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Gender Differences and Relations in Rural Household Livelihoods of Gog District, Anywaa Zone, Gambella Region, South Western Ethiopia

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Abstract

Agricultural and environmental resources are contributing for livelihood improvement of many rural households of the study area. However, sustainability of a household livelihood depends on rights of both men's and women's access to and control over resources and services. Gender-based inequality, lack of equity and power imbalance in sharing resources and services is deeply rooted in rural households, with little research on gender analysis. This study aims at analyzing gender-based differences and relations existing between men and women in rural household livelihoods including constraints they are facing for access to and control over resources and services. This has been achieved using stratified sampling, systematic random sampling, interview, descriptive statistics, independent samples T-test, chi-square and small case studies. The study findings reveals a significant difference and power imbalance between men and women in rural household livelihoods where women engaged in unpaid reproductive roles, have more work burden, and faced many demographic, social, economical, cultural and institutional constraints as compared to men. Thus, efforts on gender-sensitive and participatory programmes, capacity building programmes, implementing gender equality and equity measures, social services, affirmative actions, and rural infrastructure development should be made to improve household livelihood of both men and women living in rural areas.

Keywords: Gender roles, Work burden, Access, Control and constraints

1. Introduction

1.1 Background

The rural household livelihoods of Ethiopian people mainly depend on agriculture related activities. Agriculture is a major contributor to the economy growth, food security and poverty reduction of millions people of Ethiopia. In the fiscal year of 2007/2008, the sector contributed 44% to the total GDP with industry and services share 13% and 43% respectively (MoFED, 2008:4&5). According to World Bank report 2009, the sector accounts 44% of total GDP, almost 86% of exports, 80% of employment, and contributing as a source of livelihood for nearly 90% of the country poor people (Loening J., et al of World Bank, 2009:15). This potential contribution of the sector is what makes it as the main means for rural livelihoods and rural development of the country. Agricultural extension is one priority area in Ethiopian policy framework for expansion public services in rural areas of the country. However, strategies to increase women's access to agricultural extension suffer from the general problems faced by the extension system and from the "perception bias" regarding the role of women in agriculture (Mogues T., et al, 2009:39). Historically, services have been provided via a top-down, command-and-control mode, in which extension agents receive relatively hard quotas for signing up farmers for fixed technology "packages" and farmers are expected to serve as passive vessels for the knowledge transferred to them (Lemma, 2007).

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In almost any country, women and men have different means for access to critical economic resources and varying power to make choices that affect their lives, as a consequence of the state of gender relations that exists in a given society. The direct result of this is seen in the unequal roles and responsibilities of women and men in Ethiopia (FDRE, 2002:23). In Ethiopia, many different literatures indicate gender inequality and lack of equity in terms of livelihood resource allocation and service distribution as among key determinants that hinder sustainable household livelihood improvement in rural areas of the country. It is widely acknowledged as that poor access to livelihood resources and services is the major cause of food insecurity in many rural parts of Ethiopia (Amare Y., et al., 2000: 2). The promotion of equitable men's and women's access to natural and economic resources and social services requires specific actions to address gender disparities (FAO Strategic Framework 2000-2015, Rome, Italy, as cited in Okali C., 2006). Globally, women makes 51% of world population, hold 13.4% seats in parliament, represent 7.4% of cabinet ministers, 70% of their work unpaid and 1/3 experienced domestic violence (IIRR, 2005). In Ethiopia, more than 30% of agricultural labour is performed by women and men-headed households constitute more than 22% of the family (ibid). According to human development report of 2007/2008, gender empowerment measure for Ethiopia indicates that women share 21.4% of parliament seats, 20% of legislators, senior officials and managers, 30% of professional and technical workers, and their ratio to male counterpart earned income estimated to be 0.60 (HDR, 2007/8: 333 table 29). Although women received right to vote many years back of 1955, gender gaps still exist in economic participation and opportunities, educational attainments, and political empowerment (Ricardo H. et al, 2009). Global statistics on gender gaps for Ethiopia indicate also that women share 22% (female to male ratio of 0.28) in parliament, 10% (female to male ratio of 0.11) in ministerial positions, do not head state over last 50 years, 16% (female to male ratio of 0.19) in legislators, senior officials and managers, 33% (female to male ratio of 0.49) in professional and technical workers, female to male ratio earned income of about 0.61, 0.89 of female to male ratio in labour force participation, and 0.46, 0.92, 0.64 and 0.34 of female to male ratio estimated in literacy rate, enrolment in primary, secondary, and tertiary education respectively (ibid). These statistical trends show how gender gaps in terms of inequality, work burden and vulnerability manifested between men and women in social, economical and political issues of the country.

The main structural constraints for gender inequality gaps and equity problems are mainly societal norms and practices existing within the society. Norms and practices generally allocate different roles and responsibilities to women and men and assign lower value to aptitudes, abilities and activities conventionally associated with women, creating inequalities in the distribution of resources and capabilities (UN, 2009: 5). Governments have entered commitments through ratifying various women's rights conventions and have issued national policies supporting women's access rights to resources for gender equality in many countries. International women's conferences held consecutively in Mexico City in 1975, in Nairobi in1985 and in Beijing in 1995 were measures towards realizing women's political, social and economic equality with men (UN Action for Women, 2003, as cited in Woldetensaye A., 2007). Many gender issues which are very important to well-being of millions of women around the world got public attention after these conferences. In Ethiopia, the key objective of the national policy on women is creating conditions conducive for equality between men and women in development sectors of political, social, and economic decisions with the aim of poverty reduction in the country (FDRE, 2002:24).

Gender inequality in access to and control over rural livelihood resources is also a common problem in Gambella region. In all regional government structures, gender issues were institutionalized through women affair units with the overall goal of mainstreaming gender in development interventions. But many of these women affairs units are fail to integrate gender issues accordingly, particularly in agricultural and rural development programmes, as these units lack skilled manpower, lack awareness on gender mainstreaming and sensitization in development progarmmes, budget constraint to organize capacity building programmes and many other conditions. As a result, men's and women's livelihood conditions and feel needs at grass root level remain unaddressed in development programmes due to lack of information on gender disaggregated data. The study reveals differences in terms of roles, equity problems and power imbalance existing between men and women for access to and control over livelihood resources and agricultural extension services in rural areas of Gog district. Women faced many constraints such as household headship, property ownership and collateral, household work burden, illiteracy, culture/tradition, poverty, top-down institutional systems and poor infrastructure for access to and control over livelihood resources and agricultural extension services as compared to men in rural areas of the district. Thus, strong development efforts toward gender-sensitive rural development programmes and implementation of gender equality and equity measures should be made to improve household livelihood of both men and women living in rural areas of the district.

1.2 Statement of the Research Problem

The main problem in the study area, with regard to gender issue, is the gender-based inequality in terms of power imbalance and lack of equity that exists between men and women in rural livelihood resources and development services. There is a power imbalance and unfair between men and women in terms of access to and control over resources and services in rural areas. Women are substantially disadvantaged as compared to men because of their lower status within the society in relation to indicators such as earnings/benefits, workload, education, decision making power, access to and control over household resources and services. The gender-based differences and relations between men and women in their household livelihoods are invisible in the rural livelihood development programmes and activities. Agricultural extension packages are distributed according to household heads that always assumed to be men counterpart, where women benefiting no thing. In Gambella region, among women who involved in household decision making, 44.2% of 629 participated in decisions on large household purchases independently or jointly with their husbands, 47.6% of 500 participated in decisions on their husbands' income independently or jointly with their husbands and 19.9% of 508 participated in decisions on their own health care by themselves (UNFPA, 2008: table 5.2).

Women as a group enjoy fewer advantages, work longer hours than men do, and their work and opinions are undervalued in livelihood activities in many countries. They earn less than men, do not own land, and face numerous obstacles, threats and violence (EARO, 2000:38). According to UN and other statistics, women perform 67% of the world's working hours, earn 10% of world's income, comprise 2/3 of the world's illiterates and own less than 1% of the world's property (Almaz E., 2000 and EARO, 2000, as cited in Yeshi, 2005). In Ethiopia, women comprise 30-40% of agricultural labour and head 22.21% of families (SIDA country Gender profile: Ethiopia, 1999, as cited in EARO, 2000:38). The rural women in Ethiopia work for about 13-17 hours per day, which is almost two-fold of men (TGE, 1993). Bishop C. and Puskur R suggested that unequal roles and responsibilities of men and women are significantly determining unequal access to productive resources in rural areas of Ethiopia (Bishop C. and Puskur R., 2007:3). Lack of gender-based disaggregated data regarding differences and relations in terms of roles and responsibilities, access, decision-making power and constraints faced in rural household livelihoods is the main determinant factor or cause for the failure of addressing gender inequality in rural study area. Many development initiatives are still followed the conventional top-down approach of 'one size fits all family members', ignoring gender-based differences and constraints. As a result, the livelihoods of both men and women are not in a satisfactory manner in rural study area.

1.3 General Objective of the Study

The overall objective of the study is to analyze gender differences and relations in rural household livelihoods of the study area.

1.4 Specific Objectives of the Study

1. To examine differences between men's and women's roles and responsibilities in rural household livelihoods;
2. To analyze differences between men's and women's access to and control over rural household livelihood resources and agricultural extension services;
3. To identify constraints that men and women faced for access to and control over rural household livelihood resources and agricultural extension services; and
4. To forward implications/recommendations for gender based issues or priority needs in rural household livelihood development programmes.

1.5 Research Questions

1. Who does what in rural household livelihoods?
2. What differences exist between men and women in rural household livelihoods?
3. Who has access to and control over rural household livelihood resources and agricultural extension services?
4. What are the major constraints that influence men's and women's activities, access and control patterns, and how?

1.6 Rationale/Significance of the Study

Access to and right over resources is crucial for the livelihood needs of rural poor households. Gender inequality in terms of access to and control over resources is deeply rooted in social, political and power relations.

