ASSESSMENT OF GENDER INEQUALITY IN PARTICIPATION IN COFFEE PRODUCTION AND MARKETING: A CASE OF KIGOMA DISTRICT COUNCIL

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ABSTRACT

Gender inequalities are said to be a stumbling block to development efforts. Conversely inequalities are reported in many agricultural production and marketing. Therefore, understanding of gender participation differences within coffee production and marketing is important in promoting sustainable and equitable opportunities in agriculture. This study was set to assess gender inequalities in participation in coffee production and marketing in Kigoma district council. A cross-sectional research design was adopted and a simple random sampling technique was used to select 120 respondents. The questionnaire and checklist of questions for key informants' interviews and Focus Group Discussion (FGD) were the main instruments used for data collection. Descriptive statistical analysis was used to compute the characteristics and distribution of respondents. Content analysis was used to analyze qualitative data collected from key informants' interviews and FGD. The study found that gender inequalities exist in coffee production and marketing in Kigoma district council. The differences are attributable to differences in power relations with regard to access to and control over resources between women and men. The most profitable activities such as marketing were dominated by men while women dominated less paying activities such as weeding and harvesting. Ordinal logistic regression was used to establish the determinants of participation in coffee production and marketing. Findings revealed majority (64.8% male and 53.1% female) farmers were categorized in the medium level of participation. Furthermore, it was revealed that coffee farmers' levels of participation in coffee production and marketing were significant and negatively influenced by land ownership at ($P<0.05$). Hence the study concludes that there is gender inequality in the participation of coffee production and marketing. On the other hand, the study recommends to the government of Tanzania particularly the ministry of agriculture to ensure gender mainstreaming in the coffee programs.

DECLARATION

I, Siwajibu Ally Selemani, do hereby declare to the senate of the Sokoine University of Agriculture that this dissertation is my original work done within the period of registration and that it has neither been submitted nor being concurrently submitted for a degree award in any other institution.

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DEDICATION

I dedicate this dissertation to my late parents Mzee Ally Selemani and Mama Ashura Omari Suleiman who laid the foundation of my education. They had unconditional love, but today they could not be here seeing me through this final hurdle.

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LIST OF ABBREVIATIONS AND ACRONYMS

CARE	Cooperative for Assistance and Relief Everywhere
DANIDA	Danish International Development Agency
FAO	Food and Agricultural Organization
FGD	Focus Group Discussion
GDP	Gross Domestic Product
ITC	International Trade Forum
IWCA	International Women's Coffee Alliance
NBS	National Bureau of Statistics
NGO's	Non - Governmental Organizations
SPSS	Statistical Package for Social Sciences
SUA	Sokoine University of Agriculture
TACRI	Tanzania Coffee Research Institute
UN	United Nations
UNDESA	United Nations Department of Economics and Social Affairs
UNDP	United Nations Development Programme
UNESCO	United Nations Educational Scientific and Cultural Organisation
UNPAC	United Nations Platform for Action Committee
URT	United Republic of Tanzania
VAEO	Village Agricultural Extension Officer
VEO	Village Executive Officer
VICOBA	Village Community Bank

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background Information

In many developing countries, economic development relies on agriculture as the main source for income and raw materials for industries (URT, 2015). In Tanzania agriculture is the largest sector which provides 66.9% of employment opportunities, accounts for about 23% of GDP, 30 percent of exports and 65% of inputs to the industrial sector (FAO, 2014; URT, 2016).

Worldwide, coffee is cultivated in more than 80 countries primarily in equatorial Latin America, Southeast Asia, India and Africa (Ngeywo *et al.*, 2015). In Tanzania, coffee is one of the major cash crops; others are cotton, cashew nuts, sisal, cloves, sugar, tea, pyrethrum and tobacco. Coffee is ranked as the second major export commodity after tobacco and it accounts for 14% of agricultural exports and 4% of total exports (URT – Coffee Board and TACRI; as cited by Baregu *et al.*, 2013). According to the sited author above production is more or less constant at around 40 000 tonnes with some exceptional harvest. In Tanzania, the major regions producing coffee includes Kilimanjaro, Arusha, Mbeya, Ruvuma, Kagera, Tanga, Iringa, Manyara, Morogoro, Kigoma, Mwanza, Rukwa and Mara (Baregu *et al.*, 2013). Kigoma district council is one of the coffee producing areas in Kigoma region apart from Kasulu, Buhigwe and Kibondo district councils. The crop is the leading cash crop in the district followed by palm oil.

According to FAO (2011), one among many reasons for the agriculture sector underperformance in many developing countries is the existence of gender inequality

Gender inequality is a stumbling block to development efforts (Jeckoniah *et al*., 2013; Mroto, 2015).

Gender is not only about women but about the relationship between women and men (Njuki *et al.*, 2011). Gender as a concept also refers to the economic, social, and cultural attributes and opportunities associated with being man or woman (International Bank for Reconstruction and Development, 2012). Gender equality implies that all human beings, both men and women, are free to develop their personal abilities and make choices without the limitations set by stereotypes, rigid gender roles and prejudices (Mukasa and Salami, 2016). Gender equality is perceived as an important contributor to the economic efficiency and the achievement of other key development outcomes particularly when there is greater equality between women and men (World Bank, 2012). According Mmasa (2013), Gender inequality means that there is an equal treatment or perceptions of individuals based on their gender. This study conceptualizes gender inequality as men and women are not given equal opportunities to carry out different activities, access to resources as well as in decision making, hence they are not equally rewarded for their efforts among coffee producing communities.

It is widely argued that for Tanzania to achieve its national development, both men and women should have equal access to production resources and equal opportunities in the political, economic, social, cultural and any other field (Mmasa, 2013). Current statistics show that 98% of active women in rural areas of Tanzania are engaging in agricultural activities; such majority's contribution cannot be ignored as far as agriculture development is concerned (Leavens and Anderson, 2011). Gender roles and relationships are the key factors influencing the division of work, access and use of resources, and sharing of

benefits accrued from agricultural production between women and men (Aregu *et al.*, 2011).

Women face several constraints in accessing and controlling productive resources due to the inequalities which are perpetuated by socially constructed norms embracing male dominance (Nkhonjera, 2011). For instance, men are largely responsible for cash crop farming and income generating activities within the household. This syndrome makes the management of crops which traditionally form the household diet to be a primary responsibility of women (Leavens and Anderson, 2011).

In Tanzania, despite constitutional proclamations of gender equality and many laws that promote equal opportunities for both men and women, it remains the case that on both smallholder farms and large plantations, men and women carry out different types of work. Likewise, men and women have different levels of access to resources, and are unequally rewarded for their contributions to the agricultural system, with women typically having less access and lower incomes (Rubin *et al*., 2009). It is a fact that, women play major role in farming activities but their access to productive resources in particular land, is more limited than that of their male counterparts (FAO, 2014). Major gender difference is found in land ownership where by73% of land ownership is under men's control and only 27% of women are land holders. Substantial engagement of rural women in domestic chores and community activities limits their participation in productive and educational potentials (Suda, 2002).

Furthermore, men tend to claim control over crops that are profitable and marketable, even if they are traditionally conceived to be women's crops (Leavens and Anderson, 2011). Cultural stereotypes about men and women's work govern the role women play in

cultivating commercial crops and marketing produce. This perception confines women to petty trading, buying and selling small volumes directly for retail in local markets, while men tend to predominate in wholesale into regional and international markets (Ahmadu and Idisi, 2014). As the result of inequality between men and women, women have internalized the patriarchal system which require them to become submissive to their husbands, losing their bargaining power in influencing resources allocation and the rights to use them (CARE, 2010). It was from this background that this study was set out to assess the inequalities between men and women in Kigoma district council specifically in the participation in production and marketing of coffee.

