productive force for farmers and thus very significant for their capability to exploit resourcefully the suggestion and information accessible by the extension service and other development agents. In this aspect, the researcher

aimed to know the level of education of the respondents so as to determine the stage of the acquaintance on the donation of agriculture sector towards reducing income poverty.

Table 4.3: Respondents' Level of Education

Occupation status	No of frequency	Percentage (%)
Primary school	61	69.3
Secondary School	21	23.9
University	2	2.3
None	4	4.5
Total	88	100.0

Source: Researcher's own construct (2017)

In this study, it was found that; the majority of respondents had primary education. The results from Table 4.4 above illustrate that 69.3% of respondents from network had primary education, 23.9% had secondary education and 2.3% had University level while none educated were 4.5%. Likewise, 47.8% of leaders had a secondary level of education, 30.4% had a primary level and 21.7% had university level. In this case, there is no difference of level of education of the two groups.

Therefore, the results reveal that the network is strong as it had a number of persons with basic knowledge which is satisfactory for agricultural innovations to allow farmers to adopt new technologies and practices. This implies that there is the prosperity of farmers' network and hence achievement of its goals. Levinger and Drahman (1980) as cited by Mchomvu (2000) noted that less educated people generally lack confidence in their ability to improve their lives. This, therefore, suggests that, the level of education has a positive relationship with smallholder farmers in Ludewa District.

In the case of leaders and network promoters, research shows that, there was reasonably high literacy rate. Such high literacy charges among the respondents

encompass a digit of implications for rural development. One between them could be that, network leaders can communicate concerning farming modernization easily through posters, newsletters; and other written materials hence diminish the danger of distorting information concerning farming modernization as they go from one farmer to another.

4.2.4 Period in leadership position

During the study, it was revealed that the majority of the leaders have served their positions the duration of more than ten years. A total of 26 leaders were involved in generating information on the time used to save in the district. The time in which the respondents especially leaders stayed in the district is shown in Table 4.5, such that, 36% of the respondents have above 10 years, 32% of respondents were about 0-3 and 24% were about 7-10 and 8% were between 4 and 6. This indicates that most of the leaders in these wards stayed for more than 10 years. Therefore they were able to provide more information concerning the farmer's network and the position of proceeds shortage in the areas before the network and after the network started in these areas.

Table 4.4: Distributions of Respondents' in the leadership duration

Duration In leadership (in years)	No of frequency	Percentage (%)
Years 0-3	8	32.0
Years 4-6	2	8.0
Years 7-10	6	24.0
Years 10+	9	36.0
Total	26	100.0

Source: Researcher's construct (2017)

4.3 Farmers' Network issue in Reducing Income Poverty

4.3.1 Ownership and Uses of Land by Farmers

With regard to this, the researcher was interested in establishing the ownership of land and how the land was being used in order to support farmers to reduce income

poverty. It was observed that most of the members utilise the land between 1-5 acres. About 75% of the respondents own 1 to 5 acres; 19.3% own between 5 and 10 and 5.7% of 10 acres.

Table 4.5: Distribution of numbers of acres owned

Number of acres owned	No of frequency	Percentage (%)
1-5	66	75.0
5-10	17	19.3
10 above	5	5.7
Total	88	100.0

Source: Researcher's own construct (2017)

According to Farrington and Nelson (1994), off-farm labour, upland crop, and farm size are important indicators which differentiate between households with and without network or with and without FNs. First, households practising FNs, especially those which are also part of a network, have more on farm labour than those not adopting FNs due to its high labour input requirements. Second, households' farmers practising FNs have a larger upland area than those not practising FNs. Thirdly; households with network hold larger farm sizes than those without network as they are usually better off and can take advantage of the credit with the low interest of farmer network.

4.3.2 Participation in Seminars and Meetings

The researcher was interested in the number of the meeting held and being attended by members since they joined the network; farmers who replied that they had attended the meeting were 53.4%, as opposed to those who had not (46.6%). The study was set to issues discussed in the meeting; responses indicate issues like ways to improve agricultural activities, to get the loan and the uses of it, to find the market of their products, to use quality products and the issue of preserving the environment.

Table 4.6: Attendance in annual meetings held per year

Number of meetings	No of frequency	Percentage (%)
Yes	47	53.4
No	41	46.6
Total	88	100.0

Source: Researcher's own construct 2017

According to Mattee (1998), farmers' network facilitates effective communication of extension messages between farmers and change agents, and among farmers themselves. The change agents can communicate extension messages to farmers in farmer network more quickly than individual farmers. The network bring together farmers and other stakeholders as they meet and exchange extension messages and discuss different issues related to agricultural activities.

Although farmers' group's approach is recommended in developing countries, local network are essential for the success of both members and non-members of farmers groups as they help in technology dissemination. The dissemination of technology helps farmers to gain modern techniques and thus boost agricultural production leading to poverty reduction. Therefore in order to reduce the weakness and improve Farmers Network (FNs), communication between members is unavoidable.

4.3.3 The Contribution of Network in Income Poverty reduction

In this study, respondents were required to indicate if they experienced changes in income after joining the network. Up to 71.6% of respondents agreed and 28.4% disagreed; the responses are presented in Table 4.8. Respondents were also required to indicate the extent of the changes they had attained along participation in the Network. These findings are consistent with results obtained by Leonard (2009) in Iramba district who observed 72% of the study participants had their lives changed after joining the network, and 28.4% of member did not appreciate any changes besides Network.

Table 4.7: Distribution of respondents by changes of income

Response number	No of frequency	Percentage (%)
Yes	63	71.6
No	25	28.4
Total	88	100.0

Source: Researcher' 2017

4.3.4 Sources of Markets Information in the Rural Areas

The researcher was interested in gathering the information concerning market in order to know the sources of markets information and how the network facilitates the members to get market information.