The livelihood of both men and women are not always the same due to their different roles and responsibilities within the society. Women and men face constraints differently in their livelihood processes. Women face considerable gender-related constraints and vulnerabilities as compared to men because of existing structures in households and societies. Therefore, the impact of different livelihood interventions will also vary according to these differences and constraints between men and women. A livelihood is sustainable when it can cope with and recover from stresses and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base. This requires equity and equal access to and control over resources in production processes. The analysis of gender based differences and relations for the achievement of equality and equity between men and women in rural development process is crucial to contribute to the overall rural economy growth, poverty reduction, ensure food security and human right of the disadvantaged people. Thus, the findings of this study will benefit the following categories of partners for agricultural and rural development of the study area:

- **Marginalized and disadvantaged groups** - their livelihood will be improved and priority needs addressed through those development programmes that will refer to the findings of the study.
- **Researchers** – the study will provide detail information on gender issues for rural development researchers to do further research on this area.
- **Policy makers** – the information generated through this study will guide policy makers toward gender mainstreaming in government policies, programmes and strategies.

2. Literature Review

2.1 Evolution of Gender Approaches

2.1.1 Women in Development (WID)

The term "women in development" was coined in the early 1970s by a Washington-based network of female development professionals (Tinker, 1990:30). On the basis of their own experiences in overseas missions they began to challenge "trickle down" theories of development, arguing that modernization was impacting differently on men and women. Instead of improving women's rights and status, the development process appeared to be contributing to a deterioration of their position. It aimed at focusing on women issues exclusively through basic needs service provision that may increase their income and productivity for household livelihoods. WID was the first gender policy approach that focused on fulfilling practical gender needs.

2.1.2 Gender and Development (GAD)

By the late 1970s, some of those working in the field of development were questioning the adequacy of focusing on women in isolation, which seemed to be a dominant feature of the WID approach. Although an analysis of women's subordination was at the heart of the WID approach, the essentially relational nature of their subordination had been left largely unexplored. The WID approach identified women's lack of access to resources as the key to their subordination without raising questions about the role of gender relations in restricting women's access in the first place (and in subverting policy interventions, were they to direct resources to women). The work that was under way within various social science disciplines suggested the importance of power, conflict and gender relations in understanding women's subordination (Razavi S. & Miller C., 1995). Many influential writings appeared in the 1970s on the distinction between biological sex and social gender (Edholm F., Harris O. and Young K., 1977; Rubin, 1975). Feminist anthropology gave increasing attention to the cultural representation of the sexes – the social construction of gender identity - and its determining influence on the relative position of men and women in society. "Maleness" and "femaleness" were understood as the outcome of cultural ideologies, rather than of inherent qualities or physiology. Feminism is, "A belief that women universally face some form of oppression or exploitation; a commitment to uncover and understand what causes and sustains oppression in all its forms and a commitment to work individually and collectively in everyday life to end all forms of oppression" (Maguire, 1987: 79). The value of a symbolic analysis of gender, it was argued, lies in understanding how men and women are socially constructed, and how those constructions are powerfully reinforced by the social activities that both define and are defined by them (Moore, 1988:15-16). Status and power differentials between men and women, therefore, could not be easily read off from their respective positions within the relations of production. More recently the limitation of focusing on women in isolation has drawn attention of the need to look at "Gender in Development", that is the social relationship between men and women. Although the WID approach improved opportunities for women, it failed to address the empowerment aspect, the power sharing.

So there was a need for the programs of gender and development to move further. Thus the second policy approach Gender and Development (GAD) emerged. The GAD approach commenced on integration of gender issues into the design and implementation of development programs. The GAD approach was projected towards addressing strategic gender needs which can empower women and transform gender relations. The overall goal of the GAD approach is women's empowerment. Empowerment entails increasing women's access to knowledge, resource and decision-making power to change their disadvantaged positions to the level of having control over their own lives (Parpart, 1989). This goal was not easy to achieve and gender inequality still persists. It is reflected in many aspects in women's lives including their acquisition of resources. Men and women play different roles in society, with gender differences shaped by historical and cultural determinants, among others, WID and GAD differ in terms of policy, focus and planning procedures. Generally, there are six specific approaches through WID and GAD evolved in gender development thinking as follows (table 2.1).

Table 2.1: Main Periods and Approaches in the Historical Perspectives of Gender

Approach	Period	Area of interventions	Focused on
Welfare	1950-1970	Reproductive roles (food aid, malnutrition and family planning)	Women
Anti-poverty	1970 onwards	Aid given to poor women	Women
Equity	1975-1985	Introducing Political and economic interventions women that reduce inequality with men (fair and justice in any development process)	Women
Efficiency	Post 1980	Women's economic participation, and capacity building to address problems related to time and unpaid labour	Women
Empowerment	1985 onwards	Advocacy and grass root projects to empower women for their self-reliance	Women
Equality	Since 1995	Power sharing and more equitable partnership between women and men	Men and women

Source: Adapted from Egerton University, 1999

2.2 Policy Overview of the Global Mandates and Commitments for Promoting Gender Equality

To improve gender equality and livelihoods, the international community has created specific standards set in different commitments. All the 8 Millennium Development Goals and related targets adopted in 2000 are very important in promoting gender equality. The four that are most relevant to rural livelihoods and gender equality are Goals 1, 2, 3, and 6. Goal 1 aims to eradicate extreme poverty and hunger, Goal 2 aims to achieve universal primary education, Goal 3 aims to promote gender equality and empower women and Goal 6 aims to combat HIV/AIDS, malaria and other diseases. The Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) adopted in 1979 by the UN General Assembly provides the basis for realizing equality between women and men through ensuring women's equal access to and equal opportunities in, political and public life-including the right to vote and to stand for election-as well as education, health and employment. CEDAW continues to provide the framework for promoting gender equality for rural women, as it is the only international legally binding instrument with specific provisions for rural women (Article 14). The 1995 Beijing Platform for Action is an agenda for women's empowerment and gender equality. The Platform for Action upholds the aforementioned Convention and builds upon the Nairobi Forward-looking Strategies for the Advancement of Women, as well as relevant UN resolutions. The Beijing +10 review has reviewed the progress made and identified the gaps in implementing the Beijing Plan of Action. It called for collective responsibility to ensure that gaps in equitable access to resources and opportunities in rural and agricultural communities are met. Countries must translate the global commitments and objectives regarding the advancement of women and gender equality into institutional and national policies and action strategies.

Ethiopia's commitment to address gender disparities has strengthened over time and a number of legislative measures have been adopted to ensure equality under the law (World Bank, 2009: 3&4 box 1.2). These legislative procedures are the civil code (1960), women affairs office established within the office of the prime minister in 1992, the national policy on women (1993), the revised family code (2000), the new penal code (2005), ministry for women affairs replaced women affairs office in 2005 and others constitutional proclamations regarding gender rights (ibid).

At the policy level, gender equality has been emphasized in the PRSP process-first in the SDPRP (2002-2004) and now in PASDEP (2005-2010) (ibid: 3). To enhance women's participation in development and its benefits, the SDPRP proposed measures in the following areas: food security and agriculture, education, health, political participation, confronting harmful traditional practices, reducing women's work load, and strengthening legal environment (MoFED, 2002). Although this thematic coverage was comprehensive, the actual measures proposed were vague and did not translate into specific targets and indicators in the SDPRP matrix (MoWA, 2006). The Ministry for Women Affairs is the main government body responsible for ensuring the gender sensitivity of policies, identifying discriminatory practices, fostering adequate participation of women in various government bodies, undertaking studies and initiating recommendations on the protection of women's rights and ensuring their implementation (World Bank, 2009: 4 box 1.2). More recently MoWA released the "Development and Change Package of Ethiopian women" which identifies 5 areas o f interventions: (1) Ensuring women's access to productive assets and facilitating their labor market participation; (2) Fostering changes in attitudes towards women with respect to traditional and customary practices; (3) Improving women's effective access to health and education; (4) Promoting women's participation in social, public and political spheres; (5) Strengthening the legal protection of women (MoWA, 2008).

2.3 Gender Differences in Rural Livelihoods

Despite rapid urbanization, the bulk of the populations in sub Saharan African countries still live in the rural areas, on average 70%. In Southern Africa the figure ranges from 42% in South Africa to 85% in Malawi. More than 60% of this rural population comprises of women. There are significant differences in livelihood opportunities and outcomes between women and men in these rural areas. Although the differing roles and responsibilities between women and men vary from country to country and within countries reflecting differences in economic, social and cultural forces, some important generalizations on gender differences in rural livelihoods were made including gender differences: in gender roles in agricultural production and food security, in household work burden and decision-making, in access to land and water rights, in access to credit and income, and in access to education, training and extension services (Mutangadura G. B., 2005).

2.3.1 Gender Differences in Agricultural Production and Food Security

In most Sub-Saharan African countries, small-scale farmers, the majority of whom are women, produce 60-70% of food. Women play a major role in the different aspects of agricultural production. Although men and women participate in most agricultural tasks, men predominate in land preparation, and ploughing; women are primarily engaged in watering, planting, fertilizing, weeding, harvesting and marketing activities that are typically labour-intensive. In most parts of Ethiopia, women are intimately involved in most aspects of agricultural production, marketing, food procurement, and household nutrition, the view is widely held that "women do not farm". This cultural perception remains strong even though numerous agricultural tasks are deemed "women's work" including weeding, harvesting, preparing storage containers, managing all aspects of home gardens and poultry raising, transporting farm inputs to the field, and procuring water for household use and some on-farm uses (EEA/EEPRI, 2006). Women work more hours per day and more days per year in agriculture than men (see table 2.2 for an example from Kenya). Cash crops are considered men's crops and men control the money received from them, even though women do considerable amounts of the work. Though performing different activities, women and men remain on par as farmers in agriculture, but unequal in some agricultural policy and planning. In Ethiopia, many literatures indicate that more than 30% of agricultural labour is performed by women and work for about 17 hours per day than men.

Table 2.2: Percentage Share of Women's Role in Rural Household Systems Tasks in Kenya

Workload	Percent Share	Workload	Percent Share
Clearing land	5	Processing	90
Turning soil	30	Marketing	60
Planting	50	Carrying of water & fuel	95
Weeding & hoeing	75	Domestic animal care	55
Harvesting	65	Hunting	10
Carrying crops home	85	Cooking & family care	95
Storing	80	Small-scale farmers	85

Source: Adapted from Mutangadura G. B., 2005 annex1

2.3.2 Gender Differences in Household Work Burden and Decision-Making

Women and girls are also traditionally tasked to do all domestic maintenance work, hauling water, firewood gathering, food processing and preparation, cooking and other domestic chores. Household work done by women is characterized by long and strenuous days with very few relevant and affordable technologies to ease their workloads and drudgery. The heavy workload already imposed on women often prevents them from adopting improved technology that requires additional labour inputs. Traditionally, women have limited role in decision-making processes and laws, which are important for poverty reduction, food security and environmental sustainability. The causes of women's exclusion from decision-making are closely linked to their additional reproductive roles and their household workload, which account for an important share of their time. In rural areas of selected developing countries women work burden on average has been estimated to be 20% more as compared to men (UNDP, 1995a). The productive work done within the household by women has been ignored and not much attempt has been made to incorporate in the value of such activities within the national accounts. The degree of error is even more pronounced within the developing countries context with a large agricultural sector where large percentage of goods and services consumed within the households are produced at home. In developing countries, share of women's total time devoted to all economic activities is 53%, but only 34% of women's work are included in the national accounts, while 76% men's work are in national account. Thus most of the women's work still remains unpaid and unrecognized (ibid). Although rural women are heavily involved in almost all aspects of agricultural production, it emerges from the scant data available that their share in decision-making is not commensurate with the amount and type of work they shoulder (FAO, 1995a).