1.2 Problem Statement and Justification

In Tanzania and elsewhere, women contribute 60-80% of work force in the fields and about 60% in harvesting and processing activities (Baluku *et al*., 2009). However, women are neither represented in coffee trading activities nor in involved in cooperatives (Baluku *et al*., 2009). For many years the government of Tanzania has been focusing on the promotion of cash crops (cotton, cashew nuts, sisal, cloves, sugar, tea, pyrethrum and tobacco) production because they generate huge revenues due to exports and employ more people (Rutta, 2012). However, promoting cash crop production and marketing without addressing the gender differentials may not improve women's wellbeing and their empowerment. According to Kasente (2012), women are almost exclusively positioned at the production side of coffee chain, providing labour in the field without realizing benefits from their labor. Also, women lack access to education and training which further hinder their active participation in coffee production.

Several studies on gender and gender equality have been carried out worldwide, yet very little is known about gender inequality in coffee production and marketing in Tanzania.

The studies include that of Leavens and Anderson (2011) titled: - Gender and agriculture in Tanzania; the study on gender and value chain development by DANIDA (2010); Gender - aware value chain development by Farnworth (2011) and Gendered participation in cassava value chain in Nigeria by Ahmadu and Idisi (2014). While the afore-mentioned studies have focused on gender inequality in social, economic and value chain development context, this study have contributed to the body of knowledge by providing empirical evidence on men and women participation in production and marketing of coffee in Kigoma District Council. Thus this study provides useful information to policy makers, agricultural researchers and extension officers on how inequality in production and marketing of coffee create detrimental effects to women. Furthermore, the study findings contribute to the implementation of the National Agriculture Policy of 2013 which specifically focuses on promotion of men and women participation in production of goods and services in agriculture sector while ensuring that benefits are equitably shared. The study is also in line with Sustainable Development Goals, number five which focuses on achievement of gender equality and empowerment of women and girls through equal access to education, health care, and political and economic decision.

1.3 Objectives of the Study

1.3.1 Overall objective

The overall objective of this study was to examine inequality between men and women participation in coffee production and marketing in Kigoma district council

1.3.2 Specific objectives

The specific objectives of the study were to:

i) Identify activities carried out by men and women in coffee production and marketing activities in Kigoma district council.

ii) Determine coffee farmers' perception on men and women inequality in participation in coffee production and marketing.

iii) Determine men and women access to and control over resources from coffee production

iv) Analyse the social economic variables of gender inequalities in coffee production and marketing.

1.3.3 Research questions

The study was guided by four research questions

(i) What activities are carried out by men and women in coffee production and marketing in Kigoma district council?

(ii) How do coffee farmers perceive men and women inequality in participation in coffee production and marketing?

(iii) Who has access to and control over resources from coffee production?

(iv) What are the social – economical variables of gender inequality in the participation in coffee production and marketing?

1.4 Conceptual Framework

The conceptual framework was constructed basing on the relationships existing between independent variables that are how individual involvement in different activities is influenced by community perceptions towards ones' sex (being a female or a male). It is the fact that due to cultural norms some activities are perceived as women's role or men's roles. Furthermore, perception has an influence on ones' right to access and control on productive resources, access to information and decision making on income accrued from coffee production. On the other hand, socio-economic variables have power to influence how production activities are being done, how one sex perceive the activities done by

another sex as well as the right to access, own and control productive resources. Gender roles assigned to men and women have an impact on their respective access to resources and the power to decide over the benefits of using those resources. Men and women have different assets, access to resources, and opportunities. Women rarely own land, may have lower education due to discriminatory access, and their access to productive sources as well as decision-making tends to occur through the mediation of men (Ellis, 2000). In this study, gender inequality implies that, men and women are not given equal opportunities in access to resources and decision making regarding the use of those resources which appear to influence their levels of participation in coffee production and marketing activities.

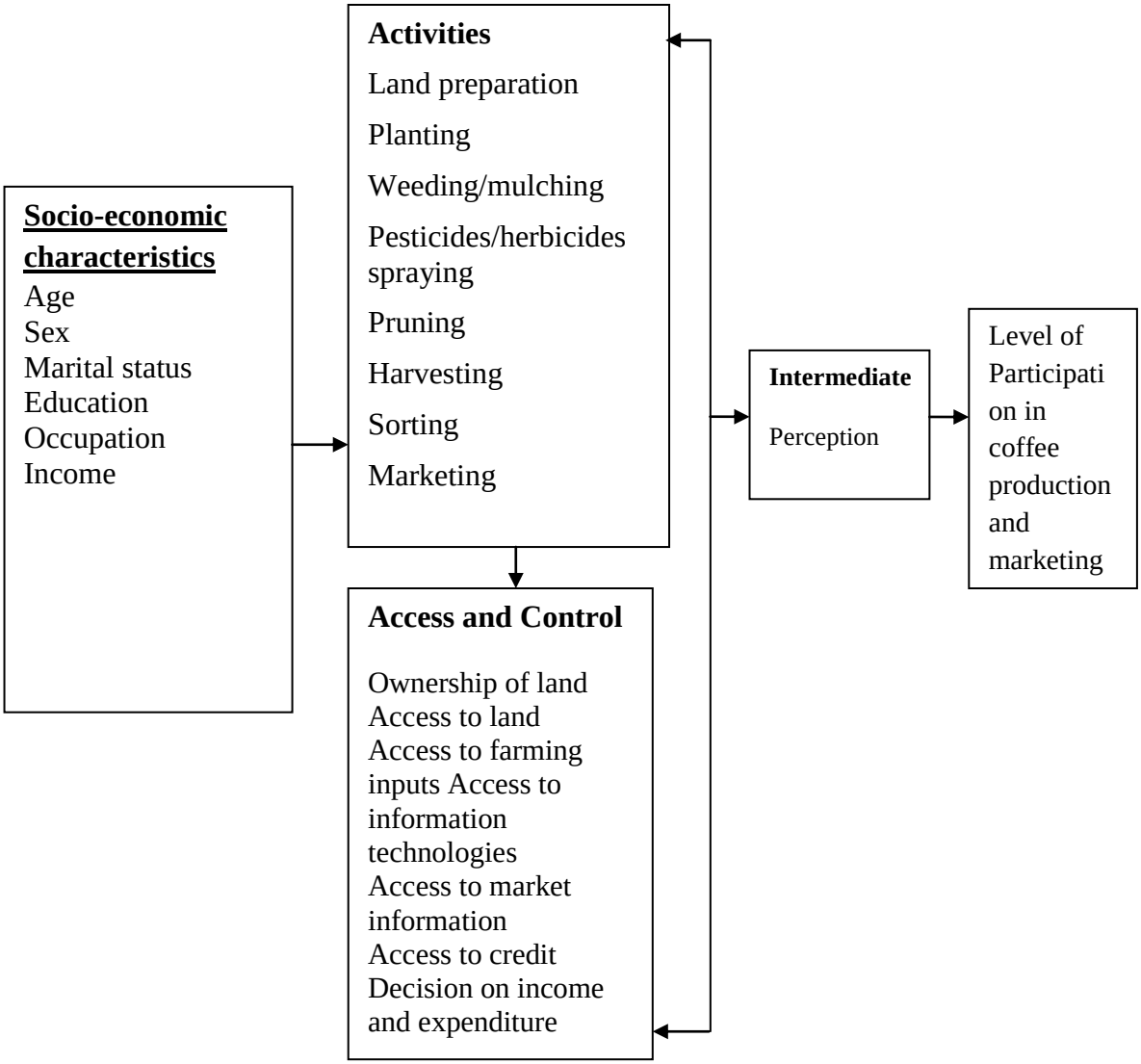

Figure 1: Conceptual framework

Source: Researchers own construction

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 INTRODUCTION

The chapter comprises of four sections. The first section provides definitions of key concepts used in this study. The second section highlights aspects of gender roles and different activities carried out in coffee production and marketing and the third section deals with the determinants of gender inequality in coffee production and marketing, while the fourth section (last section) deals with aspects of farmers' perception towards inequality of men and women participation in coffee production and marketing.