The study results in Table 4.9 indicate 62.5% of the respondents get information from the network representatives; 12.5% from extension officers, 23.9% from Village leaders, and 1.1%. From the results above, it reveals that; most of the household members get information of markets from within the network leaders. This implies that FNs contributes many farmers to receive market information and accelerate business and other economic activities in the selected ward and Ludewa at large. According to Udpa (1992), young individuals are always aware and can easily access information. For example, through training, they can get information such as on how to secure micro-credit facilities, market opportunities, and other development programs.

Table 4.8: Distribution of Sources of information

Category	No. of respondents	Percentage (%)
Network representatives	55	62.5
Extension officers	11	12.5
Village leaders	21	23.9
Others sources	1	1.1
Total	88	100.0

Source: Researcher's construct (2017)

Market information is always important for most farmers' rural market development and it is a crucial factor in encouraging farmers to organise network. The development of rural markets stimulates cooperation among small-scale farmers to meet consumer demand, with the accurate excellence and at the accurate point in time. Recently, government policies on rural market development have focused on promoting farmers to get together in groups to share experiences and information and deal with market problems that could not be solved individually (Putterman, 1995).

4.4 Merits of Being a Member of Farmers' Network

The researcher aimed to explore the effects of network input character to the rural small-scale farmers. Different views were gathered from the field through the interview, key informants and key informants which indicate the respondents from small-scale farmers. Members of the network were asked if there were any benefits gained after joining the network. The majority of them affirmed that outputs have increased moderately by 45.5%. General results are indicated in Table 4.10.

Table 4.9: Distribution by status of income level

Category	No. of respondents	Percentage (%)
Increased substantially	36	39.9
Increased moderately	40	45.5
Remained the same	9	11.2
Decreased	3	3.4
Total	88	100.0

Source: Researcher' 2017

Moreover, a network gives farmers better access to markets (Cho 2001; Gianatti and Carmody 2007) and hence leads to increased effectiveness of agricultural extension activities. Farmer network also create rural employment opportunities by stimulating industrial development and growth in the services sector, thereby contributing to

rural poverty reduction and reduced migration of people from country to town areas (Leonard, 2009).

4.4.1 Assets and Investment Ownership Resulting from the Network

In this aspect of measurement, respondents were asked to state the type of assets owned. Due to poor record keeping among respondents, it was difficult to find out the number and value of assets owned. The results showed that about 90.7% of respondents have managed to buy the asset as a result of income earned from their farming/economic activities supported by the network as shown in Table 4.11. When asked to mention the type of asset they owned after joining FNs, they mentioned about domestic/kitchen utensils, television set, radio sets, motorcycle, tractors, cars, houses, livestock such as goats, chicken, pigs and cows, and land. This was affirmed by one respondent who said:

“After joining network I have managed to do so many things but the most memorable is that I afforded to buy a new tractor (Val met) and the piece of land of about 50 acres at Ligumbiro area and I’ve started cultivation in part of that land.”

It indicates from these findings, it is apparent that there is the strong association between being a member of network and acquisition and ownership of assets.”

Table 4.10: Distribution of respondents by assets ownership

Response	No of Respondents	Percentage (%)
Own asset	62	90.7
Not own asset	18	9.3
Total	88	100.0

Source: Researcher’s construct (2017)

The study by Kaburire and Ruvuga (2006) revealed that farmers’ organisation have the significant additional potential to make the research and extension agenda more relevant to farmers’ needs and their environment, indeed in bringing about the desired changes in agricultural productivity, incomes and sustainability. If

agricultural production is increased then income poverty is reduced as farmers can get food and increase their income through the sale of the surplus produce.

Also, the researcher was also interested in probing on investment, as on which members have applied so as to assess the contribution of FNs to its members in relation to increasing the level of income and expenditure of members. Also, farmers' network group has shown the sense of income, then saving which resulted in investment.

The majority of the members (48.1%) own land, others own houses (42.6 %), and the rest own other different other things (9.3 %) as result of being a member of the network. This shows how members invest after joining the network and have the ability to save and invest. This realises that organisation of FNs have substantial contributions to the livelihoods of its members at the family level and community at large. According to Weiligmann (1999), the network offers benefits to its members that are higher than the associated costs. Collective target systems are characterised by their objective as well as personal content. Collective goals are composed of a collection of targets of individual people. In other words, a network must guarantee a fair distribution of benefits in order to secure the active contribution of its members. The crucial issue for any individual is whether the network objectives are sufficiently close to one's personal goal to make him/her choose to participate in the network rather than try to attain his/her goal by himself/herself.

4.4.2 Access to Loans of Farmers Network Members

Farmer empowerment is a process that increases the capabilities of smallholder farmers and farmer groups to make choices and to influence collective decisions towards desired actions and outcomes on the basis of those choices. According to Rugumamu (2014), farmers see the advantages of networking although they have yet to adopt it. Multivariate factor analysis identifies three of these perceived major

advantages. The first and most important advantage is the opportunity to improve their farm productivity through better access to technical training. The second advantage is better access to governmental credit supply, while the third one is social networking. These advantages are the same as those suggested by networking farmers.

During the study, the researcher assessed how capital and loan accessibility to small-scale farmers contributes to reducing income poverty. Different opinions and views were gathered from rural scale farmers in Ligumbiro, Lusala, Lupanga, Milo, Mavala and Itundu village in Ludewa district as shown in Table 4.12. The study shows that respondents who had access to loan were 70.4% while who had no access to loan were 29.6%. Most of this loan was provided by financial institutions which are formal and non-formal like NJOCOPA (48.6%), NMB (38.4%) and SACCOS (13%).