2.3.3 Gender Differences in Access to Land and Water

Land is considered the most fundamental resource to women's living conditions, economic empowerment and to some extent their struggle for equity and equality. Despite the importance of land to women in their livelihoods, their land rights are still largely discriminated against. Most women in matrilineal customary system have access to farmland only through their husbands or fathers as they are only granted usufructuary rights as land title pass through the male line. In a study done by the Economic Commission for Africa-Office for Southern Africa (ECA-SA, 2003), the major obstacles facing women in owning and controlling land in Southern Africa were identified to include customary law, some legal clauses that do not allow joint ownership of land by married couples under statutory tenure and non-synchronization of the inheritance and marriage laws with the Land law. In situations where women can own and control land such as where one can buy the land from the land market, women are constrained by several socio-economic factors which include illiteracy, lack of capital and implements, lack of collateral, lack of farm management experience, training and advice. Land is basic resource for agricultural production of 85% population living in rural areas of Ethiopia, where land tenure system affects development of rural agricultural sector for many years. Women are marginalized from accessing land than men whenever land is scarce (Tasfay H., 2002; Teklu T., 2003). Rural women do not have equitable access to land and agricultural resources. They have low involvement in development activities and have low decision-making power. Their labor contribution to the agricultural sector is invisible because of the gender division of labor in communities. The ox-plough farming system and cultural taboos on women ploughing and sowing had affected women's right on land particularly that of female headed households (Rahmato D., 1994; Tadesse Z., 2000; Tasfay H., 2002). These households mostly end up in poverty because of lack of adult male labor which the farming system requires. A study in Highland Wollo and Waghamra reflected that female headed households are poorer and more food insecure than male headed households due to gender relations with regard to land access problems (Devereux S. et al, 2003).

2.3.4 Gender Differences in Access to Credit and Income

Women have little access to credit. While women are reputed as efficient in paying loans, ironically they have the hardest time in securing loans without collaterals, male consent, and security against the loan (Fortmann, 2001). Rural women's limited incomes, lack of collateral, higher levels of illiteracy and lack of information drastically constrain their access to almost all forms of credit from financial institutions and government agencies. Women's uncertain access to land, credit and education denies them exposure to and control of new technologies that might help them out of the mire of poverty. In many Sub-Saharan countries female-headed households are usually poorer and fewer rural female-headed households own agricultural productive resources.

For African women, combining farm and non-farm income-earning activities has long been a survival strategy which allows them to reduce the risk of starvation for themselves and their families during periods of chronic or transitory food insecurity. However despite this, their incomes are generally lower than their male counterparts. For example in Zimbabwe, female-headed household incomes are 40% less than rural-male headed households and within the female-headed households, poverty is greatest in *de facto* female-headed households (the woman is heading the household because her husband is absent) and *de jure* households (women who are single, widowed or divorced) (Mutangadura, 2001). Most of the *de facto* female-headed households are found in the rural areas (89 %).

2.3.5 Gender Differences in Access to Education, Training and Extension Services

Women are more likely to be less educated than men. Two-thirds of the one billion illiterate in the world are women and girls. Adult female illiteracy rate is less than 20 percent in Botswana, Lesotho, Namibia, South Africa, Swaziland and Zimbabwe, but is higher than 50 percent in Mozambique and Malawi (UNDP, 2004). In terms of agricultural production and improving rural livelihoods, illiteracy leads to inability to understand and adopt new technologies, accessing credit, accessing information, inability to know their rights and support mechanisms that are available. Available figures show that only 5% of extension services have been addressed to rural women, while no more than 15% of the world's extension agents are women. In Africa only 7 percent of agricultural extension services were directed to women farmers in 1998 and only about 11 percent of all extension personnel were women (FAO, 1989). Gender still receives low priority in the planning and implementation of extension policies and programs in many developing countries today (FAO, 2003). Women's full roles in production-related activities need to be brought into mainstream of extension and training (Jazairy, et al, 1992:287). In Ethiopia, many studies conducted in rural areas shows that female are more illiterate than male. The study conducted in Dire Arerti and Koftu Kebeles of Adaa Woreda, Oromiya region, shows high illiterate rate among women i.e. 78.3% are illiterate, 12.3% have non-formal basic education, 5.3% have formal first cycle academic education (grade 1-4) and 4.1% have second cycle (grade 5-8) level academic education (Woldetensaye A., 2007: 50). The proportion of male farmers who enjoyed agricultural extension services three rural areas of Ambo district, Oromiya region, was 72.0% compared to only 36.8% for female counterparts (Ogato G. S., Boon E. K. and Subramani J., 2007**).**

3. Materials and Methods

3.1 Research Design

Survey research was used among non-experimental social scientific research as well as types of experimental research. The data were designed using descriptive survey and observation techniques of situations in order to save time and cost to deal with every element of a sample. The study describes existing gender situations, analyze roles, power relations and constraints, and forwards sound implications for further research or interventions. As data of survey research always susceptible to distortion, particular attentions were made to safeguard the data from the influence of bias.

3.2 Sampling and Sampling Techniques

The study was conducted in Gog district of Anywaa zone, Gambella people's national regional state, for its suitability in terms of natural livelihood resources, accessibility and gender inequality factors rooted within society living in the area. The study was used both probability and non-probability sampling techniques during sampling of administrative Kebeles and sample of respondents. Four kebeles, namely Gog-jangjor, Gog-dipach, Tata and Puchala, were selected purposively from the administrative kebeles under the Gog district based on their accessibility. The selection of sample respondents was also involved stratified sampling technique, in which the sample divided into men, women, male-headed households, female-headed households and household wives within male-headed households. The sample size for the study was determined using formula as follows (Cochran, 1977, as cited in Bartlett and Higgins, 2001):

$$n = \frac{N}{1 + N(e)^2} = \frac{370}{1 + 370(0.05)^2} = 192 \text{ respondents}$$

Where:

n = the sample size used for study;
N= total population of both men and women in the households of the four Kebeles;
e = maximum variability or margin of error assuming to be 5% (0.05); and

1 = the probability of the event occurring.

The sample size for each Kebele was determined using proportions as follows:

Sample size of Gog-jangjor $= \frac{98 \times 192}{370} = 51$ respondents

Sample size of Gog-dipach $= \frac{85 \times 192}{370} = 44$ respondents

Sample size of Tata $= \frac{95 \times 192}{370} = 49$ respondents

Sample size of Puchala $= \frac{92 \times 192}{370} = 48$ respondents

After determined the sample size, sample of respondents from both men and women (female-headed households and household wives) were selected systematically from each Kebele using systematic random sampling. The process of systematic random sampling involved:

- The population (the sample frame) was listed numerically in order (1st, 2nd, 3rd, …370th), where 370 is the population size.
- Then if sample size is n, the first random individual respondents (r) were estimated using the formula:

$$r = \frac{N}{n} = \frac{370}{192} = 2$$

- The first sample respondent, i.e 1th, was selected from the first 2 individuals of the sample frame randomly using random number tables or a lottery system.
- From this chosen respondent, every rth respondent was selected at evenly spaced interval (1st, 2nd=1st+r, 3rd=2nd+r, …) until the total sample size n=192 respondents reached.

3.3 Methods of Data Collection

The study covered men's and women's (female-headed households and household wives) roles and responsibilities, access to and control over rural livelihood resources, and constraints they faced in rural study areas of the district. The collected data have both qualitative and quantitative types in nature. The data for the study were collected from both primary and secondary sources. Primary data were collected directly from sample of respondents using interview schedule designed for data collection and to some extent observations. Primary data were collected through individual interview, validation procedures and group discussion with sample respondents on gender roles, relations, and constraints faced in rural livelihoods of the study area. While secondary data were collected through reviewing of relevant literatures on gender roles, access to and control over livelihood resources in Ethiopia, Africa and other countries.

3.4 Methods of Data Analysis

After collection of information for study, quantitative data were analyzed using statistical techniques such as means and independent-samples-T-test. While qualitative data were analyzed using descriptive statistics such as frequencies, descriptives, general tables, cross tabulations and chi-square for independent. These quantitative and qualitative data were analyzed with the help of computer software known as statistical package for social science (SPSS) version-12 for windows. During survey at field level, qualitative data were analyzed using personal judgments or descriptions, interpretations, comparisons and discussion with respondents. Qualitative information from the individual interviews was also written as a very small case studies or quotations to thoroughly understand gender-based differences and relations in rural household livelihoods of the study area.

4. Results and Discussions

4.1 Gender Differences or Roles in Rural Household Livelihood Activities

This section discusses the activity profile (roles and responsibilities) aspect of gender analysis framework of men's and women's productive and reproductive roles in rural household livelihoods of the study area. Gender roles that men and women can do in rural household livelihoods of the study area were varied according to their household livelihood production activities. The major type of production activities were divided in to three categories such as crop production (Maize, Sorghum and Rice), production of vegetables, oilseeds, pulses, roots and tubers, and fruits (Tomato, Pumpkin, Sesame, Haricot bean, Chickpea, Groundnut, Sweet potato, Cassava, Mango, Banana, & Papaya), and livestock production (Cattle, Sheep, Goats and Chicken). Men have dominated the productive roles more than women do in the rural household livelihoods of the study area. Out of 192 sample respondents, male-headed households account for 50% in crop production, 22.9% in production of vegetables, oilseeds, pulses, roots and tubers, and fruits, and 13% in livestock production, while female-headed households account for 17.7% in crop production, 10.4% in production of vegetables, oilseeds, pulses, roots and tubers, and fruits, and 3.1% in livestock production. About 5.2% of household wives responded that they could produce vegetables, oilseeds, pulses, roots and tubers, and fruits (see table 4.1).