2.1.1 Definition of Concepts

2.1.1.1 Gender

Different scholars view the term gender in different ways. For example for (UN, 2009) views the term gender as the social attributes and opportunities associated with being male and female and the relationships between women and men and girls and boys, as well as the relations between women and those between men. Gender as a concept also refers to the economic, social, and cultural attributes and opportunities associated with being man or woman (International Bank for Reconstruction and Development, 2008). Other scholars' view gender as the socially constructed roles and status of women and men, girls and boys. It is a set of culturally specific characteristics defining the social behavior of women and men, and the relationship between them. Gender roles, status and relations vary according to place (countries, regions, and villages), groups (class, ethnic, religious, and caste), generations and stages of the lifecycle of individuals. Gender is, thus, not about women but about the relationship between women and men (Njuki *et al.*, 2011).Gender refers to the social differences and relations between men and women which are learned, vary widely among societies and cultures, and change over time. On the other hand,

gender refers to the social attributes and opportunities associated with being male and female, the relationships between women and men and girls and boys, and the relations between women and between men (UN, 2012). For the purpose of this study gender is referred to the social constructed relationship and responsibilities between women and men farmers involved in coffee production and marketing in the study area.

2.1.1.2 Gender equality

Gender equality refers to the equal rights, responsibilities and opportunities of women, men, girls and boys (UN, 2012). Other scholars UNESCO, (2000); Mtsor and Idisi, (2014); Mukasa and Salami (2016) view gender equality as a concept that describes equality between men and women, and it entails the concept that all human beings, both men and women, are free to develop their personal abilities and make choices without the limitations set by stereotypes, rigid gender roles and prejudices. Therefore, gender equality in this aspect means that the different behavior, aspirations and needs of women and men are considered, valued and favored equally (UNESCO, 2000). On one hand it should be noted that equality does not mean that women and men will become the same but their rights, responsibilities and opportunities will not depend on whether they are born male or female (UN, 2001), on the other hand gender equality is viewed as an important tool in two major aspects. First, gender equality connotes the ability to live the life of one's own choosing and be spared from absolute deprivation and is a basic human right which should be equal for everyone, independent of whether one is male or female. Second, gender equality is perceived as important contributor to the economic efficiency and the achievement of other key development outcomes particularly when there is greater equality between women and men (World Bank, 2012). Therefore, promoting gender equality in coffee growing regions can improve coffee productivity hence improve economic development (FAO, 2011).

2.1.1.3 Gender inequality

In view of the World Bank (2012) gender inequality is differences between men and women in terms of opportunity, voice and under the law. Gender inequality refers to unequal treatment or perceptions of individuals based on their gender; it is a result of differences in socially constructed gender roles as well as biologically through chromosomes, brain structure and hormonal differences (Mmasa, 2013). Gender inequality is also viewed as a word used to describe the position of women in different societies because they are the ones most inferior and weaker section of our society (Shastri, 2014). In this study gender inequality implies that men and women are not given equal opportunities to carry out different activities, access to resources as well as in decision making, hence they are not equally rewarded for their efforts among coffee producing communities.

2.1.1.4 Coffee production

Production is basically an activity of transformation, which connects factor inputs and outputs. Production is the process of altering resources or inputs so they satisfy more wants. Hence coffee production involves all activities from land preparation, coffee transplanting, weeding, fertilizer application, insecticides application to control pests and diseases, pruning, harvesting and sorting.

2.1.1.5 Coffee marketing

Marketing is the activity, set of institutions, and processes for creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large (Cohen, 2017). Sometimes marketing is the science and art of exploring, creating, and delivering value to satisfy the needs of a target market at a profit. Coffee

marketing comprises activities such as searching marketing information, taking coffee to the selling point and finally collecting money from coffee sales.

2.2 Participation

Participation has been included as an important element in development strategies of different countries in sub-Saharan Africa. Participation or empowerment is a part of the process in development. There is, therefore, a growing consensus that people everywhere have a basic human right to take part in decisions that affect their lives (Kifale *et al*., 2012). Moreover, participation has been advocated as a way of solving the ethnicity problems in African countries, this is because it has been generally documented that the exclusion of social groups (ethnic, women, youth, tribal or religious) from participating in the decision-making process and in different governmental structural positions will result in the catastrophic and harrowing conflicts.

The term participation has been used by different scholars and is regarded as a social process whereby specific groups with shared needs and living in a defined geographic area actively pursue identification of their needs, take decisions and establish a mechanism of meeting these needs (Passy,2002; Manzo and Perkins, 2006; Freedman, 2009). Studies reveal that participation includes management of skills, mobilization of community members, conflict resolution and institution building among extension personnel (Naika and Siddaramaiah, 2006).

It is argued that people's participation increases the actual benefits to beneficiaries; it decreases people’s dependence on government support and makes the public self-sustaining. It facilitates mobilization of local resources and simplifies implementation of the project at a micro level (Ribar, 2014). Thus due to its importance in economic

development it is important to understand the extent of gender participation through gender disaggregated data instead of generalizing without knowing the levels of individuals participation. In this study, participation refers to the role and extent to which men and women involve them in the decision making process and the implementation of such decisions in coffee production and marketing.

In the study conducted by Kifale *et al*. (2012) shows that the extent of participation was measured by calculating the score value of the Participation index whereby the participation status of members were categorized into low, medium and high, but all fallen under the category of low. Such levels have also been used by other scholars like Al-Rimawi (2002); and Mroto (2015), although the approach of the two were different from the first, levels of participation were established on the basis of the rates of participation in different activities carried out by individuals. Therefore, an individual was given 1 score in an activity participated and 0 in an activity not participated, hence rates beyond one standard deviation below the mean were labeled as low, rates beyond one standard deviation above the mean were labeled as high while rates in the range of one standard deviation below, or above the mean were labeled as medium. For the purpose of this study the extent of gender participation in coffee production and marketing scores were calculated basing on the approach used by Kifale *et al.* (2012).

2.3 Determinants of Gender Inequalities in Participation in the Coffee Production

Men and women 'have complex and shifting roles', and decision - making on agricultural production and marketing (Quisumbing *et al*., 2013). Despite the fact that women conduct a substantial part of the work on the coffee farm, the crop is often considered to be a "man's crop". The author adds that it is called so because the crop is grown on land owned by men and since they can make all decisions in regards to the crop (Fedisch, 2013). Men

have the power to own and control land while women do not have that property right and as a result women have to work on their husbands land. Even when the husband dies, it is the brother for instance who claims the land since women do not have rights under inheritance laws (Fedisch, 2013). Land ownership brings advantages in such a way that decisions on crop cultivation and marketing can be made. It is the men who market the crop and control the income from sales. There is consensus that women have little authority over marketing, sales, income and spending (Alinyo and Leahy, 2012).

Women comprised an average of 70 percent of the workforce in the fieldwork and harvesting roles, but only participated in 10 percent of the in-country trading and export roles (ITC, 2008). Trading and exports tasks currently are increasingly becoming more male-dominated as coffee transitions from raw commodity into a value-added product ready for sales and marketing. Women cannot decide 'when and how much farm produce should be sold, let alone what the income should be used for' (Alinyo and Leahy, 2012). Gender inequalities are now generally accepted not only as key causes of female and household poverty and constraints on women moving up the coffee value chain, but also poor coffee quality, low production and inefficiencies throughout the coffee value chain for all stakeholders (Mayoux, 2014). On the other hand, factors such as land size, access to credit and training were some of the general factors influencing gendered participation while the major key factors that influence the intensity were land size, extension, training and membership to farmer groups (Umuhoza, 2012). Furthermore, access to land was the major factor influencing women participation in cooperatives as it was the case in coffee production in Uganda (Selhausen, 2015). Therefore, addressing gender inequalities and its determinants in coffee production is of crucial important at this juncture where coffee is gaining popularity as cash crop in Kigoma region.

2.4 Access to and Control over Resources in the Coffee Production

Different literatures have tried to reveal the importance women access and control over productive resources as well as labour market as the policy issue that need to be addressed in order to achieve sustainable development. For example in the literature review conducted by Duflo (2012) it is argued that there is a need for policies that increase their productivity in everyday work or improve their chances to access the labor market. Findings from Ya-Bititi (2012) highlight that; women due to gender-based norms often have lower access to and control over economic and social resources and opportunities. This situation has negative impact on agricultural growth because one of the reasons behind failure is poor recognition of women roles in agriculture (Yeis *et al.,* 2009). Gender inequalities tend to perpetuate women's access to the markets and exports of crops (Wedig, 2013).