Table 4.11: Distribution of respondents by loan

Loan access	No. of respondents	Percentage (%)
Access to loan	49	70.4
Not access to loan	39	29.6
Total	88	100.0

Source: Researcher's construct (2017)

For an individual to be considered empowered, one must be able to do what she/he was previously unable to do and access what was previously denied the right and power to access. The study has revealed that network members of Ludewa have empowered through training, access to information and access to loans. For example, 70.4% of respondents indicated to have access to loan as shown above. Farmers who are network members can take a loan without security or with low- interest rates, provided that they have a guarantee from their network head. In joining a network, farmers can also benefit from having the government covers of 50 percent of their expenses for training programs organised by local agricultural extension agencies. Lele (1984) pointed out that transformation of farming requires the large

amalgamation of appreciation for the reason of paying for inputs such as fertiliser, improved seeds, and chemicals. According to De Wilde (1967), credit by itself does not create new resources but if dispensed under appropriate planning might direct to an improved productive power and endow with the means for future agriculture profitable development.

Table 4.12: Distribution of Leaders responses concerning loan

Loan access	No. of respondents	Percentage (%)
Yes	19	76.0
None	6	24.0
Total	25	100.0

Source: Researcher's own construct (2017)

The study shows that the majority of the farmers' network members (76%) have access to loans. Most of these loans were provided by NJOCOPA (48.6%), NMB (38.4%), and SACCOS (13%). Madaha (2011) noted that, Farmers Network play a very significant role in improving both agricultural production and food security for the household members. Farmers Network allows group members to communicate and exchange ideas with others group members. The exchange of ideas allows members to be creative and have a sense of recognition.

4. 5 Economic Activities Performed by Member of Farmers' Network

4.5.1 Distributions of Respondents by type of Activities

In this study, types and level of activities conducted in their fields were assessed. The research shows that 51.2% of farmers are dealing with agriculture activities, followed by 44.3% farmers who are practising both agriculture and livestock activities and 4.5% who deal with other economic activities as shown in the Table 4.14. Livestock keeping is conducted by households to increase income and providing products to the households and improving the wellbeing of communities.

These activities are such as livestock rearing, milking, feeding, and cleaning. Livestock includes cattle, sheep, goats, pigs and chicken. In addition, non-farm activities performed by Farmers Network members consist of a bureaucrat who civil servants, petty business, tree and timbering, woodwork, building material, drivers, food vendors and dressmaking.

Table 4.13: Main economic activity

Activities	Frequency	Percentage (%)
Agriculture	44	51.2
Agriculture & Livestock	39	44.3
Others	4	4.5
Total	88	100.0

Source: Researcher' 2017

This shows that farming is a main economic activity and source of income of the community in the study area as it is comprised of 51.2% of the respondents. The situation shows a typical characteristic of the country for having the large percent of farmers in the rural areas as indicated in the 2012 National Population Census (URT, 2013). Furthermore, the area has the favourable climate which attracts more people to engage in agriculture than other income generating activities. On the other hand, 44.3% of members' practice both agriculture and pastoralist (agro-pastoralists) these are interdependent because crop residual serves as food for livestock while animal dung serve as manure. This was confirmed by one respondent who said:

“Agriculture is just like a game of chance, sometimes it pays but sometimes it does not pay. So if you depend on only one business what will you do if it does not sell and at the same time you are to repay the loan will they financial institutions understand you? That is why we opt to run multiple activities”

4.5.2 Types of Crops Produced by Members of the Network.

In respect to this, the researcher was interested in looking for the types of crops being grown by household farmers in selected ward where FNs were active and doing well in Ludewa district. The study shows the food crops grown in these

villages as maize, beans, sunflower, groundnuts, paddy, sorghum, Irish and sweet potatoes. This suggests the fact that; these crops perform well in the area and there was a reliable market for such kind of crops hence assisted farmers to create additional income to sustain life and improve their living standards these crops are produced almost in all six villages in Mlangali division. In key informants and observation survey conducted, it emerged that, cash crops are produced in three villages, which are Ligumbiro in Mlangali ward, and Milo and Mavala in Milo ward.

Table 4.14: Distribution of respondents by types of crops produced by farmers'

Types of crops	No of frequency	Percentage (%)
Food crops	41	46.6
Cash crops	4	4.5
Cash crops / Food crops	43	48.9
Total	88	100.0

Source: Researcher's construct (2017)

Results show that the majority of the members cultivate both food crops and cash crops. Table 4.15 shows that those who are producing food crops were 46.6% while members who produce both cash and food crops were 48.9% and 4.5% produce only cash crops. During key informants it was revealed that coffee and pyrethrum are cash crops produced in three villages of Ligumbiro in Mlangali ward, Milo, and Mavala in Milo ward due to favorable climate of the area.

4.5.3 Quantity produced per Year.

The average quantity of harvests ranged between 5 to more than 20 bags weighing 100 kilograms. Research findings show that 39.8% of respondents produce 5-10 bags. About 30.7%, of the respondents, produces 10-15 bags, 14.8% produce 15-10 bags, and another 14.8% produce 20 bags and above. The average number of bags is mainly attributed to by the size of land cultivated.

Table 4.15: Distribution of respondents by number of bags produced

Number of bags	No of frequency	Percentage (%)
5-10 bags	35	39.8
10- 15 bags	27	30.7
15- 20 bags	13	14.8
20 bags above	13	14.8
Total	88	100.0

Source: Researcher's construct (2017)

4.5.4 Average Income Earned by Members of the Network in results with their activities.

During interviews, FNs members affirmed that the amount of money earned before joining to the FNs was lower compared to the amount earned after joining to the FNs. Responses from the Key informants show that farmers' income increased after the introduction of FNs in Ludewa District, especially in respective villages of the study and signifies that it has the substantial contribution in reducing income poverty in the household. Working through groups, farmers can reduce the cost of accessing inputs, production technologies, information and markets by sharing these costs amongst all members of the group, which means that it lowers individual costs (FAO, 1999 and Rugumamu, 2014)

With regards to the research, the findings show that farmers are utilising small portion(s) of land to cultivate even though they own large portions. As a result, very little is produced and that less income is earned. Detailed findings are provided in Table 4.17.