A chi-square test for independence (Pearson chi-square) indicated a significant difference between household headship status and rural household livelihood activities such as Crop production χ^2 (df = 2, n = 192) = 192, p = 0, and Cramer's V = 1; production of vegetables, oilseeds, pulses, roots and tubers, and fruits χ^2 (df = 2, n = 192) = 21.208, p = 0, and Cramer's V = 0.332; and Livestock production χ^2 (df = 2, n = 192) = 18.938, p = 0, Cramer's V = 0.314 (see table 4.2-4.7). These survey statistics indicated that men dominated types of productions such as crop and livestock production as compared to women in the rural study area. They are also more producing crops as compared to livestock production, and production of vegetables, oilseeds, pulses, roots and tubers, and fruits. Women's participation also observed in crop and livestock production (female-headed households), and production of vegetables, oilseeds, pulses, roots and tubers, and fruits (both female-headed households and those household wives owned farmland).

Table 4.1: Percentage Share of Household Headship in Rural Household Livelihood Activities

Household livelihood activities	Responses	Household headship status							
		MHHs(n=96)		FHHs (n=34)		HHWs (n=62)		Total (n=192)	
		Frequency	% share	Frequency	% share	Frequency	% share	Frequency	% share
Crop production	Yes	96	50	34	17.7	-	-	130	67.7
	No	-	-	-	-	62	32.3	62	32.3
Production of vegetables, oilseeds, pulses, roots and tubers, and fruits	Yes	44	22.9	20	10.4	10	5.2	74	38.5
	No	52	27.1	14	7.3	52	27.1	118	61.5
Livestock production	Yes	25	13	6	3.1	-	-	31	16.1
	No	71	37	28	14.6	62	32.3	161	83.9

Source: Field survey data (2010)

Table 4.2: Chi-Square Tests for Household Headship Status * Crop Production

Values			
Statistics	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	192.000[a]	2	0.000
Likelihood ratio	241.555 2		0.000
Linear-by-Linear Association	159.446 1		0.000
N of Valid Cases	192		

a. 0 cells (.0%) have expected count less than 5.
The minimum expected count is 10.98.

Table 4.3: Symmetric Measures for Household Headship Status * Crop Production

Values			
Statistics		Value	Approx. Sig
Nominal by	Phi	1.000	0.000
Nominal	Cramer's V	1.000	0.000
N of valid Cases		192	

a. Not assuming the null hypothesis.
b. Using the asymptotic standard error assuming the null hypothesis.

Table 4.4: Chi-Square Tests for Household Headship Status * Production of Vegetable, Oilseeds, Pulses, Roots and Tubers, and Fruits

Values			
Statistics	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	21.208[a]	2	0.000
Likelihood ratio	22.725	2	0.000
Linear-by-Linear Association	12.066	1	0.001
N of Valid Cases	192		

a. 0 cells (.0%) have expected count less than 5.
The minimum expected count is 13.10.

Table 4.5: Symmetric Measures for Household Headship Status * Production of Vegetable, Oilseeds, Pulses, Roots and Tubers, and Fruits

Values			
Statistics		Value	Approx. Sig
Nominal by	Phi	0.332	0.000
Nominal	Cramer's V	0.332	0.000
N of valid Cases	192		

a. Not assuming the null hypothesis.
b. Using the asymptotic standard error assuming the null hypothesis.

Table 4.6: Chi-Square Tests for Household Headship Status * Livestock Production

Values			
Statistics	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	18.938[a] 2		0.000
Likelihood ratio	27.960	2	0.000
Linear-by-Linear Association	18.403	1	0.000
N of Valid Cases	192		

a. 0 cells (.0%) have expected count less than 5.
The minimum expected count is 5.49.

Table 4.7: Symmetric Measures for Household Headship Status * Livestock Production

Values			
Statistics		Value	Approx. Sig
Nominal by	Phi	0.314	0.000
Nominal	Cramer's V	0.314	0.000
N of valid Cases	192		

a. Not assuming the null hypothesis.
b. Using the asymptotic standard error assuming the null hypothesis.

4.1.1 Gender Differences or Roles in Crop Production Activities

4.2.1 Gender differences or roles in crop production activities

Out of 192 sample of respondents, the percentage share of male-headed households in crop production activities account for about 50% in land clearing, ploughing, planting/sowing, weeding and hoeing, and harvesting, 45.3% in transporting, 45.3% in threshing, 44.3% in storing, and 49.5% in marketing. While that of female-headed households were 17.7% in ploughing, planting/sowing, weeding and hoeing, harvesting, transporting, threshing, storing, marketing and none in land clearing. Household wives on the other hand account for about 30.2% in planting/sowing, harvesting, transporting, threshing, storing and none in land clearing, ploughing, and weeding and hoeing (see table 4.8). These statistics indicated that men's proportion is higher in pre-harvest crop production activities as compared to women in the study area. In a contrary, women's participation also observed in post-harvest crop activities as compared to men's activities. These variations in activities occurred because of work culture shaped by the society for men and women.

Table 4.8: Proportion of Household Headship Status in Crop Production Activities

Types of activities	Responses	Household headship status							
		MHHs (n=96)		FHHs (n=34)		HHWs (n=62)		Total (n=192)	
		Frequency	% share	Frequency	% share	Frequency	% share	Frequency	% share
Land clearing	Yes	96	50	-	-	-	-	96	50
	No	-	-	34	17.7	62	32.3	96	50
Ploughing	Yes	96	50	34	17.7	-	-	130	67.7
	No	-	-	-	-	62	32.3	62	32.3
Planting or sowing	Yes	96	50	34	17.7	58	30.2	188	97.9
	No	-	-	-	-	4	2.1	4	2.1
Weeding and hoeing	Yes	96	50	34	17.7	-	-	130	67.7
	No	-	-	-	-	62	32.3	62	32.3
Harvesting	Yes	96	50	34	17.7	58	30.2	188	97.9
	No	-	-	-	-	4	2.1	4	2.1
Transporting	Yes	87	45.3	34	17.7	58	30.2	179	93.2
	No	9	4.7	-	-	4	2.1	13	6.8
Threshing	Yes	87	45.3	34	17.7	58	30.2	179	93.2
	No	9	4.7	-	-	4	2.1	13	6.8
Storing	Yes	85	44.3	34	17.7	58	30.2	177	92.2
	No	11	5.7	-	-	4	2.1	15	7.8
Marketing	Yes	95	49.5	34	17.7	58	30.2	187	97.4
	No	1	0.5	-	-	4	2.1	5	2.6

Source: Field survey data (2010)

4.1.2 Gender Differences or Roles in Vegetables, Oilseeds, Pulses, Roots and Tubers, and Fruits Production Activities

The survey statistics for male-headed households indicated, out of 192 sample respondents, a percentage share of about 22.9% in seedbed preparation, furrowing, planting or transplanting, cultivating and weeding, harvesting, and marketing, and accounts for 21.9% in transporting, while that of female-headed households account for about 10.4% in these types of vegetables, oilseeds, pulses, roots and tubers, and fruits production activities respectively. Household wives share for about 5.2% in seedbed preparation and furrowing, 20.8% in planting or transplanting, 6.3% in cultivating and weeding, 21.4% in transporting, harvesting and marketing (see table 4.9). These statistics of the survey indicated that participation of women (female-headed households and household wives) was more visible in vegetables, oilseeds, pulses, roots and tubers, and fruits production activities as compared to crop production activities of the surveyed study area.

Table 4.9: Proportion of Household Headship in Vegetables, Oilseeds, Pulses, Roots and Tubers, and Fruits Production Activities

Types of activities	Responses	Household headship status							
		MHHs (n=96)		FHHs (n=34)		HHWs (n=62)		Total (n=192)	
		Frequency	% share	Frequency	% share	Frequency	% share	Frequency	% share
Seedbed preparation	Yes	44	22.9	20	10.4	10	5.2	74	38.5
	No	52	27.1	14	7.3	52	27.1	118	61.5
Furrowing	Yes	44	22.9	20	10.4	10	5.2	74	38.5
	No	52	27.1	14	7.3	52	27.1	118	61.5
Planting or transplanting	Yes	44	22.9	20	10.4	40	20.8	104	54.2
	No	52	27.1	14	7.3	22	11.5	88	45.8
Cultivating and weeding	Yes	44	22.9	20	10.4	12	6.3	76	39.6
	No	52	27.1	14	7.3	50	26	116	60.4
Harvesting	Yes	44	22.9	20	10.4	41	21.4	105	54.7
	No	52	27.1	14	7.3	21	10.9	87	45.3
Transporting	Yes	42	21.9	20	10.4	41	21.4	103	53.6
	No	54	28.1	14	7.3	21	10.9	89	46.4
Marketing	Yes	44	22.9	20	10.4	41	21.4	105	54.7
	No	52	27.1	14	7.3	21	10.9	87	45.3

Source: Field survey data (2010)

4.1.3 Gender Differences or Roles in Livestock Production Activities

Out of 192 sample respondents, male-headed households share for about 12.5% in housing, feeding, milking, releasing livestock for grazing, herding and grazing, watering, health care, and marketing, 12% in cleaning barn, collecting dung and heating, and 8.9% in caring for chicken and calves. Female-headed households share nothing in housing, 2.1% in cleaning barn, collecting dung and heating, and herding and grazing, 3.1% in feeding, health care, caring for chicken and calves, and marketing, and 2.6% in milking, releasing livestock for grazing, and watering. Household wives also have a share in these activities that account for about 0.5% in cleaning barn, 4.2% in collecting dung and heating, 10.9% in feeding, caring for chicken and calves, and marketing, 10.4% in milking, releasing livestock for grazing, and watering, 8.9% in health care, and none in housing, herding and grazing (see table 4.10). In these types of livestock production activities, female-headed households can do all tasks except housing. However, they can use community labour exchange locally known as 'Akoch' for constructing house or Barn. Household wives also never do housing, herding and grazing, as their husbands are responsible for doing such activities. Because of household work burden and time constraint, in most cases they do not participate in herding and grazing of livestock at distant grazing areas. Although women's proportion in livestock production is very less as compared to men, they are very active in livestock management activities such as cleaning barn, collecting dung and heating, feeding, milking, releasing livestock for grazing, watering, health care, caring for chicken and calves, and marketing. In Chicken production process, women (particularly household wives) dominated the management as compared to men.