Gender disparities are reported in Sub-Saharan Africa including Tanzania from production, access, control and ownership of resources to marketing of raw and processed agro-produce. According to Umuhoza (2012) the capacity of an individual to engage in coffee production normally depends on access to the productive resources such as land. Since coffee is a perennial crop producers must have long term land tenure (Raynolds, 2002). Given its importance, access to and availability of land resources are critical to ensure real and long lasting improvement in social, economic and political well-being (Barume, 2014). Thus the fact that gender is generally associated with unequal power relations and access to and control over resources tend to constrain ones participation in the coffee production (UNDESA, 2010).

2.5 Farmers Perception on Men and Women Inequality in Participation in Coffee Production and Marketing

Based on type of crop and type of community women and men participation in agriculture is perceived differently (CRS, 2012). However, on one hand it is generally perceived that if women's work in assisting with the harvest and preparing food for labourers were taken into account, their share would be greater (CRS, 2012; Twin, 2017). On the other hand, Rölander (2015) argued that community perceptions towards women and men activities has great influence in ones' participation in a certain activities, but when a woman or man perceive that what women do men can do great changes at family level and community level happens. Cultural norms maintain that if women do not work outside the home, it is perceived that they do not need to be as strong and healthy and that they do not need a formal education (Duflo, 2012). This has negative impacts on coffee production because it leads to low productivity and poverty at the community level because of low return from the produce which fail to improve their livelihoods.

2.6 Gender Roles in Coffee Production

Several activities are carried out in coffee production which includes; land preparation, coffee transplanting, weeding/mulching, pesticides/herbicides application, pruning, harvesting, sorting; but coffee marketing involves seeking coffee market information, taking coffee to the selling point and finally collecting money from coffee sales. UNPAC (2011) highlighted that woman who performs more than 80 percent of the growing, harvesting and washing coffee seeds activities in addition to their household and family chores and obligations they neither receive little of the income from this product nor have much voice in the decisions making on income accrued from coffee production (UNPAC, 2011).

In many coffee-producing countries, coffee farming is generally seen as a family business with men and women working side by side to grow, maintain, harvest and process coffee throughout the continent of Africa (Hivos, 2014). According to UNDP (2010), women work two-thirds of the world's working hours, yet receive only 10% of the world's income; this scenario creates major gender disparities. Women provides 60 to 80 percent of the productive work force in coffee farming.However, despite their strong involvement, women are often overlooked in the decision-making processes, do not receive adequate pay, are denied leadership roles and often lack access to basic knowledge and resources to lead healthy lives (Langman, 2014). Furthermore, it is reported that in Ethiopia 2.5 million women are involved in smallholder production: about 300 000 own their own farms while the remaining 2.2 million serve as laborers, primarily on family farms where they do not control the income generated (Fraser – Moleketi, 2016). Women are heavily involved in coffee cultivation and processing (about 90%) of coffee farmers, but they do not have land ownership rights like their counterparts men who own the land and take the main decisions regarding production, while providing little labour input (Farnworth, 2011).

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Description of the Study Area

The study was conducted in Nyarubanda and Matyazo villages in Kigoma district council, Kigoma Region. The district was purposively selected for study because of its high potential in coffee production and has vast arable land for coffee production and processing expansion (Tanzania coffee industry development strategy, 2011/2021 Furthermore, within the district and Matyazo in particular, all coffee from all over the Region is being processed ready for sale.

Kigoma district council is located in western part of Tanzania along the North-Eastern part of Lake Tanganyika. To the North the district boarders with Buhigwe and Kasulu districts as well as Burundi country, to the East the district border Uvinza district, Democratic Republic of Congo (DRC) to the West, and to the South Kigoma –Ujiji Municipality. Kigoma District Council comprises of 15 wards, 48 villages with a total population of 211 566 and 29 182 farm families (URT, 2013). The main economic activities in the district are agriculture and fishing. The district has 244 632 ha of land potential for cultivation although the area under cultivation is 94 266 ha (about 38% only). The soil is fertile for agricultural production which favours production of a wide range of crops. Major food crops grown include maize, banana, rice, cassava and beans. The major cash crop includes palm oil and coffee.

The district has 9 coffee producing villages, which includes Kalinzi, Matyazo, Mkabogo, Mkigo, Nyarubanda, Chankele, Mkongoro, Nyamhoza and Kizenga Villages.

3.2 Research Design

The study used a cross-sectional research design which allows data to be collected at one specific point in time from individuals that are selected. ((Babbie, 1990; Kothari, 2004; Chris and Diane 2004).This design also allows the use of both qualitative and quantitative methods. The design is suitable for descriptive statistics and determination of relationships between variables (Bailey, 1998). It is also quick, cost effective on utilizing limited resources in terms of financial resources, transport and time (Casley and Kumar, 1998).

3.3 Sampling Frame and Sampling Procedure

3.3.1 Study population and sample frame

The study population comprised of coffee farmers from Matyazo and Nyarubanda villages. The sample frame was obtained from Village Executive Officers office (VEO – office). The list was formally comprised of only head of household from coffee growing families. With the help of village Agricultural Extension officers, the list was updated to include female coffee farmers from those households so as to achieve comprehensiveness of the frame. Therefore, the unit of analysis in this household was individuals involving in coffee production.

3.3.2 Sampling procedure and sample size

Kigoma district council was selected purposively from the coffee growing districts. The district was chosen because of its high potential in coffee production and has a vast arable land for coffee production expansion (Tanzania Coffee Industry Development Strategy, 2011-2021). According to Andrew and Philip (2014) coffee production is very despite its low profitability. Kigoma district council is the only district where all the coffee from all over the Region is being processed ready for sale. Purposive sampling was used to select 9

coffee growing villages in the district and simple random sampling technique was employed to select two villages of Matyazo and Nyarubanda.

Simple random sampling technique was employed to select 120 respondents from the list of all coffee farmers (1 501) from Matyazo and Nyarubanda villages, 60 respondents from each village. The respondents include both men and women from households producing coffee. According to (Matata *et al*., 2001), a range of 80 – 120 respondents is adequate for most of social economic studies in Sub Saharan Africa.

3.3.3 Key informants and Focus group discussion participants

A total number of four focus group discussions (FGD) were conducted, comprised six participants - three women and three men. The criteria for selecting participants were coffee farming experience, age and sex of the respondent. Key informants interviewed includes, village extension officer (1), Ward and Village Executive officer (2), and cooperative leader (1); 4 representative from each village.

3.4 Data Collection

3.4.1 Primary data collection

A structured questionnaire with close and open ended questions was used to collect primary quantitative data from coffee farmers. Checklist was used to collect data from key informants and focus group discussions. Primary data collected cover aspects of coffee farmer's characteristics, cultural and socio economic characteristics of coffee farmers. Questionnaires pre-testing were administered to ten respondents in order to test the reliability and validity of the tools. Some questions which were found difficult to understand to the respondents were revised while those that were missing were added.

3.4.2 Secondary information collection

Secondary information collected includes information on previous studies on gender equality and gender inequality, coffee production and coffee marketing, gendered participation in coffee production and marketing. This information was collected from books, journals and other reports from Government offices and NGO's. Electronic materials were also used to enrich the findings from primary data.

3.5 Data Processing and Analysis

After compiling and coding quantitative data, data analysis was done using Statistical Package for Social Sciences (SPSS) version 16.0 computer software. Simple descriptive statistical analysis mainly means, frequencies, percentages was employed in the analysis of objective one and three. Perception of farmers towards gender equality in the participation in coffee production was captured using five likert scales. Reliability analysis was conducted in order to test the validity of each statement basing on the principles of cronbarch alpha which requires each statement that qualifies to be involved in the analysis to have at least 0.71 and above. Thus, the number of statements was reduced, whereby 4 statements which had cronbarch alpha of 0.759 were picked out of 15 for further analysis. The statements were there after transformed into three levels namely disagree, agree and neutral which were assigned 2, 1, and 3 scores respectively. Later on, an index was developed by summing up the scores obtained from the 4 Likert-scale statements, focusing on examining perception of coffee farmers towards women's and men's equality on the participation in coffee production and marketing. Ultimately, descriptive analysis was computed so as to obtain the mean index score which in this case was 0.95. The perception index was calculated by using the knowledge index formula developed by Jha and Singh (1970) sited in Fita *et al.* (2012) which was employed to measure the extent of knowledge of the dairy farmers regarding improved dairy husbandry practices. For the purpose of this

study it was adopted to suit this study. Such formula was also used by Rao et al. (1992). Thus the formula is specified as follows:

$$PI = \frac{x_1 + x_2 + \dots\dots\dots + x_n}{N} x100 \quad \dots\dots(1)$$

Where:

PI= Perception index, $x_1 \dots\dots\dots x_{n=}$ scores, N= Maximum possible scores

Thus, the obtained individual perception index was categorized into positive and negative perception basing on the overall mean score as cut off point (0.95). That means individuals who scores mean and above (0.95≥) were perceived as positive perception while scores below the mean (0.95<) were perceived as negative perception.