Table 4.16: Distribution of amount of money earned

Amount of money	No of frequency	Percentage (%)
Tshs 150,000-200,000	35	25.0
Tshs 250,000- 300,000	22	39.8
Tshs 350,000- 400,000	16	18.2
Tshs 550,000 above	15	17.0
Total	88	100.0

Source: Researcher's construct (2017)

The potential of FNs to rural poverty alleviation is stipulated by ASDP which stresses the importance of increasing the voice of farmers in the local planning process through placing greater control of resource allocation in the hands of groups and communities. The ASDP has developed as a dominant instrument for alleviating income poverty with the primary objective of creating an enabling and conducive environment for improving the profitability of the agricultural sector as the basis for improved farm incomes and rural poverty reduction in the medium and long term (Leonard, 2009).

4.5.5 Other Sources of Income

The researcher was interested in finding out other economic activities performed by members of the network out of farming. Results show that 52.3% of the respondents confirmed to have other income generating activities other than farming, while 47.7% do not have sources of getting income (See Table 4.18)

Table 4.17: Distribution of other sources of income

Respondents	No of frequency	Percentage (%)
Yes	46	52.3
No	42	47.7
Total	88	100.0

Source: Researcher' 2017

Most of those who have other activities are dealing with business activities like, hotels, food vending, beekeeping; selling timbers and other are tailoring, welding and mobile phone charges. The FN members perceive the importance of doing off-farm income generating activities is that farming can sometimes fail. During data collection one of the respondents said;

The argument being the reliance on several activities emphasize that, agriculture is just like a game of chance, sometimes it pays but sometimes it does not pay, also post by one of the respondents; “..If you depend on one business only, what will you do if it fails and at the same time you are to repay the loan? Will the financial

institutions (SACCOS) understand you? That is why we opt to run multiple activities”

4.6 Income Level Members Before and After Joining the Network

The specific objective of the study was to determine the income level of members, before and after joining the network. The findings show that most of the farmers’ income was low before joining into Farmers Network, as confirmed through interviews, and key informants conducted during the study. Also, the findings prove that the income of most farmers changed positively (improved) after joining into Farmers Networking. This has been realised during the study through interview, observation, and key informants conducted in the study.

4.6.1 Income Level Members before Joining FNs

With regard to average income earned from their business/economic activity conducted before joining FNs, the majority of respondents 44.4% were found to have an average income between Tshs. 350000 to 750000 and Tshs. 750,000 - 100,000 were only 9.3%. These results suggest that the life of farmers was not good in terms of income compared with the life after joining into FNs.

Table: 4.18. Distribution of respondents by Level of income before joining FNs

Average of money	Frequency	Percentage (%)
10,000- 35,000	7	13.0
35,000- 55,000	35	33.0
55,000- 75,000	41	44.4
75000- 100,000	5	9.3
Total	88	100

Source: Researcher’s construct (2017)

4.6.2 Income Level of Members after Joining FNs

This results exposed an increased level of income earned from agriculture after joining into FNs compared to the situation of 39.8% before as confirmed by the

researcher. The findings show that there is an increase in the level of income among farmers after joining the network compared to their situation before as shown in Table 4.19 above. Most of the members interviewed show that their life has changed positively after joining the network as the network provides quality seeds, insecticides, training, and loans.

Furthermore, the network has helped to connect them to markets of their produce. Otherwise, 37.4% of the respondents have not seen any contributions of FNs since they joined. Most of the respondents 37.4% were younger in the network; hence it was not easy to them to realise the fruits of the network during the study.

Table 4.19: Distribution of respondents by Level of income after joining FNs

Amount of money	No of frequency	Percentage (%)
Tshs 150,000-200,000	22	25.0
Tshs 250,000- 300,000	35	39.8
Tshs 350,000- 400,000	16	18.2
Tshs 550,000 above	15	17.0
Total	88	100.0

Source: Researcher's construct (2017)

A case of Mr Daudi Kayombo in Ligumbiro in Mlangali ward

Mr Daudi Kayombo, a farmer from Ligumbiro village gave his testimony upon attending several pieces of training and meetings on crops production conducted by the member of the network; he cultivated maize and sunflower in the same piece of land as taught during the workshop, training, and seminar:

“I cultivated one acre of maize, one acre of sunflower and one acre of beans. I harvested 1800 kgs of maize, 1200 kgs of beans and 600 kgs of sunflower, after applying improved and quality seeds, transplanting on time, planting in rows and application of manure in the field. Initially, I was harvesting 300kgs of beans, 200 kgs of sunflower and 210 kgs of maize but now my production has increased twice. The increases in income enabled me to buy a brand new motorcycle, a piece of land and it helped me take my children to private school.”

This result exposed an increased level of income earned from agriculture after joining into FNs compared to the situation of 39.8% before. This is confirmed in this study which shows that there is an increase in the level of income among farmers after joining the network compared to their situation before (See Table 4.20). Most of the members interviewed show that their lives have changed positively after joining the network as the network provides quality seeds, insecticides, training, and loans. Furthermore, the network helped to connect them to markets of their produce. While 37.4% responded that they did not see any contributions of FNs since they joined it. Most of the respondents (37.4%) were younger in the network; hence it was not easy to them to appreciate the fruits of the network during the study.

4.6.3 Constraints Faced by Farmers' Network.

This study further examined the specific constraints facing farmers' network in achieving their goals and objectives. Observed in this study includes the shortage of capital, uncooperative group members, and division of profit and income misuse as cited as the main ones amounting 38%, 22% and 20% respectively (See Table 4.21). Due to low levels of resources by character members, the groups are not capable of raising the preferred amount of capital from membership contributions to adequately support their activities.