Table 4.10: Proportion of Household Headship Status in Livestock Production Activities

Types of activities	Responses	Household headship status							
		MHHs (n=96)		FHHs (n=34)		HHWs (n=62)		Total (n=192)	
		Frequency	% share	Frequency	% share	Frequency	% share	Frequency	% share
Housing	Yes	24	12.5	-	-	-	-	24	12.5
	No	72	37.5	34	17.7	62	32.3	168	87.5
Cleaning barn	Yes	23	12	4	2.1	1	0.5	28	14.6
	No	73	38	30	15.6	61	31.8	164	85.4
Collecting dung and heating	Yes	23	12	4	2.1	8	4.2	35	18.2
	No	73	38	30	15.6	54	28.1	157	81.8
Feeding	Yes	24	12.5	6	3.1	21	10.9	51	26.6
	No	72	37.5	28	14.6	41	21.4	14	73.4
Milking	Yes	24	12.5	5	2.6	20	10.4	49	25.5
	No	72	37.5	29	15.1	42	21.9	143	74.5
Releasing livestock for grazing	Yes	24	12.5	5	2.6	20	10.4	49	25.5
	No	72	37.5	29	15.1	42	21.9	143	74.5
Herding and grazing	Yes	24	12.5	4	2.1	-	-	28	14.6
	No	72	37.5	30	15.6	62	32.3	164	85.4
Watering	Yes	24	12.5	5	2.6	20	10.4	49	25.5
	No	72	37.5	29	15.1	42	21.9	143	74.5
Health care	Yes	24	12.5	6	3.1	17	8.9	49	24.5
	No	72	37.5	28	14.6	45	23.4	145	75.5
Caring for chicken and calves	Yes	17	8.9	6	3.1	21	10.9	44	22.9
	No	79	41.1	28	14.6	41	21.4	148	77.1
Marketing	Yes	24	12.5	6	3.1	21	10.9	51	26.6
	No	72	37.5	28	14.6	41	21.4	141	73.4

Source: Field survey data (2010)

4.1.4 Gender Differences or Roles in off and Non-Farm Activities

Men and women can also do off and non-farm activities as a means for their living in the study area. Out of 192 sample respondents, the percentage share of male-headed households were 23.4% in wage labour, 19.8% in fishing, 43.2% in hunting, 22.4% in collecting wild food during stress period, 32.3% in collecting wild honey, 19.8% in selling fish products, and 21.4% in selling woody tree products. While that of female-headed households were 2.1% in wage labour, 7.3% in fishing and selling fish products, 17.7% in collecting wild food during stress period and selling of local wine and alcohols. Household wives on the other hand share for about 9.4% in fishing, 32.3% in collecting wild food during stress period, and selling of local wine and alcohols, and 8.3% in selling fish products (see table 4.11). The survey also indicates that male-headed households share nothing in selling of local wine and alcohols as society assign such roles to women exclusively. In a contrary, female-headed households are not responsible for hunting, collecting wild honey, and selling woody tree products. Household wives are not responsible for these tasks including wage labour because of gender division of labour as well as household work burden. Men and women play a great roles in these off and non-farm activities as coping strategies during food stress periods as well as means for household livelihood diversification of the surveyed study area.

Table 4.11: Percentage share of Household Headship in off and Non-Farm Activities

Types of activities	Responses	Household headship status							
		MHHs(n=96)		FHHs (n=34)		HHWs (n=62)		Total (n=192)	
		Frequency	% share	Frequency	% share	Frequency	% share	Frequency	% share
Wage labour	Yes	45	23.4	4	2.1	-	-	49	25.5
	No	51	26.6	30	15.6	62	32.3	143	74.5
Fishing	Yes	38	19.8	14	7.3	18	9.4	70	36.5
	No	58	30.2	20	10.4	44	22.9	122	63.5
Hunting	Yes	83	43.2	-	-	-	-	83	43.2
	No	13	6.8	34	17.7	62	32.3	109	56.8
Collecting wild food during stress period	Yes	43	22.4	34	17.7	62	32.3	139	72.4
	No	53	27.6	-	-	-	-	53	27.6
Collecting wild honey	Yes	62	32.3	-	-	-	-	62	32.3
	No	34	17.7	34	17.7	62	32.3	130	67.7
Selling of local wine and alcohols	Yes	-	-	34	17.7	62	32.3	96	50
	No	96	50	-	-	-	-	96	50
Selling fish products	Yes	38	19.8	14	7.3	16	8.3	68	35.4
	No	58	30.2	20	10.4	46	24	124	64.6
Selling woody tree products	Yes	41	21.4	-	-	-	-	41	21.4
	No	55	28.6	34	17.7	62	32.3	151	78.6

Source: Field survey data (2010)

4.1.5 Gender Differences or Roles in Domestic Household Activities

The survey also examined men's and women's roles in domestic household reproductive activities. The statistical results of the surveyed study area indicated that, out of 192 sample respondents, male-headed households share a proportion of about 4.7% in bearing and caring for children, caring for sick and elderly household members, 50% in constructing and maintaining house and fence, household security and decision-making. They are not responsible for tasks such as preparing/cooking food, cleaning house, fetching water, firewood collection, and pounding grains with the help of local pestle and mortar, these culturally shaped by society as women's roles. Female-headed households share for about 17.7% in preparing/cooking food, bearing and caring for children, caring for sick and elderly household members, household security and decision-making, cleaning house, fetching water, firewood collection, and pounding grains with the help of local pestle and mortar. They share nothing in constructing and maintaining house and fence. However, they do such activity through 'Akoch', a local approach for labour pooling or exchange. Whereas household wives account for about 32.3% in preparing/cooking food, bearing and caring for children, caring for sick and elderly household members, cleaning house, fetching water, firewood collection, and pounding grains with the help of local pestle and mortar (see table 4.12). They share nothing in constructing and maintaining house and fence, and control household security and decision-making, as their husbands responsible for these activities. Generally, women work burden is more visible in unpaid domestic household activities, where they are benefiting nothing, as compared to men in the surveyed study area.

Table 4.12: Percentage Share of Household Headship in Domestic Household Activities

Types of activities	Responses	Household headship status							
		MHHs(n=96)		FHHs (n=34)		HHWs (n=62)		Total (n=192)	
		Frequency	% share	Frequency	% share	Frequency	% share	Frequency	% share
Preparing/cooking food	Yes	-	-	34	17.7	62	32.3	96	50
	No	96	50	-	-	-	-	96	50
Bearing and caring for children	Yes	9	4.7	34	17.7	62	32.3	105	54.7
	No	87	45.3	-	-	-	-	87	45.3
Caring for sick and elderly household members	Yes	9	4.7	34	17.7	62	32.3	105	54.7
	No	87	45.3	-	-	-	-	87	45.3
Constructing and maintaining house and fence	Yes	96	50	-	-	-	-	96	50
	No	-	-	34	17.7	62	32.3	96	50
Household security and decision making	Yes	96	50	34	17.7	-	-	130	67.7
	No	-	-	-	-	62	32.3	62	32.3
Cleaning house	Yes	-	-	34	17.7	62	32.3	96	50
	No	96	50	-	-	-	-	96	50
Fetching water	Yes	-	-	34	17.7	62	32.3	96	50
	No	96	50	-	-	-	-	96	50
Firewood collection	Yes	-	-	34	17.7	62	32.3	96	50
	No	96	50	-	-	-	-	96	50
Pounding grains with the help of local pestle and mortar	Yes	-	-	34	17.7	62	32.3	96	50
	No	96	50	-	-	-	-	96	50

Source: Field survey data (2010)

4.1.6 Gender Differences in Daily Working Time for Productive and Reproductive Activities

The survey statistics of the study area indicated that men could work for about 6-10 hours in productive activities, 1-3 hours in reproductive activities and 8-12 hours in both productive and reproductive activities per day as compared to women with 1-7 hours, 6-16 hours, and 13-17 hours per day in these activities respectively. An independent-samples t-test for mean comparison indicated that there was a statistically significant different in the mean scores of daily **productive time** in hours for men/males (N = 96, M = 8.64, Std.D = 0.95) and women/females (N = 96, M = 3.83, Std.D = 2.13); t (df = 132) = 20, p = 0 (two-tailed). The magnitude of the differences in means (mean difference = 4.80, 95% CI: 4.33 to 5.27) was very large effect (eta squared $= 0.68 = \frac{t^2}{t^2 + (N1 + N2 - 2)}$) using guidelines (proposed by Cohen, 1988) of 0.01 for small effect, 0.06 for medium effect and 0.14 for large effect. An independent-samples t-test for mean comparison also indicated a statistically significant different in the mean scores of daily **reproductive time** in hours for men/males (N = 96, M = 1.82, Std.D = 0.57) and women/females (N = 96, M = 11.04, Std.D = 2.45); t (df = 105) = -36, p = 0 (two-tailed). The magnitude of the differences in means (mean difference = -9.23, 95% CI: -9.74 to -8.72) was very large effect (eta squared = 0.87) using guidelines (proposed by Cohen, 1988) of 0.01 for small effect, 0.06 for medium effect and 0.14 for large effect. Finally, an independent-samples t-test indicated a statistically significant different in the mean scores of both daily **productive and reproductive time** in hours for men/males (N = 96, M = 10.45, Std.D = 0.90) and women/females (N = 96, M = 14.88, Std.D = 1.40); t (df = 162) = -26, p = 0 (two-tailed). The magnitude of the differences in means (mean difference= -4.42, 95% CI: -4.76 to -4.09) was very large effect (eta squared = 0.78) using guidelines (proposed by Cohen, 1988) of 0.01 for small effect, 0.06 for medium effect and 0.14 for large effect.

These statistical figures show that women have more work burden/load as compared to men in rural household livelihood activities of the surveyed study area. Women spent more time (in hours) per day in unpaid household reproductive activities as compared to men dominating the productive ones (see table 4.13 and 4.14).