Levels of participation were established on the basis of the rates of participation in different activities done along the coffee production and marketing whereby an individual was given 1 score in an activity participated and 0 in an activity not participated. Individuals scores was obtained by summing up the scores obtained from activities participated whereby later an index scores was developed. Descriptive statistics was developed to obtain overall mean scores and standard deviation which is 0.7 and 0.13 respectively in this case. Later on, levels of participation were developed basing on individuals' rate of participation whereby mean minus standard deviation (0.7-0.13) were labeled as Low level of participation, any scores in the range of standard deviation below or above the mean (0.58 to 0.82) were labeled as medium and rates of scores above the mean that is (0.7+0.13) which is 0.83 were labeled as high level of participation in the activities carried out in the coffee production and marketing. Thus, levels of participation were further categorized into three (low, medium and high) whereby scores from 0.00-

0.57, 0.57-0.82 and 0.83-1.00 were labeled as low, medium and high respectively. Such levels have also been used by other scholars (Kifale *et al.,* 2012).

Ordinal regression was employed to find out the factors influencing farmer's participation in coffee production and marketing. The dependent variable (Y) was in this case the level of participation in coffee production and marketing presented in three levels of low, medium and high as 1, 2 and 3 respectively. The independent variables (explanatory variables) were 13 which includes sex of respondent, marital status, level of education, occupation, access to credit (cash), access to input credit, land ownership, control of cash from coffee, participation in trainings, final decision making, membership of cooperative, access to information on coffee and presence of unfavorable policies/local institution that hinder gender equality. Thus the empirical ordinal regression model is specified as follows:

$$P(y) = \frac{e^{\alpha + \beta 1x1 + \ldots \beta kxk \quad k}}{1 + e^{\alpha + \beta 1x1 + \ldots \beta kxk}} \qquad (2)$$

(Agrestic and Finlay, 2009), where:

P (y) = the probability of the level of an individual to participate in the coffee production

e = the natural log

α = the intercept of the equation

β_1 to β_k= coefficients of the predictor variables

x_1 to x_k= predictor variables entered in the regression model

Where:

X_1 = Sex of respondents (1= Female, 0= Otherwise)

X_2 = Education level of the respondent (Continuous)

X_3 = Marital status (1= Married, 0= Otherwise)

X_4=Occupation (1= Farming, 0= Otherwise)

X_5=Receiving credit (Cash) (1= Yes, 0= No)

X_6= Receiving Input Credit (1= Yes, 0= No)

X_7=Land ownership (1= Yes, 0= No)

X_8=Control of cash from coffee (1= Yes, 0= Otherwise)

X_9= Participation in Training (1= Yes, 0= No)

X_{10} = Final decision say on income from coffee (1= Yes, 0= Otherwise)

X_{11}=Membership in cooperative (1= Yes, 0= Otherwise)

X_{12}=Access to information on coffee (1= Yes, 0= Otherwise)

X_{13}=Presence of unfavourable policies (1= Yes, 0= No)

CHAPTER FOUR

4.0 RESULTS AND DISCUSSION

This chapter presents the study findings. It is divided into five main sections. Section one presents demographic characteristics of respondents, section two presents activities carried out by men and women in coffee production and marketing, while section three covers coffee farmer's perception on gender inequality in participation in coffee production and marketing. Section four presents access and control over resources and income from coffee production and section five presents the socio – economic variables of coffee farmer's participation in coffee production and marketing.

4.1Demographic Characteristics of Respondents

The results presented in Table 1show that 59.2% of respondents were male and 40.8% were female. Out of 120 respondents interviewed, 80% were aged between 31 – 60 years. About 12% of the respondents were above 61 years of age and 7.5% were aged between 19 – 30 years. These results showed that very few youth (aged 19 – 30 years) were engaged in coffee production. Majority (92%) of the coffee farmers in the study area were middle (31 – 60) and old aged (above 61) people (Table 1).

Table 1: Demographic characteristics of the respondents (n = 120)

Variables	Frequency	Percentage
Age (Years)		
19-30	9	7.5
31-60	97	80.8
Above 61	14	11.7
Sex		
Male	71	59.2
Female	49	40.8
Marital status		
Married	108	90.0
Single	2	1.7
Widowed	10	8.3
Education level		
No formal education	24	20.0
Primary education	88	73.3
Secondary education	4	3.3
Certificate level	3	2.5

Diploma and above	1	0.8
Occupation		
Salaried employment	4	3.3
Farming	116	96.7

These findings are in line with the study carried out by Mohamed *et al. (*2013) who found that in Kabba local government of Nigeria majority of coffee production farmers were having age of 41 years and above. This implies that old people are more involved in coffee production than youths. This could negatively affect productivity because the young are more energetic than the old ones. The findings also indicate that 90.0% of the respondents were married, while 1.7% were single and 8.3% were widowed. The results also show that 20.0% of the respondents did not attend schools at all, 73.3% had completed primary school , 3.3% attained secondary education, while 2.5% had post-secondary education and 0.8% had diploma and above level of education.

For the purpose of comparing gender disparities in education levels attained between women and men was analysed. Results in Table 2 reveal that majority (75.5%) of female respondent had attained primary level of education while 24.5% did not attend formal education. For the case of male respondents, 71.8% of male respondents had attained primary education, 16.9% have no formal education, 5.6% acquired secondary school education, 4.2% had post-secondary education and 1.4% had attained diploma level and above respectively. Furthermore, results in Table 2 reveal that 96.7% of the respondents were depending on farming as their main source of income and 3% of the respondents were salaried employees.

Table 2: Comparison of male and female education level (n = 120)

Sex of the respondent	Education level	Frequency	Percentage
Male	No formal education	12	16.9
	Primary education	51	71.8
	Secondary education	4	5.6
	Certificate level	3	4.2
	Diploma and above	1	1.4
Total		**71**	**100**

Female			
	No formal education	12	24.5
	Primary education	37	75.5
Total		**49**	**100**
	Secondary education	0	0
	Certificate level	0	0
	Diploma and above	0	0
Grand Total		**120**	**100**

These results imply that gender inequalities in education between male and female coffee farmers is still existing because while male coffee farmers were found to have attained up to secondary school education and above , female coffee farmers were found to have attained only primary school education. On the other hand, the percentage of male that with no formal education was only 16.9% compared to that of female coffee farmers which was 24.5%.

4.2 Activities Carried Out by Men and Women in Coffee Production and Marketing

During the interview, a number of activities that are being carried out in the process of coffee production and marketing were identified. The activities includes land preparation, transplanting coffee, weeding/mulching, pesticides/herbicides application, pruning, harvesting, sorting, seeking coffee market information, taking coffee to the selling point and finally collecting money from coffee sales. Both men and women seem to be equally engaged in the production activities with little/slightly difference in percentage, for example land preparation men had 88.3% while women had 87.5%. There are some activities which were mainly done by men like pruning and spraying pesticides where women can just help in fetching some water and bringing the important equipments/materials for the activity. But most of the marketing activities like finding information on coffee marketing and collecting money from coffee sales were mostly done by men. Study findings as presented in Table 3 shows that, in the study 90.0% of interviewed men participated in marketing activities and only 17.5% of women

interviewed do participate. The dominance of men in marketing activities lead them to have more access to income accrued from coffee compared to women.