Pests and diseases, unfavourable weather and high prices of agricultural input were cited as the next most constraining factors reported by 12.7%, 11.1%, and 7.9% respectively. In the same way, lack of access information and services and lack of adequate farm land were not seen as major constraining factors amounting 3.2% and 1.6% respectively. This may be due to the view that, production is at a standstill principally for home expenditure, although farmers do take benefit of optimistic local market conditions to market surpluses.

The interview and FDGs conducted between the researcher and leaders of FNs observed problems such as high prices for agricultural inputs, water shortage, market accessibility, lack of economic skills among members and political interest influence farmers to have wrong assumptions towards FNs. On the other hand, ignorance among the people (Low Education), and few extension officers in the areas have proved to be the main barriers to farmers' development. This can be supported by research done by Chambo (1999) on the problems which faced cooperative movements. In general, cooperative movement has been weak in Tanzania because of corruption, mismanagement, conflict and lack of clear goals. In the due course, the government recognised this mistake and started to revive cooperative principles through the establishment of Cooperative Act of 1991.

Table 4.20: Distribution of respondents by constraints of Farmers' Network

Amount of money	No of frequency	Percentage (%)
Shortage of working capital	44	30.2
Lack of adequate farm land	1	1.6
High price of agriculture inputs	5	7.9
Uncooperative group members	11	17.5
Pests and diseases	8	12.7
Unfavourable weather	7	11.1
Lack of access to information	2	3.2
Division of profit & income misuse	10	15.9
Total	88	100.0

Source: Researcher's construct (2017)

CHAPTER FIVE

DISCUSSION OF THE FINDINGS

5.1. Introduction

This chapter represents the findings from the assessment of the contributions of farmer's network in income poverty reduction. Research question has been discussed and analysed by the use of data. The study covered three wards and six villages in Ludewa district.

5.2 FNs Marketing Strategy and Farm Income

This study aimed to document operational practices of rural marketing initiatives implemented by FNs, a Tanzanian based organisation. The attitude supporting the markets is that farmers can only make a decent living from their production if they are able to sell in a favourable environment that is orderly and has the essential infrastructure to put off their produce from scratch. Therefore, FNs set out to develop organisation systems and put up the infrastructure for countryside farmers at selected areas.

Farmers are located throughout the country. For them to take their product to the market, they often depend on a few transporters who charge high transport costs, to offset the high cost of depreciation and limited competition. Hence, good rural roads and market infrastructure are needed to take inputs to farmers on the one hand and to deliver products to consumers at the lowest cost on the other hand. In a view of the fact that infrastructure development is expensive, there is strong justification to focus on farm blocks and resettlement schemes as centres of agricultural development (Putterman, 1995).

Smallholder farmers in Ludewa face problems of the market for their produce. The remoteness of their areas, low population densities in rural areas and high transporting cost are barriers in accessing markets. Interview conducted to WEOs,

VEOs and key informants illustrate that, the identified problems have been combated by farmer's network by finding the markets for their produce, construction and rehabilitation of rural infrastructure including training centers, rural feeder roads, and markets structure, one lady farmer, she said: *"...by selling my fruits and vegetables in this market, am now able to educate my children; I am in the process of buying a plot..." This statement is a testimony to the fact that farmers are earning profits"*

A second farmer confessed that, he used to sell his produce in village markets, in presence by using his membership with Twitange SACCOS, his capability has been improved, transforming him to a giant farmer, he has expanded the market up to Dar es salaam and Mwanza markets.

Additionally, during the study, it was observed that FNs trained farmers in Milo, Mlangali and Lupanga wards in agro- processing to restrain spoilage of food crops. Many of the fastener foodstuff crops developed in the nation state necessitate several forms of handing out to improve the marketability, conservation and value addition. Gunfire, freshening, milling, and simple extraction are the major food handing out techniques in the farming areas. FN members had been provided training to farmers in agro- processing as well as small – scale entrepreneurs in food processing in the wards.

According to the study, 86% of farmers had been provided with simple traditional, labour intensive, small- scale agro –processing training in food and crops preservation. The presence of Famers' Network in the areas helped and enabled small-scale farmers to sell their produce at high prices. Farm income was the main source of income to individuals and households. The study thus confirms the proposition that FNs market strategy has had positive contribution impact to farmer's income poverty reduction.

5.2.1 Farmers Networking in Education and Training

The researcher aimed to assess how training to rural small-scale farmers on agricultural practices has significant impacts on income poverty reduction in rural areas.

The researcher was interested to find out whether the network educated members concerning the reduction of income poverty through various means such as agriculture and other economic activities.

To some extent, FNs failed to provide proper knowledge in some villages, especially in Milo ward. Members are not educated on how to utilise the surrounding environment to survive and increase income. They are not informed on how to access loans, find markets of their produces, or use quality seeds and calendar for the timing of agriculture activities in order to produce quality and quantity goods.

Furthermore, the study sought to find out whether farmers are provided with particular training with the intent of improving their agriculture environment. The question was asked to network members, leaders of the network, VEOs, WEOs and extension officers. Findings from interview illustrated that training on how to use quality seeds, fertilisers, managing loans acquired and records keeping (book-keeping) are provided to farmers. This is also reflected by Paliscio & Madaha (2006) in Dodoma where the Seed Producers Societies (SPS) network of Mvumi Makulu, Bahama, and Dabalo villages in Mvumi Division were engaged in providing quality seeds production and seed multiplication training. The use of quality seeds enabled the farmers to access quality seeds at a cheaper cost. Quality seeds have led to an increase of production in three wards where network is more active.

5.2.3 Farmers Network Training

The study sites faced with a number of problems, one of which is climate change. Climate change is the serious issue affecting crop productivity. During key

informants, it was noted that in order address this problem, farmer network has conducted interventions to promote climate changes such as mulching, tree planting and use of terraces in slope areas. The methods have normally paid attention to nutrient and water conservation. Farmers were trained to use the fore mentioned methods in order to avoid the destruction of the environment in their areas.