Table 4.13: Group Statistics of Daily Working Time in Hours for Productive and Reproductive Activities

Statistics					
Dependent Variables	Gender	N	Mean	Std. Deviation	Std. error of mean
Productive time	Men	96	8.64	0.95	0.097
	Women	96	3.83	2.13	0.217
Reproductive time	Men	96	1.82	0.57	0.058
	Women	96	11.04	2.45	0.249
Total working time for both	Men	96	10.45	0.90	0.092
	Women	96	14.88	1.40	0.143

Sources: Field survey data (2010)

Table 4.14: Independent Samples Test for men's and Women's Working Time in Hours per Day

Dependent variables	Assumptions	Statistics								
		Levene's Test for Equality of variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean difference	Std. error difference	95% confidence interval of the difference	
									Lower	Upper
Time for productive activities	Equal variances assumed	142	0.000	20	190	0.000	4.80	0.24	4.33	5.27
	Equal variances not assumed			20	132	0.000	4.80	0.24	4.33	5.27
Time for reproductive activities	Equal variances assumed	138	0.000	-36	190	0.000	-9.23	0.26	-9.73	-8.72
	Equal variances not assumed			-36	105	0.000	-9.23	0.26	-9.74	-8.72
Time for productive and reproductive activities	Equal variances assumed	30	0.000	-26	190	0.000	-4.42	0.17	-4.76	-4.09
	Equal variances not assumed			-26	162	0.000	-4.42	0.17	-4.76	-4.09

Sources: Field survey data (2010)

4.2 Gender Differences in Access to and Control Over Household Resources and Agricultural Extension Services

This section discusses access and control profile, livelihood assets/opportunities, power and decision-making aspects of gender analysis frameworks. It includes livelihood assets/opportunities and agricultural extension services men and women have access to and control over, decision-making they participate and usually control in rural household livelihoods of the study area.

4.2.1 Gender Differences in Access to and Control Over Household Resources

Access to and Control over Farmland (Natural Asset)

Land is a fundamental factor of agricultural production for household livelihood improvement of rural people living in the study area, where majority are women. The survey statistics indicated that, out of 192 sample of respondents, about 50% of male-headed households and 17.7% of female-headed households were access to and control over farmland, but only 5.2% of household wives were access to farmland. Although household wives may have access to farmland, the overall control over it is still on the hands of their husbands, they do not control their farmland. Generally, 50% of men/male-headed households were access to and control over farmland, while 22.9% of women (female-headed households and household wives) were access to farmland, but only 17.7% of them (all female-headed households) responded that they could control over farmland (see table 4.15). These statistical figures indicated that women have less access to and control over farmland in the surveyed study area. Although women have right to use land for production purpose, their access were determining by many different factors, particularly inheritance customary laws and demographic factors. They become access to and control over farmland only either after the dead of their husbands or when they divorced by their husbands. These widowed or divorced women can replace their husbands' position as a head of household; but they are still under the control of their husbands' relatives. This is because of patrilineal customary inheritance system, which is widely practiced by the Anuak ethnic group, whereby property passes through male line to keep up household property for the children.

Access to and control over farm labour (Human asset)

Out of 192 sample of respondents, the percentage share for male-headed households who have access to and control over farm labour, particularly community exchange labour locally known as 'Akoch', were 50%; while that of female-headed households were 5.2% of the survey respondents. The percentage share for household wives who have access to farm labour was very less of about 0.5% as compared to other categories. Because household resources are on the hands of their husbands, in most cases they do not control over labour for farm production. Generally, the percentage share of men who have access to farm labour were 50%; while that of women (female-headed households and household wives) were 5.7% of sample respondents. About 50% of men responded that they have right to control over farm labour; while that of women (female-headed households) were 5.2 % of sample respondents (see table 4.15). Women faced many obstacles for access to and control over farm labour like collateral/property ownership, household headship, poverty and other factors in order to hire labour. As a result, women have less access to and control over farm labour in the surveyed study area.

Access to and control over Livestock (Cattle, Sheep, Goats and Chicken) (Natural asset)

Out of 192 sample of respondents, about 13% of male-headed households/men were access to and control over livestock, while that of female-headed household/women share for about 3.1% of survey respondents (see table 4.15). These survey statistics indicated that household wives share nothing for access to and control over livestock, as these owned and controlled by their husbands. Generally, women have less access to and control over livestock as compared to men counterpart in the surveyed study area.

Access to and control over farm equipments and implements/tools (Physical asset)

The survey statistics indicated that, out of 192 sample of respondents, about 50% and 17.7% of male and female-headed households respectively were access to and control over farm equipments and implements/tools. While 5.2% of household wives were access to farm equipments and implements/tools and none of them have right to control over these farm equipments and tools. Because household wives of the surveyed study area are using their husbands' farm equipments and implements/tools for farm production, in most cases they have no power to control over them. In other word, lack of household property ownership is what makes them less control over equipments and implements/tools. Thus, 50% and 22.9% of men/male-headed households and women (female-headed households and household wives) respectively were access to farm equipments and implements/tools. However, men and female-headed households of about 50% and 17.7% of survey respondents mentioned that they have right to control over farm equipments and implements/tools other than household wives (see table 4.15). This generally indicates that women have less access to and control over farm equipments and implements/tools as compared to men counterpart.

Access to and control over household income and marketing products (Financial asset)

Out of 192 sample of respondents, 50% of male-headed households were access to and control over household income and marketing products, while female-headed households share for about 17.7% of the survey respondents. About 32.3% of household wives were access to, but most of them mentioned that they do not control over household income and marketing products. This is because of lacking household property ownership, where their husbands own and control everything of the household. Generally, 50% of men/male-headed households were access to and control over household income and marketing products in the study area. While 50% of women (female-headed households and household wives) were access to, but 17.7% of them (all female-headed households) reported that they could control household income and marketing products (see table 4.15). Thus, women have less access to and control over household income and marketing products as compared to men in the surveyed study area.

Table 4.15: Percentage Share of Men's and Women's Access to and Control over Household Livelihood Resources

Household livelihood resources	Access to and control over resources	Responses	Household headship status							
			MHHs (n=96)		FHHs (n=34)		HHWs (n=62)		Total (n=192)	
			Frequency	% share	Frequency	% share	Frequency	% share	Frequency	% share
Farm land	Access	Yes	96	50	34	17.7	10	5.2	140	72.9
		No	-	-	-	-	52	27.1	52	27.1
	Control	Yes	96	50	34	17.7	-	-	130	67.7
		No	-	-	-	-	62	32.3	62	32.3
Labour (exchange)	Access	Yes	96	50	10	5.2	1	0.5	107	55.7
		No	-	-	24	12.5	61	31.8	85	44.3
	Control	Yes	96	50	10	5.2	-	-	106	55.2
		No	-	-	24	12.5	62	32.3	86	44.8
Livestock (Cattle, Sheep, Goats and Chicken)	Access	Yes	25	13	6	3.1	-	-	31	16.1
		No	71	37	28	14.6	62	32.3	161	83.9
	Control	Yes	25	13	6	3.1	-	-	31	16.1
		No	71	37	28	14.6	62	32.3	161	83.9
Farm equipments and implements/tools	Access	Yes	96	50	34	17.7	10	5.2	140	72.9
		No	-	-	-	-	52	27.1	52	27.1
	Control	Yes	96	50	34	17.7	-	-	130	67.7
		No	-	-	-	-	62	32.3	62	32.3
Household income	Access	Yes	96	50	34	17.7	62	32.3	192	100
		No	-	-	-	-	-	-	-	-
	Control	Yes	96	50	34	17.7	-	-	130	67.7
		No	-	-	-	-	62	32.3	62	32.3
Marketing products	Access	Yes	96	50	34	17.7	62	32.3	192	100
		No	-	-	-	-	-	-	-	-
	Control	Yes	96	50	34	17.7	-	-	130	67.7
		No	-	-	-	-	62	32.3	62	32.3

Source: Field survey data (2010)

4.2.2 Gender Differences in Access to and Control Over Agricultural Extension Services

The agricultural extension services that men and women use or access in the study area are mainly improved seeds (physical asset/service), pesticides/insecticides (physical asset or service), and extension education and training services (human asset/service). The survey statistics indicated that, out of 192 sample of respondents, 40.1% of male-headed households were access to and control over improved seeds, while female-headed households account for about 16.1% of survey respondents. About 14.6% of male-headed households were access to and control over pesticides/insecticides, but female-headed households shared less proportion of about 5.7% of survey respondents. Regarding extension education and training services, 28.1% of male-headed households were access to and control over these services, while that of female-headed households were 12% of survey respondents (see table 4.16).

Although few of household wives have owned farmland, most of them mentioned that they are not access to and control over these agricultural extension services because of many different obstacles such as household headship, household property ownership and collateral, poverty, illiteracy and institutional top-down extension systems. Household wives of the study area have been playing a great role in post-harvest and livestock activities, but they mostly missed from participation in agricultural extension services. Even female-headed households faced these obstacles for access and control over agricultural extension services in the surveyed study area. In most cases, they missed from benefiting and participating in extension services either because of not yet identified as heads of household as long as their husbands died or ignorance from extension organizations. Hence, women have less access to and control over agricultural extension services as compared to men in the surveyed study area.

Table 4.16: Percentage Share of Men's and Women's Access to and Control over Agricultural Extension Services

Agricultural extension services	Access to and control over services	Responses	Household headship status							
			MHHs (n=96)		FHHs (n=34)		HHWs (n=62)		Total (n=192)	
			Frequency	% share	Frequency	% share	Frequency	% share	Frequency	% share
Improved seeds	Access	Yes	77	40.1	31	16.1	-	-	108	56.3
		No	19	9.9	3	1.6	62	32.3	84	43.8
	Control	Yes	77	40.1	31	16.1	-	-	108	56.3
		No	19	9.9	3	1.6	62	32.3	84	43.8
Pesticides/insecticides	Access	Yes	28	14.6	11	5.7	-	-	39	20.3
		No	68	35.4	23	12	62	32.3	153	79.7
	Control	Yes	28	14.6	11	5.7	-	-	39	20.3
		No	68	35.4	23	12	62	32.3	153	79.7
Extension education and training services	Access	Yes	54	28.1	23	12	-	-	77	40.1
		No	42	21.9	11	5.7	62	32.3	115	59.9
	Control	Yes	54	28.1	23	12	-	-	77	40.1
		No	42	21.9	11	5.7	62	32.3	115	59.9

Source: Field survey data (2010)

4.2.3 Men's and Women's Decision-Making in Household Livelihoods

The survey respondents also interviewed based on general situations of men and women with respect to household power relations in their livelihood processes. Out of 192 sample respondents, the survey statistics indicated a higher proportion of those who responded that men dominate the decision as compared to women in decisions on farm inputs (using family labour, hire and exchange labour, buying inputs) = 76.6%, production decisions = 86.5%, marketing decisions = 69.8%, investment decisions (equipments/tools, labour & animals) = 76%, household income expenditure = 71.9%, decision-making on land use = 88%, and household consumption = 66.7%. While that of women accounts for 0.5% in production decisions and 1% in each of the decisions such as farm inputs, marketing, investment, household income expenditure, land use, and household consumption respectively. About 83.9% of survey respondents responded that women dominate the decisions in reproductive decisions as compared to men with none proportion.