Table 3: Activities carried out by men and women in the study area (n = 120)

Activity	sex	Percentage	
		Yes	No
Land preparation	Male	88.3	11.7
	Female	87.5	12.5
Planting	Male	83.3	11.7
	Female	80.8	19.2
Weeding/Mulching	Male	88.3	11.7
	Female	95.8	4.2
Pesticides/Herbicides spray	Male	86.7	13.3
	Female	69.2	30.8
Pruning	Male	89.2	10.8
	Female	12.5	87.5
Harvesting	Male	88.3	11.7
	Female	92.5	7.5
Sorting	Male	86.7	13.3
	Female	93.3	6.7
Seeking coffee market information	Male	90.0	10.0
	Female	17.5	82.5
Taking coffee to the selling point	Male	89.2	10.8
	Female	75.8	24.2
Collecting money from coffee sales	Male	90.0	10.0
	Female	17.5	82.5

Regardless of almost equal participation in the production activities where men and women perform all the activities less equally, women do most of the reproductive work in the study area. During focus group discussion with women coffee farmers in Nyarubanda village one woman reported that:

> '*After field activities, a woman has to make sure that she collected fire wood and carry them home. She has to prepare some water for a husband to take bath, meanwhile preparing some food for the family'*

The findings are also in line with those of (Harun, 2014), in his study carried out in Ethiopia, Ambo district on Women's workload and their role in agricultural production. The author found that: In most rural communities in Ethiopia, women work from sunrise to sunset and, in contrast with men, have little time for leisure or socializing. Women are

not only the major source of labour in the agricultural sector, they are also responsible for the vital tasks of caring for children, the sick and the elderly as part of their household responsibilities. This means gender disparities continue to exist among African countries including Tanania and the study area.

4.3 Coffee Farmer's Perception on Equality of Men and Women Participation of Coffee Production and Marketing

Farmers' perception towards equality of men and women participation in coffee production and marketing were expected to have direct influence towards individuals' participation in study area. In order to understand this scenario attitudinal statements were developed and set to be respondent by each farmer. Study results as presented in Table 4 revealed that 94.2 % of farmers had positive perception on equality towards men and women participation in coffee production and marketing while only 5.8% were having negative perception. These results imply that as far as gender mainstreaming is concern and being carried out by stakeholders, gender stereotyping is somehow decreasing.

Table 4: Coffee farmer's perception on equality of men and women participation in coffee production and marketing (n = 120)

Variable	Frequency	Percent
Negative perception	7	5.8
Positive perception	113	94.2
Total	**120**	**100.0**

Moreover, by comparing farmers' perception based on sex perception, Study findings in Table 5 revealed that both men and women have negative perception, but very minimal. For example majority (93%) of men were having positive perception. On the other hand, 95.9% of women were found to have positive perception. These results proved that, despite that there is high positive perception, yet gender inequality still existing in the participation in coffee production and marketing in the study area.

Table 5: Coffee farmer's perception on equal participation by sex in coffee production and marketing (n = 120)

Variable	Frequency	Percent
Male		
Negative perception	5	7.0
Positive perception	66	93.0
Total	**71**	**100.0**
Female		
Negative perception	2	4.1
Positive perception	47	95.9
Total	**49**	**100.0**

4.4 Access to and Control over Resources and Income from Coffee Production

4.4.1 Land ownership

Resources which were examined in this research among others include land for coffee production. Results on land resource are as presented in Table 6.

Table 6: Land ownership (n = 120)

Group	Frequency		Percent
Male	71	Yes	100
	0	No	0
Total	**71**		**100**
Female	14	Yes	28.6
	35	No	71.4
Total	**49**		**100.0**

These results show that access and control of land resource was much male dominated. From the findings, it is seen that of all male interviewed, own land by 100% but only 28.6% female interviewed do own land.

Results presented in Table 7also show that 49.0% of interviewed women did not own land because of lack of financial resources where as 20.4% of them reported that they were not given land by the family because of patriarchal system which favour men than women. In terms of means of land acquisition, 67.6% of male interviewed own land through inheritance and 32.4% of them bought land. Where on the other hand, only 26.5% of female interviewed own land through inheritance and 2.0% bought land. In the study area,

male can own a minimum of 0.25 acres, maximum of 2.5 acres and a mean of 1.09 while female can own a minimum of 0.25 acres, maximum of 2.0 acres and a mean of 0.82 acres.

Table 7: Means of land acquisition and land size (n = 120)

Group	Means of acquisition	Frequency	Percent
Male	Bought	23	32.4
	Inherited	48	67.6
	No means	0	0.0
	Total	**71**	**100.0**
Female	Bought	1	2.0
	Inherited	13	26.5
	No means	35	71.4
	Total	**49**	**100.0**
Gender group		**Land size in acres:**	
Male	Minimum	0.25	
	Maximum	2.5	
	Mean	1.09	
Female	Minimum	0.25	
	Maximum	2	
	Mean	0.82	

These findings are supported by world development report of 2012 which reported that there is a high gender gap agriculture which is driven by deep-seated gender differences in time use (reflecting social norms about house and care work), in rights of ownership and control over land and assets which is normally seen to disadvantage women. Minde (2015) on her study carried out in Moshi Rural, Tanzania on analysis of gender roles within chagga households that practice ripe banana street selling finds out that; there was no equality by 90% on ownership and control of resources. The inequality was highly skewed to land ownership. Women had only full access to land and other resource but not ownership to any. Also, Mukasa *et al.* (2016) in their study on gender equality in agriculture found that: In sub-Saharan Africa, the most dominant land tenure system is still customary or communal, which generally considers women as not worthy of acquiring or inheriting land property rights. Without access to land, which is one of the most important input factors for performing agricultural activities, women are thus confined to be

labourers, lack sufficient power to either influence production decisions within the household or control the allocation of agricultural incomes.

During focus group discussion with male coffee farmers in Matyazo village one farmer was quoted saying that:

> '*In our village, male own land by more than 90% because normally parents give land to their male children. This is because they are the ones responsible for continuation of the clan. The female child got married and move to her husband in another clan so there is no need to give them land'.*

4.4.2 Access to financial resources

Access to financial resources from financial institutions in the study area is a problem to coffee farmers. The results in Table 8 show that only 25.4% of male interviewed received credit from financial institutions whereas only 12.2% of female interviewed receive credit. The reason is that, farmers are not aware on how credits can be accessed in those institutions. The findings shows that 54.9% and 59.2% of male and female interviewed respectively were not aware on credit accessibility in those institutions where as 18.4% of female were not having collateral to access credits. The results show that at least few male receive credit from formal financial institution like CRDB, NMB and NSSF by 1.4%, 4.2% and 4.2% respectively. But 12.2% of female interviewed received their credit from village community bank (VICOBA) and about 11% and 3% of male interviewed receive credit from VOCOBA and cooperatives respectively.

Table 8: Access to credit from financial institutions (n = 120)

Item	Sex	Response	Frequency	Percent
Receiving credit	Male	Yes	18	25.4
		No	53	74.6
	Total		**71**	**100.0**
	Female	Yes	6	12.2
		No	43	87.8
	Total		**49**	**100.0**
Sources of credit				
	Male	**NMB**	**3**	**4.2**
		CRDB	1	1.4
		Cooperative	2	2.8
		SACCOS	1	1.4
		VICOBA	8	11.3
		NSSF	3	4.2
		Not applicable	53	74.6
		Total	**71**	**100.0**
	Female	NMB	0	0.0
		CRDB	0	0.0
		Cooperative	0	0.0
		SACCOS	0	0.0
		VICOBA	6	12.2
		NSSF	0	0.0
		Not applicable	43	87.8
		Total	**49**	**100**
Reasons for not receiving credit				
	Male	Having other sources	4	5.6
		High Interest	7	9.9
		Lack of collateral	3	4.2
		Not aware on credit accessibility	39	54.9
		No reason	18	25.4
	Total		**71**	**100.0**
	Female	Having other sources	1	2.0
		High Interest	4	8.2
		Lack of collateral	9	18.4
		Not aware on credit accessibility	29	59.2
		No reason	6	12.2
	Total		**49**	**100.0**

These results implies that, although the accessibility of the financial credit is a problem to coffee farmers in the study area, the situation is far worse to female farmers as compared to their male counterpart.