5.2.4 Stakeholders Views on the Importance Farmers Network

From the standpoint of the farmer's network promoters and leaders who were interviewed on the importance and concert of the farmer's network, up to 88% of the respondents brought to light that the standard income of the benefactor farmers has improved significantly over the farmer's network period. This was also amalgamated by 56 out of 88 the benefactor farmers who were interviewed. Food crops produced are considered to increase considerably over the farmer's network period. The production levels of some food crops and cash crop such as beans, sunflowers, potatoes, maize, pyrethrum, coffee and animal husbandry such as cattle's have increased significantly as indicated by the sum yields over the network period. In a number of cases, income from the farming activities was said to have been ploughed back into other economic activities (agricultural and non-agricultural) which ultimately assist in food crops production, improved revenue and ensured family food security, income for the benefactor farmers and their households in selected wards in Ludewa district.

5.2.5 Farmers' Perceptions on the Role of Network

Results obtained from the study revealed that the majority of farmers network members 92.5% affirmed that, network meetings and training helped them to share undeveloped knowledge with other farmers' within the network. Otherwise, 6.3% of network members affirmed that network meetings had helped them to share the agricultural experience with other farmers' together with road maintenance. In the same line, 1.3% of the group members responded that network meetings helped them

to share agricultural know-how with other farmers' together with sensitising people to connect into the network. Furthermore, 85.7% of network promoters declared that network meetings assisted them to split undeveloped knowledge with other farmers' and 14.3% of network promoters responded that network meetings assisted them to share agricultural skills, information's with other farmers' together with road maintenance. Munanka (2008:1993) as cited in Madaha *et al.* (2011) contend that, younger farmers can learn from older farmers and farmers without experience can learn from experienced ones and so avoid the unnecessary repetition of mistakes done by older farmers in the past. This was also noted by Nelson & Farrington (1994) that farmer's network act as a link in circulating messages concerning innovations stuck between personage farmers and mob that would not otherwise correspond with each other. The process of information and skills sharing between individuals leads to mutual understanding, mutual agreement and collective actions. By so doing new and inexperienced farmers can engage in production successfully and henceforth increase agricultural production.

5.2.6 Farm Demonstrations Exhibitions to FNs Members

The demonstration is a participatory method of knowledge improvement and propagation supported on education values and experimental knowledge. Demonstration reflects concrete experience, observation and reflection, generality and abstract conceptualization, and active testing (Mchomvu & Gedi, 2000).

According to respondents, farm demonstrations were not sufficient according to respondents' views. It was discovered during key informants' interviews that only two villages namely, Lusala and Itundu, have demonstration plots. Otherwise, farmers were using group farms and primary school farms for the purpose. However very few of them visited Nane Nane exhibition in Mbeya district demonstrated annually.

There is a need to establish farm demonstration at the village, wards and district levels, but also measures have to be taken to ensure all the members in the FNs attend the demonstration in and outside Ludewa District to learn how other are doing and handling farm network. As means of linking farmers with the markets and other services providers in the farming marketing chain, farmer's network facilitate farmers to participate in farming exhibition in Mbeya in three ways; To encourage farmers to attend the exhibitions and other agricultural shows; network members participate in exhibitions and facilitate farmers to exhibit the produce at spectator area of the network. due to the efforts above of the farmer's network, business contact between the traders was established to facilitate the further link for the market purpose, farmers uses this chance to sell their produce at high quantity and price and also the exchange of information's, technology and innovations concerning agricultural activities.

5.3 Positive Impacts Indicators of FNs in Reducing Income Poverty in Ludewa District

It is noted that, levels of economic actions generally, improve when conditions needed for such improvement are created. Farmers were therefore interviewed on the performance of their economic activities and actions prior to and after the FNs intrusion to find out whether the intrusion has been advantageous to them. More than 80% of the respondents replied that; they had affianced in agriculture better than five years prior to FNs intrusion. They did not record any important improvement in their agricultural activities due to lack of productive possessions such as micro-credit, extension services, and market 60 outlets. Though with the beginning of FNs intrusion, over 90% of the respondents felt the stage of their profitable activities have been cheering and have improved considerably. Farmers have been able to meet the basic needs of their household mainly through the proceeds from their economic activities. Only (8%) of the respondents felt there had not been any significant change in their output as well as income levels.

They challenged that, they have not been capable of meeting up the basic needs of their personal households through the intrusion. Weakness, laziness as well as weather failure were identified as the reasons why some recipient network farmers could not record any optimistic transformation in their yield and income level as well as their capability to prop up their family requirements.

The study also noted the five impacts' indicators FNs to members once asked that the presence of network group if they have changed farmers in living standards and to what extent? Therefore 67.7% of respondents responded that the network have enabled them to change their living standards positively while 32.3% said no changes had occurred in their lives. Other mentioned some indicators which were increased number of traders and volume of goods in the areas and at markets; also increased employment opportunities due to the nature of agriculture and business operationalised in the place. They further argued that, they have seen growth in the services industry, for example, food vendors, luggage carries, packers, welders and mobile phones charging phones. These activities have mainly been undertaken by youth. In regard to enhanced infrastructure, the coming of FNs in Ludewa District has led to the improvement of roads to the markets which have eased access not only to farmers but also traders. The cost of production and transportation has been reduced to rural farmers and traders. There is increased revenue to network members due to unlimited business conducted by farmers in rural areas. There is also improved community livelihood due to the network, the researcher met with farmers who said they are conducting irrigation agriculture after training through loans received from the groups which resulted to high produce. These facts have been witnessed by the researcher through direct observation to the field.