The proportion of sample respondents who responded that **'**both have equal influence/say**'** were 4.7% in decisions on farm inputs, 2.6% in production decisions, 6.8% in marketing decisions, 4.7% in investment decisions, 2.6 in reproduction decisions, 7.8% in household income expenditure, 2.6% in decision-making on land use and 6.3% in household consumption. The percentage share of survey respondents who responded that **'**both can decide, but men dominate the decisions**'** were 17.2% in decisions on farm inputs, 9.9% in production decisions, 21.9% in marketing decisions, 17.7% in investment decisions, 4.7% in reproduction decisions, 18.8% in household income expenditure, 7.8% in decision-making on land use and 21.9% in household consumption. Finally, the survey respondents also reported that **'**both can decide, but women dominate the decisions**'** were 8.9% in reproduction decisions, 4.2 % in household consumption and 0.5% in each of the decisions such as farm inputs, production, marketing, investment, household income expenditure, and land use respectively (see table 4.17). Although women may decide in some cases, in reality they decide after the decisions have already made by their husbands or men counterpart. These statistical figures indicated that men dominate the overall household livelihood decisions as compared to their women counterpart in the survey area. In other word, women's voice to decide what they feel relevant for addressing household livelihood conditions and better improvement is soundless from the side of their husbands.

Table 4.17: Percentage Share of Respondents Regarding Men's and Women's Decision-Making in Household Livelihoods

Household livelihood decisions	Men (%)	Women (%)	Both have equal influence/say (%)	Both, but men have more influence/dominate the decision (%)	Both, but women have more influence/dominate the decision (%)
Decisions on farm inputs (using family labour, hire and exchange labour, buying inputs)	76.6	1	4.7	17.2	0.5
Production decisions	86.5	0.5	2.6	9.9	0.5
Marketing decisions	69.8	1	6.8	21.9	0.5
Investment decisions (equipments/tools, labour & animals)	76	1	4.7	17.7	0.5
Reproduction decisions	-	83.9	2.6	4.7	8.9
Household income expenditure	71.9	1	7.8	18.8	0.5
Decision-making on land use	88	1	2.6	7.8	0.5
Household consumption	66.7	1	6.3	21.9	4.2

Source: Field survey data (2010)

4.3 Constraints men and Women Faced for Access to and Control Over Livelihood Resources and Agricultural Extension Services

This section includes analysis of factors and trends or constraints aspect of gender analysis frameworks. Men and women faced many different constraints, related to demographic, social, economical, cultural, and institutional conditions, for access to and control over rural household livelihood resources and agricultural extension services in the study area. The main ones are household headship, top-down institutional systems, property ownership and collateral, work burden/load, illiteracy, culture/tradition, poverty and poor infrastructure.

Household Headship

Women, particularly household wives, faced this constraint for access to and control over rural household livelihood resources and agricultural extension services. Out of 192 sample of respondents, about 32.3% of household wives mentioned that they fail difficulty for access to and control over rural household livelihood resources and agricultural extension services (see table 4.18). This is because these resources and extension services are under the control of their heads of household or husbands. In the surveyed study area, women never got identity as household heads as long as their husbands are still alive. In Anuak community, women identified as heads of households when they either widowed or divorced/separated because of disagreements with their husbands.

Top-Down Institutional Systems

Out of 192 sample respondents, about 17.7% of female-headed households and 32.3% of household wives mentioned top-down institutional systems of extension organizations as their constraint hindered them from access to and control over agricultural extension services (see table 4.18). Because extension organizations of the area followed a kind of household heads-oriented system, where household heads focused exclusively, household wives are missing from benefiting and participating in extension services. Even female-headed households faced this obstacle for access to and control over agricultural extension services either because of not yet identified as heads of household as long as their husbands died or ignorance from extension organizations.

Case study 1: 2010 survey in Gog District

Ajulu Omod is a divorced women of 38 years old living in Gog-dipach administrative kebele of Gog district/woreda/. She explained how household headship and institutional top-down systems affect her accessibility to agricultural extension services.

Photo 1 Ajulu Omod from Gog-dipach (2010)

She faced challenges for access to agricultural extension services as stated that:

"I am the first wife among of the three wives of my husband. However, my husband divorced me three years later because of household disagreements and disputes with other of his wives. I started living alone with my children in a separate home and lead my life without any support from him until now. Starting from the time when I become a divorced woman and head my household, I have denied by extension services such as improved seeds, pesticides and training services. At the time I divorced until now, I am not getting extension services. Last year when development agents distributed improved seeds to household heads of this administrative kebele, I claim for my right why they did not include my name in the extension packages. They mentioned that you are not identified as head of household as well as your farm is not measured for extension packages. Then I reported the case to agricultural and rural development office of the district to include my name as female-headed household so that I could not be missed from benefiting extension services. This month I got identity as female-headed household from the office, my farm measured of 0.50 hectares and now I am waiting next cropping season for getting extension packages or services".

Property Ownership and Collateral

Household wives, account for about 32.3% out of 192 sample respondents, mentioned this as their main obstacle for access to and control over household livelihood resources and extension services (see table 4.18). This is because they have rarely owned household resources like farmland and income under their own name. Household wives, who have owned small farmland, faced difficulty for access to community exchange labour locally known as 'Akoch' (for temporary borrowing through agreement) and informal credit/money lenders, as these institutions based on collateral for paying back a loan. The Anuak ethnic group of the study area culturally practices patrilineal system of property inheritance whereby properties pass through male line. For instance, if a man dies, his son(s) will be in charge of household estates/all properties. If the man has no son(s), the nearest male relative would be in charge of all household properties. Many women are vulnerable to dispossession either at the dissolution of their marriage or the death of their husbands.

Case study 2: 2010 survey in Gog District

Thwol Olock is a widowed women of 45 years old living in Gog-jangjor administrative kebele of Gog district/woreda/.

Photo 2 Thwol Olock from Gog-jangjor (2010)

Thwol Olock explained, when she mentioned property ownership and collateral as one challenge she faced for access to local informal labour exchange known as 'Akoch', that:

"Before the dead of my husband, when I was simply a household wife, I do have a small farm around homestead. I discussed with my husband to provide two goats of 25 goats he have owned for labour investment in my farm during weed infestations. He said that "these goats are not for farm inputs investment; rather I keep them as marriage gifts that should be given to your relatives". Again last cropping season, while I become widowed woman, my farm of about 0.45 hectares faced weed infestations. I hired 10 individuals through 'Akoch" with the agreement of 300 Ethiopian birr to be paying back within one month. I reported the case to the brother of my husband, to give me three of goats my husband inherited to him when he died four years later. He refused to give me these goats that I could sell them for paying back a loan to 'Akoch' group. As he said, "Your husband ordered me when he died, to keep these goats he inherited as marriage gifts for his son". Then I default to payback 300 birr of 'Akoch' group until harvesting time of farm outputs. After harvesting time of my farm outputs, I sold some amount of farm products and payback the 300 birr of 'Akoch' group. In this cropping season, my farm also faced weed infestations as you can see (See photo 2). But I fear to contact 'Akoch' group again for their labour sharing through borrowing, because of default that I may faced again as well as they may request flexible assets I owned as collateral guarantee for paying back a loan .

Work Burden/Load

Out of 192 sample respondents, women respondents with a proportion of about 50% (17.7% female-headed households and 32.3% household wives) mentioned household work burden as their main obstacle for access to productive daily tasks and extension services (see table 4.18). In most cases, they are less mobile to access to environmental information relevant for livelihood improvement because of household unpaid workload. They assigned to a continuous, no gap to take rest, unpaid reproductive tasks such cooking, fetching water, cleaning a house, feeding children, and many others in their daily life.

Illiteracy

As the survey respondents interviewed based on what constraints they faced, out of 192 sample respondents, about 28.6 % of male-headed households, 15.1% of female-headed households and 26.6% of household wives reported that illiteracy as one of their constraints for access to and control over household resources and extension services (see table 4.18). The survey statistics on educational status indicated that 67.7% (men=27.6 and women=40.1%) of survey respondents were illiterate. However, the survey respondents from grade 1-4 were also mentioned illiteracy as their constraint because they could not read and understand written information in a prefect manner. Because they are illiterate, many of them faced inability to understand information on new technologies, access to sources of information for their support, and claim for their rights. Women also lack knowledge and experience on agricultural practices as compared to men counterpart.

Culture/Tradition

Out of 192 sample respondents, the percentage of female-headed households and household wives reported this constraint were 17.7% and 32.3% respectively (see table 4.18). Men and women behave in a certain ways in their livelihood activities culturally shaped by society of a particular geographical area. In the study area, women assigned to unpaid reproductive tasks such as cooking, firewood collection, fetching water, pounding grains, and care for children; but it is taboos for them to clear land under bush, ploughing, weeding, hoeing, and milking. This culturally gender division of labour contributes to unequal access to and control over resources and extension services in the surveyed study area.

Poverty

The Anuak people of the surveyed study area called Poverty as **'**Chan**',** meaning the state of not having enough household livelihood resources/assets or benefits that most people have, particularly income, farm, livestock, agricultural products, farm implements and shelter and many others to take care of basic needs such as food, clothing and housing. They also give a code to a man as poor (Chan) when he has no sisters/daughters, as he will not get marriage gifts, either in terms of money, livestock and cultural marriage materials (Dimui (an Anuak necklet) = 2500 Ethiopian birr per one), from his sister's/daughter's husband. A man, who has adequate of these marriage gifts, will have potential capability to cope during food stress periods. Out of 192 sample respondents, the proportion of survey respondents who reported poverty as their main obstacle for access to and control over household resources and extension services were 40.1% for male-headed households, 15.6% for female-headed households and 32.3% for household wives (see table 4.18). As they mentioned, in most cases they have no income to buy agricultural inputs, unable to own assets, lack adequate health, clean water and educational services. They also faced right insecurity and powerlessness to participate in decision-making process for their livelihoods. Furthermore, they are more vulnerable to shocks such as drought, civil conflicts and river flood that hindered them from access to and control over livelihood resources and extension services. Thus, men and women of the study area are more incapable to cope with their household livelihood conditions, because of being poorer and poorer.