These findings are supported by the study carried out by FAO (2011) which stated out that; women in rural agricultural societies have difficulties in accessing credits than men. The reasons for this being; women have less control over fixed assets that are usually necessary as collateral for loans.

4.4.3 Access to input from coffee cooperative/group

Findings presented in Table 9 show that about 56.3% of male interviewed receive input from cooperative whereas only 14.3% female interviewed receive input. About 44.9% female interviewed reported that they did not receive input because they were not the members of cooperative and 20.4% were not aware on how those input are given by cooperative. These results show a great gap between male and female coffee farmers on the access to input whereas male were seen to have a high chance of receiving input compared to their female counterpart. This is because majority women do not own land which is one of the conditions for membership in coffee farmer cooperatives.

Table 9: Access to input from cooperative (n = 120)

Item	Group	Response	Frequency	Percent
Access to credit	Male	Yes	40	56.3
		No	31	43.7
	Total		**71**	**100**
	Female	Yes	7	14.3
		No	42	85.7
	Total		**49**	**100**
Reasons for not receiving input credit	Male	Having other sources	15	21.1
		High Interest	4	5.6
		Not aware on credit accessibility	8	11.3
		Not a member of cooperative	7	9.9
		No reason	37	52.1
	Total		**71**	**100**
	Female	Having other sources	5	10.2
		High Interest	2	4.1
		Lack of collateral	4	8.2
		Not aware on credit accessibility	10	20.4
		Not a member of cooperative	22	44.9
		No reason	6	12.2
	Total		**49**	**100**

4.4.4 Decision making on income and control of expenditure from coffee production/sale

Male and female can make decision at least equally from the income obtained from other crops apart from coffee in the study area. But the situation is different for the income obtained from coffee. Research findings in table 10 revealed that 37.5% of interviewed men and 37.5% of interviewed women can make decision equally and they can make decision jointly by 25%. For the case of decision making on income from coffee, about 70% of interviewed men can make decision on their own and only 9.2% of interviewed women can make decision on their own. Both men and women can make decision jointly for the income obtained from coffee by 20.8%.

Table 10: Decision making on income (n = 120)

Item	Variable	Frequency	Percentage
Decision making on income from other crops	Men	45	37.5
	Women	45	37.5
	All/Joint	30	25.0
	Total	**120**	**100.0**
Decision making on income from coffee	Men	84	70.0
	Women	11	9.2
	All/Joint	25	20.8
	Total	**120**	**100.0**

These findings implies that, decision making on income from coffee is much male dominated in the study area. These findings are in line with the study carried out by Njuki *et al.* (2011) on: linking smallholder farmers to markets, Gender and Intra – Household Dynamics. Does the choice of commodity matter? They find out that: Women are more likely to control income from commodities that have lower revenues, whereas they controlled a lower share of income from high revenue commodities.

During the focus group discussion with female farmers in Nyarubanda village one woman said:

'Even if a woman tries to ask for expenditures from coffee sales you she is likely to be asked by her husband that: Did you come with the coffee field in this house? The coffee field is mine and your mine. I am the head of this family. So in those situations, a woman just decides to remain silence in order to avoid quarreling within the family'.

4.5 Socio – economic Variables that Determine Inequality on Men and Women Participation in Coffee Production and Marketing.

In this part, the main focus was to look on: the level of men and women participation in coffee production and marketing, coffee farmer's participation in different trainings on coffee production and marketing and the factors influencing men and women participation in coffee production and marketing.

4.5.1 Level of men and women participation in coffee production and marketing

Levels of participation were established on the basis of the rates of participation in different activities done along the coffee production and marketing whereby an individual was given 1 score in an activity participated and 0 in an activity not participated. Levels of participation were further categorized into three (low, medium and high) whereby scores from 0.00-0.57, 0.57-0.82 and 0.83-1.00 were labeled as low, medium and high respectively. Results presented in Table 11 show that 64.8% of male respondents and 53.1% of female respondents were in medium level of participation. However, more male were seen to participate in the high level (26.8%). This implies that men were participating more in coffee production and marketing than their female counterparts. Whereas, more female were seen to participate in the lower level (38.8%).

The implication of these results is that, gender inequality exists at different levels of coffee production and marketing in the study area, where as male were seen to have more authority compared to female.

The results are also in line with the study carried out by Mroto, (2015) in his study carried out in Mvomero district, Morogoro on Gender analysis in sunflower value chain. The author found that majority of the respondents were in the medium level of participation while sex wise, more male were seen to be in the high level of participation compared to their female counterpart.

Findings from focus group discussion with women coffee farmers in Matyazo village revealed that there is gender inequality in the study area. This is evidenced by one woman who reported that:

> *'In our village, both family members (husband, wife & children participated in all activities of coffee production up to taking coffee to the cooperative (the selling centre). But our husbands are the ones responsible to collecting money from cooperatives.'*

Table 11: Levels of participation in coffee production and marketing by sex (n = 120)

Levels of gender participation	Male	Female
Low	6 (8.4%)	19(38.8%)
Medium	46(64.8%)	26(53.1%)
High	19(26.8%)	6 (8.1%)
Total	**71**	**49**

4.5.2 Coffee farmer's participation in different trainings on coffee production and marketing trainings

Extension officers and other development partners (Jane Goodal Institute, Nyakitonto Youth Development Organization) conducted different trainings on coffee production like pruning, mulching and fertilizer application, spraying of pesticides, fungicides and

herbicides. Also trainings on how coffee marketing are conducted were provided by Cooperative officers from the district.

Study findings in Table 12 shows that, in the study area only 10.2% of women interviewed attended training on coffee production while 54.9% of men interviewed attended the same training. The findings also indicate that 12.2% of women interviewed attended training on coffee marketing and 29.6% of men interviewed attended the same training. The study also revealed that; 12.2% of women interviewed participated in coffee marketing while 43.7% of men interviewed participated in coffee marketing.

Table 12: Coffee farmers attending different trainings (n = 120)

Type of training	Group	Response	Frequency	Percent
Attending training in coffee production	Female	Yes	5	10.2
		No	44	89.8
Total			**49**	**100.0**
	Male	Yes	39	54.9
		No	32	45.1
Total			**71**	**100.0**
Attending training in coffee marketing	Female	Yes	6	12.2
		No	43	87.8
Total			**49**	**100**
	Male	Yes	21	29.6
		No	50	70.4
Total			**71**	**100.0**
Participation in coffee marketing	Female	Yes	6	12.2
		No	43	87.8
Total			**49**	**100.0**
	Male	Yes	31	43.7
		No	40	56.3
	Total		**71**	**100.0**

These results show that there is no gender equality between men and women regarding attendance on various trainings on coffee production and marketing. The participation of men was seen to be high compared to that of women as indicated in Table 12.

The study went further to find out reasons for some coffee farmers not participating in those trainings. Table 13results show that 42.8% of women interviewed did not attend training on coffee production because they were represented by their husband and 28.6%

said they did not attend because of having other responsibilities. Meanwhile, 39.5% of men interviewed did not attend because of lack of information. Coffee farmers were also requested to give reasons for not attending training on coffee marketing and the results show that 71.4% of women interviewed did not attend because their husbands represented them.

Table 13: Reasons for coffee farmers not attending training in coffee production and marketing

Group	Item	Reasons	Frequency	Percent
Female	Coffee production	Lack of information	9	18.4
		Represented by husband	21	42.8
		Having other responsibilities	14	28.6
		No reason	5	10.2
	Total		**49**	**100.0**
Male		Lack of information	28	39.5
		Represented by wife	0	0.0
		Having other responsibilities	4	5.6
		No reason	39	54.9
	Total		**71**	**100**
Female	Coffee marketing	Not given a chance to attend (Leaders are given priority)	4	8.2
		Lack of information	6	12.2
		Represented by husband	35	71.4
		No reason	4	8.2
	Total		**49**	**100.0**
Male		Not given a chance to attend (Leaders are given priority)	37	52.1
		Lack of information	14	19.7
		Represented by wife	0	0.0
		No reason	20	28.2
	Total		**71**	**100.0**

The study went further to determine coffee farmer's satisfaction regarding their participation in coffee production and marketing. Study findings as presented in Table 14 show that only 24.5% of women interviewed seemed to be satisfied regarding their participation in coffee production while 49.3% of men interviewed showed satisfaction. Only 8.2% of women interviewed showed satisfaction regarding their participation in coffee marketing while 36.6% of men interviewed showed satisfaction.