CHAPTER SIX

SUMMARY OF THE STUDY, CONCLUSIONS AND RECOMMENDATIONS

6.1 Introduction

This chapter summarises the key elements of the study, including the purpose of the study, the research questions, and the methodology. The chapter further presents discussions, conclusions, and recommendations of the study. The discussion focused on the ways on how farmers' network contributes to Reducing Income Poverty among rural small-scale farmers in Tanzania in Ludewa District.

6.2 Summary of the Study

The purpose of the study was to assess how farmers' network contributes to reducing income poverty among rural small-scale farmers in Tanzania in Ludewa District. The study was guided by the following specific objectives; to assess the position of farmers' network in income poverty reduction; to examine the income of members of the network after joining into the farmers' network and to assess measures taken by farmer's network to reduce income poverty and problems facing farmers' network.

The study adopted quantitative and qualitative research approaches to make possible to gather more data and test research hypotheses. Exploratory research design, survey research technique, simple random sampling and purposive sampling were employed during the study. Data were collected by using questionnaires and interview guide question and sample size of 88 respondents. Descriptive and inferential statistics were used to analyse data collected from the respondents. Statistical Package for Social Sciences (SPSS) version 16 and Excel Microsoft application was used to process data. Over 90% of the research findings have revealed that; farmer's network plays a significant role towards poverty reduction in

rural areas. Also, farmer's network helps in creating employment among many Tanzanian residing in rural areas. It further improves income and living standards of the rural farmers, despite many challenges carrying out their growth including poor infrastructures, lacks enough capital, lack of competent leaders, lack of training, poor agricultural technologies and climate uncertainties.

6.3 Conclusion

In general, the researcher concludes that, farmers Network Theater has a great role in the economic growth of any country. Thus, the governments are responsible for ensuring that friendly environments are enhanced to strengthen the development of the network, create strategies that will keep the farmers ahead as it occupies about 80% of total inhabitants as argued by other earlier researchers. According to Mashindano et al. 2011), farmer's network is a monetary activity important to achieving the income poverty reduction strategy goals of Tanzania. Growth in farming network has made contributions to GDP, foreign exchange earnings, and income poverty reduction. However, despite high growth, the growth pattern in farming network which employed about 70 percent of the population between 1998 and 2009 is not reflected in income poverty reduction, frequently in country areas and the challenges facing that are within the control of human-like quality seeds provision, improvement of infrastructure, research and development also provision of education on good agronomy practices.

6.3.1 Contribution of Capital and Loan Accessibility

The study concludes that the government should create a friendly environment for farmers to easily access capital and loan whether cash in kind or credits through inputs to facilitate the crops production in rural farmers. This would improve their food security, income through employments and living standards.

6.3.2 Impacts of Training to Rural Farmers

It is further concluded in this study that, training farmer's network affects the production capacity of the small-scale farmers. Thus, extension officers should provide proper education to farmers which would help them to produce better on their farms.

6.4 Recommendations

Generally, the researcher recommends that, there is a need for the government through the ministry of agriculture livestock and irrigation to formulate policies that will be favourable to rural farmers. That will enable them to improve productivity and make sure that the main option towards reducing income poverty to the rural farmer's network.

The government and its authorised sectors and departments should invest in research on quality seeds, fertilizers, and pesticides that will enable rural farmers to get enough produce hence provide them with enough food and surplus for selling.

The government through its authorised sectors and departments should seek for markets of the produce that will make them have direct access to sell their product and hence earn income. Formulation of Poverty Eradication Strategies such as Farmers network should go hand in hand with the injection of sources of the fund in rural areas O&OD which will enable the farmers to identify opportunities which can be used in implementing various projects for poverty eradication.

Following low level of education and skills of farmers, there is a need for farmers network (FNs) to put much emphasis on an integrated approach of farmer's empowerment through training. Training will support farmers and help them run their activities with improved skills which will make them much more viable and profitable. This, in turn, will ensure sustainability of farmer's network simply because farmers will be able to perform their activities.

There is a need for farmer's network to make loaning groups much functional and not just for repayment. There is a need of advising these groups to share their skills and knowledge in running their business and also in seeking further technical assistance from other organisations.

6.4.1 Capital and Loan Accessibility

The researcher recommends that the government and its responsible departments should ensure that agricultural inputs are easily accessed by farmers in rural areas. This draws from the observation that farmers network are receiving agricultural inputs very late from the agro-dealer due to lack of capital to purchase them from agro - dealer.

Also, the government through its authorized sectors and departments should establish efficient and effective window which finances farmers in rural areas to facilitate the credit facilities to farmer's network through well- formulated groups and the government should act as guarantor. This can be supported by research done by (Chambo, April 2009), on the problems faced cooperative movement. In general cooperative movement has been weak in Tanzania because of corruption, mismanagement, conflict and lack of clear goals Chambo (April 2009). In the due course, the government recognized this mistake and started to revive cooperative principles through the establishment of Cooperative Act of 1991.

6.4.2 Agricultural Inputs Qualities

This study recommends the need that agricultural inputs supplied to the farmers to be of high quality. The government through Tanzania Bureau of Standards (TBS) should make regular follow up to authorized industries which manufacture agricultural inputs so that they manufacture best quality agricultural inputs such as seeds and fertilizers, as Inputs, play a significant contribution towards the productivity of crops. Poor quality of fertilizers, pesticides or seeds leads to the poor

performance of the products as reported cases from many farmers concerning the low quality of agricultural inputs.

6.4.3 Training on Agro-Practices to Rural Farmers Network

The study also recommends that, agro-practice training skills should be given to farmers in rural areas to increase the production skills on farming activities. As the results show that on average, 53% of respondents in the study area had attained primary school level of education, which is higher than the average 57 percent for Tanzania. Levinger and Drahman (1980) as cited by Mchomvu and Gedi (2000) noted that, poor and less educated people generally lack confidence in their ability to improve their lives. It can, therefore, be said that the level of education has a positive relationship with smallholder farmers.