Poor Infrastructure

Out of 192 sample respondents, the percentage share of survey respondents who mentioned this as their main obstacle for access to and control over household functions and extension services were 44% for male-headed households, 15.6% for female-headed households, and 8.3% for household wives (see table 4.18). As men and women mentioned, poor infrastructures such as poor roads, transportation means like vehicles, pack animals, carrying devices and other facilities, weak administrative and extension systems, unavailability and ineffective farmers training centers (FTCs) are the main constraints causes inefficient household functions and delivering extension services in the rural areas of the study.

Table 4.18: Percentage Share of Men and Women in Constraints they Faced for Access to and Control over Household Livelihood Resources and Agricultural Extension Services

Constraints	Respondents	Household headship status							
		MHHs (n=96)		FHHs (n=34)		HHWs (n=62)		Total (n=192)	
		Frequency	% share	Frequency	% share	Frequency	% share	Frequency	% share
Household headship	Valid	-	-	-	-	62	32.3	62	32.3
	None	96	50	34	17.7	-	-	130	67.7
Property ownership and collateral	Valid	-	-	-	-	62	32.3	62	32.3
	None	96	50	34	17.7	-	-	130	67.7
Work burden/load	Valid	-	-	34	17.7	62	32.3	96	50
	None	96	50	-	-	-	-	96	50
Illiteracy	Valid	55	28.6	29	15.1	51	26.6	135	70.3
	None	41	21.4	5	2.6	11	5.7	57	29.7
Culture/tradition	Valid	-	-	34	17.7	62	32.3	96	50
	None	96	50	-	-	-	-	96	50
Poverty	Valid	77	40.1	30	15.6	62	32.3	169	88
	None	19	9.9	4	2.1	-	-	23	12
Top-down institutional systems	Valid	-	-	34	17.7	62	32.3	96	50
	None	96	50	-	-	-	-	96	50
Poor infrastructure	Valid	85	44.3	30	15.6	16	8.3	131	68.2
	None	11	5.7	4	2.1	46	24	61	31.8

Source: Field survey data (2010)

5. Conclusions and Recommendations

5.1 Conclusions

Gender equality and equity in livelihood resource allocation and service provision is an important factor in rural development approaches. Gender based approaches help development workers or policy makers to consider men's and women's issues in development programmes. By conducting a gender analysis and taking into account gender inequalities in development programmes, there is a higher likelihood that such programmes will support the empowerment of disadvantaged and marginalized people, particularly women. However, gender inequality, lack of equity and power imbalance in resource allocations, extension service distributions and decision-making processes still exist within communities living in rural study area. Many literatures indicate that women mainly engaged in unpaid reproductive roles, have more work burden, disadvantaged, spent more time per day in household tasks, and less access to and control over resources and agricultural extension services. The reviewed literatures indicate also that women faced many demographic, socio-economic, political, cultural and institutional conditions for access to and control over these resources and services as compared to men in rural areas of many countries. This study reveals significant differences between men and women in terms of roles and responsibilities, access to and control over livelihood resources and extension services in rural study area. Household headship is one main determinant that influence and shaped gender roles and responsibilities, access to and control over livelihood resources and agricultural extension services in rural households of the study area. In the rural study area, men have more predominated productions such as crops, livestock, and production of vegetables, oilseeds, pulses, roots and tubers, and fruits as compared to women. Women, both female headed households and household wives who owned farmland, have more contribution in production of vegetables, oilseeds, pulses, roots and tubers, and fruits than other types of productions. Although female headed households engaged in pre-harvest activities and livestock productions, women's roles are more visible in post-harvest activities and livestock managements. Women faced labour constraint and problems related to work culture in pre-harvest and livestock management activities such as land clearing, ploughing, weeding and hoeing, housing, herding and grazing. Men engaged in all of these activities without any restriction as compared to women counterpart.

Men and women also play a great role in off and non-farm activities, as means to diversify their household livelihoods and cope with shocks during food stress periods. Women are primarily engaged in unpaid domestic household activities, where they are benefiting nothing, as compared to men counterpart. They also have more disadvantaged from household work burden, spent more time per day and benefit less from rural household livelihood opportunities as compared to men. The study also reflects gender inequality, power imbalance and unfair distribution of rural household resources and agricultural extension services within household categories. Men have no restriction for access to and control over livelihood resources and agricultural extension services, except in cases of incapability and other conditions. Women have less access to and control over household livelihood resources and agricultural extension services as compared to men. It is only in case of general conditions such as illiteracy, poverty and poor infrastructure that men faced for access to and control over livelihood resources and agricultural extension services. Women faced all demographic, social, economic, cultural and institutional conditions such as household headship, property ownership and collateral, work burden, illiteracy, culture/tradition, poverty, top-down institutional systems and poor infrastructure for access to and control over livelihood resources and agricultural extension services. Female headed households have access to and control over livelihood resources and extension services, but they mostly ignored from extension services as well as relatives of widow's husband still control these resources and services. Although household wives have right to use household resources and extension services as well as make substantial contributions to agricultural productions and household well-being, their husbands largely control the overall decision-making process on these resources and services. Thus, women usually suffer from discriminations in household resource allocations, extension service distributions and remain unused human resource in agricultural and rural development programmes of the study area.

5.2 Recommendations

The overall study suggest endeavor efforts from development actors and policy-makers working on agricultural and rural development interventions to implement strategies for gender mainstreaming, sensitization and responsive actions that may incorporate gender-based differences and relations existing between men and women with the ultimate goal of ensuring gender equality, equity and balance in rural areas. Thus, the study suggests the following specific recommendations for bridging the gaps and addressing gender needs in rural development programmes and services of the study area.

1. Gender-sensitive and responsive development activities and services

- Agricultural and rural development actors should acknowledge and incorporate findings regarding differences to what men and women produce (crop, livestock, chicken, vegetables, oilseeds, pulses, fruits, roots and tubers) in their designing and implementation of development programmes and extension services.
- They should also design extension packages or technologies based on specific activities men and women play in the process of these production systems (for instance, post-harvest technologies, livestock and chicken management procedures may be more preferable for women than men).
- Encourage opportunities for expansion of off-and non-farm income generating activities through bringing them in development programmes, paying attention to the environmental issues, in rural areas.
- Provide labour- and time-saving technologies for women, particularly tools and equipments appropriate for their tasks, improved stoves, grinding mills and modern cooking fuels (kerosene and liquefied petroleum gas) that may save and reduce work burden of women as well as protect environmental degradation in rural areas.
- Accounting for women's time use patterns in planning and implementation of development programmes i.e. compatibility of time with their roles and seasonal works.
- Ensuring men's and women's access to resources and services through integrated gender-responsive approaches that will encourage flexibility of extension systems in activities and packages.
- Gender-sensitization of officials as well as development agents at grass root level regarding gender-sensitive extension packages through networking and experience sharing mechanisms.

2. Participatory institutional development systems

- The agricultural and rural development systems of the region should be in a partnership taken into consideration the gender differences and relations existing between men and women in their strategies, programmes, planning and implementation of development activities in a more participatory manner.

- Organizational arrangements and establishment of strong linkage mechanisms that will support women's participation and raise awareness of partners on gender issues as an integral part of agricultural research, extension and utilization, realizing the immense roles women play in agricultural development.
- Because men's and women's roles and priority needs vary over time, gender needs assessment programmes should always be a starting point of agricultural and rural development projects and services.

3. Organizing capacity building programmes and services
   - The capacity of men and women as well as development actors should be build through gender-sensitive programmes such as workshops, training of trainers, farmers training centers (FTCs) and linkage mechanisms that will mobilize men and women toward actions with the overall aim of awareness creation and promoting accessibility of people to information regarding development programmes and services.
   - All responsible partners within household production functions, particularly male-headed households, household wives or women within male-headed households and female-headed households, should be involved in farmers training programmes regarding agricultural extension packages and services.
4. Ensuring implementation of policies and laws on property ownership and inheritance
   - Although a seemingly sound legal framework regarding economic and social equity exists in Ethiopia, implementation of such legal procedures has not sensitized in the rural study area as well as disparities still exist in the implementation of gender equity measures.
   - Thus immediate gender-sensitization actions should be taken regarding legislative measures on rural household resource or property registration, efforts on family code and other social laws that may treat women owned, shared and inherited equally as men.
   - Furthermore, regional land use planning incorporating all issues regarding land registration and land ownership certificate as a guarantee for people living in the study area.
   - However, strategies for implementation of these policies and laws should also reflect political and economical life of local society for assuring sustainability of development interventions.
5. Integrating social services in rural development programmes
   - Because poverty is dynamic in nature, social services such as health, education, water, rights, and financial (saving and micro-credit) services should be made available and integrated with other sectors in rural development programmes and activities.
   - Efforts on strengthening formal as well as informal saving and credit institutions should be made to address conditions for men's and women's access to rural development services.
6. Women's empowerment in development programmes and services
   - Because women are more in a particularly disadvantageous position in rural areas, empowerment for them should be made in development programmes and services through affirmative actions, capacity building/ training, facilitation and networking, improving their access and support to information or services, and raising their visibility in decision-making with the aim of promoting sustainability, equality and equity distribution of resources and services.
   - Strengthening women's political participation and raising awareness of their rights in planning and implementation of programmes.
7. Availability and establishment of infrastructure in rural areas
   - The regional government integrated with national one should pay attention to rural infrastructure development such as roads construction, strong administrative and extension systems, establish and build capacity of farmers training center (FTCs), well organize rural marketing systems, and build capacity of rural development organizations with facilities that may facilitate efficiency and effective delivery of development services and communication of information to the rural disadvantaged and marginalized rural poor people, particularly women.
   - Introducing rural transport technologies i.e. increasing men's and women's access to carrying devices such as donkeys, wheelbarrows, and carts that will reduce work burden, particularly for women.

8. Further Research on Gender Issues

- Gender is a social, economic and cultural roles and relations that society constructed for men and women, which is dynamic through livelihood processes over time in a given geographical location or population groups.
- Therefore, the study suggests further research on gender-based differences in terms of roles and power relations between men and women in rural study areas.

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