6.5 Areas for Further Studies

This study concentrated much on the contribution of the farmer's network groups towards reducing income poverty to rural farmers. The findings have revealed that women are the group that mostly engages in the network activities compared to men. Therefore, further study may be carried out on impacts of women in farmer's network towards income poverty reduction in household level, especially in Ludewa district.

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APPENDICES

Appendix 0-I

Research Questionnaire Designed For Members of the Farmers Network

Date

A. Background characteristics

1. Questionnaire number
2. Village
3. Ward.....
4. Sex (a) Male (b) Female
5. Age (a) 21-30 (b) 31- 40 (c) 41- 50 (d) 51- 60 (e) 61 and above
6. Marital status (a) Single (b) married (c) Divorced (d) Widow
7. Educational level (a) Primary education (b) Ordinary Level (c) Advanced level (d) Tertiary (f) None
8. Occupation or Position in the Networking.....

B. Economic Activities

9. What is your main source of income? (a) Agriculture (b) Livestock keeping (c) Agriculture and livestock keeping
10. How many acres of land do you own? (a) 1 - 5 (b) 5 - 10 (c) 10 – above
11. How many acres do you cultivate each year? (a) 1 - 5 (b) 5 - 10(c) 10 – above
12. What type of crops do you grow? (a)Cereal crops (b) leguminous crops (c) Beverage crops
13. On average how many bags/ kilograms do you harvest in each season?
14. On average how much do you earn each year for agricultures produce?
15. (i)Do you have any other source of income out of farming activity? (a) Yes, (b) No
(ii)If yes, which one? (Specify)

C. Farmers Network

16. (i) Are you a member of the farmers' network? (a) Yes, (b) No
(ii) If yes, for how long? (a) less than 3 yrs (b) 3 - 5 yrs (c) 6-9(d) 10 above
17. How many farmers' network meetings did you attend last year? Mention it
18. What do you discuss?
19. (i) Are there any changes of income after joined the farm network? (a) Yes, (b) No
(ii) If yes to what extent (a) Increased (b) Decreased (c) Constant
20. (i) Do you benefit by being a member of the farmer's network? (a) Yes, (b) No (ii) If yes how?
21. (i) Do you possess any asset as a result of being a member of the farmers' network? (a) Yes, (b) No
(i) If yes, what is the asset?
22. What types of technology do you use in cultivating your farms (a) Hand hoe (b) Ox, carts (c) Tractor
23. Specify some of the support you have received from the network since you became a beneficiary of farmers Network's intervention?
24. (i) Have you ever had any agricultural study tour anywhere? (a) Yes, (b) No
(ii) If yes, what did you learn?
25. Where do you get to market (price) information? (a) From the network representatives (b) From village extension officers (c) from village leaders (d) Network leaders (e) others sources, specify
26. As a result of your connection with the network, your family income has (a) Increased substantially (b) Increased moderately (c) Remained the same (d) Decreased?
27. (i) Have you had access to micro-credit facility over the past five years? (a)Yes (b) No.
(ii) If yes, who was the provider? (State)

Appendix 0-2

Research Questionnaire Designed For District Officials, Extension Officers/ Network leaders, Wards and Village officials.

1. What is your title.....
2. Village
3. Ward.....
4. Sex (a) Male (b) Female
5. Age (a) 21-30 (b) 31- 40 (c) 41- 50 (d) 51- 60 (e) 61 and above
6. Marital status (a) Single (b) married (c) Divorced (d) Widow
7. Educational level (a) Primary education (b) Ordinary Level (c) Advanced level (d) Tertiary (f) None
8. How long have you served in the District? (a)0-3yrs (b) 4-7yrs (c) 8 -11yrs (d) over 12yrs
9. What types of crops are grown in this area? (a)Beverage crops (b) leguminous crops (c) Cereal crops
10. How many acres are utilised for agriculture in the area?
11. How many are under farmers' network?
12. Are there any training conducted for farmers networking?
13. How does such training help to improve agricultural activities?
14. Which groups between men and women/youths and elders are more active in farmers' network?
15. Do you think that the presence of the network group has changed farmers in living standards? (a) Yes, (b) No
16. If yes, what are the indicators you are looking for? (a)Income (b) Asset ownership (c) Nutritional status (d) other (specify)
17. Are there any differences between members and non-members of the Networking (a) Yes, (b) No

18. What differences (a) Income (b) Assets Ownership? (c) Education wise (d) other (specify)
19. What mechanism do you use to make sure the community is aware of the importance of being in networking?
20. Is there any institution which is dealing with loaning farmers? (a)Yes (b) No,
21. If yes, please mention them.....
22. How does the network connect its members with such institutions?
23. How does the network help farmers to market their produce?
24. What other steps have been taken by the network to assist farmers in solving their problem?
25. Give your opinion concerning the existence of farmers' network in your area

Appendix -0 3

A check- list for leaders and key informants in assessing the contributions of farmer's network in income poverty reduction in selected ward in Ludewa

District

Date.....

No.	Question	Answer
1.	What is the evolution of farmers' network in your area?	
2.	Why farmers chip in into farmers' network?	
3.	How many numbers of farmers who are the member of farmers' network?	
4.	What activities are undertaken/ performed by Farmers Network in your village/wards?	
5.	How does farmers network Operationalised and put into practice?	
6.	How successful have farmers been in promoting farmers network?	
7.	Is there any contribution of farmers' network towards income poverty reduction?	
8.	What is the difference between a member of the network and the non- member of the network?	
9.	What are the repayments of the network in household food security and income?	
10.	What challenges has faced in execution farmers networking activities?	
11.	How have you dealt with each of these challenges?	
12.	What is your opinion on how to get better farmers' network perform?	

Appendix 0-4

Map of Ludewa District Showing the Study Area