Table 14: Coffee farmer's satisfaction regarding their participation in coffee production and marketing (n = 120)

Group	Item	Response	Frequency	Percent
Female	Satisfaction with participation in coffee production	Yes	12	24.5
		No	37	75.5
Total			**49**	**100**
Male		Yes	35	49.3
		No	36	50.7
Total			**71**	**100**
Female	Satisfaction with participation in coffee marketing	Yes	4	8.2
		No	45	91.8
Total			**49**	**100**
Male		Yes	26	36.6
		No	45	63.4
Total			**71**	**100**

The reasons for coffee farmers not satisfied for their participation in coffee production; in Table 15 show women were seems not satisfied because of lack of transparence within the family and high cost of production compared to benefits by 40.8% and 24.5% respectively. Reasons given by men respondent were high cost of production and low capital to invest in coffee by 29.6% and 19.7% respectively. Furthermore, it was found that about 44.9% of women interviewed were not satisfied with coffee marketing because only their husbands are the ones who know the amount obtained from coffee sales while they know nothing. Moreover, 33.8% of men respondents were not satisfied because in coffee business, farmers are not given chance to negotiate the price. With these results; we can say that there is gender disparities in terms of satisfaction between men and women whereby more men seems to be satisfied regarding their participation in coffee production and marketing while very few women seemed to be satisfied with their participation in coffee production while majority were not satisfied.

Table 15: Reasons for not satisfied (n = 120)

Group	Item	Reasons	Frequency	Percent
Female	Production	High cost of production compared to benefits (profit)	12	24.5
		Coffee farmers are not given input subsidies	4	8.2
		Low capital to invest in coffee	1	2.0
		Lack of transparency/openness within the family	20	40.8
		No reason	12	24.5
Total			**49**	**100.0**
Male		High cost of production compared to benefits (profit)	21	29.6
		Coffee farmers are not given input subsidies	1	1.4
		Low capital to invest in coffee	14	19.7
		Lack of transparency/openness within the family	0	0.0
		No reason	35	49.3
Total			**71**	**100.0**
Female	Marketing	Farmers are not given chance to decide on the price	9	18.4
		Low price given compared to cost	13	26.5
		Only husband is the one who knows the amount received from the sale	22	44.9
		Buyers are the ones who decides on the price	0	0.0
		No reason	5	10.2
Total			**49**	**100.0**
Male		Farmers are not given chance to decide on the price	24	33.8
		Low price given compared to cost	19	26.8
		Only wife is the one who knows the amount received from the sale	0	0.0
		Buyers are the ones who decides on the price	2	2.8
		No reason	26	36.6
Total			**71**	**100.0**

During the focus group discussion conducted in Matyazo village one farmer reported that;

> '*We farmers are not satisfied with coffee marketing because only cooperative leaders know the price. Once you ask them, they said it depends with the world's coffee market price. So, once we sell our coffee we are not sure of the price. A farmer is only told about the price during the day of collecting his/her money from coffee sales. It's only those few who can access and use the internet can be aware of the world's market price trends'.*

4.5.3 Factors influencing level of women and men participation in coffee production and marketing

To determine the factors influencing level of participation in coffee production and marketing in Matyazo and Nyarubanda village, ordinal regression models were estimated. Results as presented in Table 16 indicate that four variables were statistically significant in influencing the levels of farmers' participation in coffee production and marketing. These were marital status, access to credits (cash) for coffee production, land ownership and access on information on coffee production and marketing. However, all these variables were negatively influencing the levels of farmers' participation. Marital status was significant and negatively influencing the level of participation at 10%. This implied that as far as an individual get married his/her participation is likely to decreases the probability of participating in the coffee production and marketing by 2.389. This is due to the experience of the community to perceive some activities such as marketing to be of men and fetching water to be of women.

Table 16: Factors influencing men and women participation in coffee production and marketing (n = 120)

Variables	Coefficient	Std. error	p>[t]
Sex of respondent	-2.026	1.281	0.114
Marital status	-2.389*	1.444	0.098
Level of education	-0.394	0.553	0.476
Occupation	-0.519	1.074	0.629
Receiving credit (cash)	-1.242**	0.575	0.031
Receiving input credit	0.372	0.487	0.445
Land ownership	-5.185***	1.376	0.000
Control of cash from coffee	-0.128	0.259	0.622
Participation in trainings	-0.085	0.531	0.873
Final decision maker	-0.330	1.049	0.753
Membership of cooperative	0.432	0.758	0.569
Access to information on coffee	-1.248**	0.543	0.022
Presence of unfavorable policies/local institution that hinder gender equality	-0.512	0.442	0.247

*Note: ***, **, * denote significance at one percent, five percent and ten percent level*

Access to credits in terms of cash was found to have negative influence on the levels of farmers' participation in coffee production and marketing at 5%. This means that, the financial resources requested are not necessarily to be used in coffee production. Furthermore, land ownership was significant and negatively influencing the level of participation at 1%. Ownership of land does not necessarily influence the level of participation because that land can be used for growing other crops other than coffee. On the other hand, access on information was also statistically significant at 5% but negatively influencing the level of participation. As ones have an access on information there is a probability of decreasing his/her participation, but also when an individual do not have an access on information there is a probability of decreasing the participation in coffee production and marketing by one unit (1.248). The information received by an individual can lead to someone refuse to participate. For example, if somebody received the information on coffee world price to decrease, his/her participation is likely to decrease. These results are likely to resemble with those of Umuhoza (2012) who found that land ownership was significantly influencing women participation, but it was found that land ownership was positively influencing participation, meaning that when a woman own land she is likely to participate in coffee production.

CHAPTER FIVE

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

Basing on the findings concerning different activities carried out by female and male coffee farmers such as land preparation, planting, weeding, fertilizer application, harvesting and marketing. It was found that both male and female farmers were participating in almost all activities except that some activities such as marketing and pruning which were found to be more dominated by male farmers. Therefore, it can be concluded that inequality exist between men and women in the study area.

Furthermore, it was revealed that women have limited control over productive resources such as land and credit support which are necessary in the coffee production and marketing. Men were also seen to have dominated the decision making on income accrued from coffee sale compared to women. These situations give more chance for men to control monetary from coffee and finally make decision on expenditure and savings.

It was found that, despite that large percent of men and women coffee farmers having positive perception towards gender equality in the participation in coffee production and marketing, yet some farmers still have negative perception regarding men and women participation in coffee production. This implies that, gender inequality still exists among coffee farmers in the study area. Thus there is a need of more efforts in order to obtain equitable gender participation in the coffee production and marketing in Kigoma district council.

Inequalities were also found between women and men in all aspects of attending different trainings in coffee production and marketing whereby men have more chances of attending different trainings compared to women. The reason for this being; husbands representing their wife, women having other responsibilities and sometimes farmers are represented by cooperative leaders. None inclusion of women in different trainings on coffee production and marketing is one of the reason leading to poor participation. This can finally leads to low production as we have seen that women contribute a large percentage in coffee production activities.

Basing on the Ordinal regression model, marital status, land ownership, access to credit and access to information were the factors influencing the levels of participation but all were negatively correlated. Meaning that instead of increasing the levels of participation they were reducing the level of individual participation in the study area. It is therefore, concluded that agricultural officers at district level and ward level should take these factors into consideration to see to what extent they can affect coffee production and marketing.

5.2 Recommendations

In the light of the above conclusions, the study put forward the following recommendations are given in order to achieve gender equality in the participation of women and men in coffee production and marketing in Tanzania, particularly in the study area Kigoma district council, where the research for this dissertation was done.

5.2.1 Recommendation to the government and other stakeholders

Kigoma district council management (especially the agriculture department) and other development partners within the district should include gender issues in coffee

programs/plans in the study area. Equal division of labour in coffee production and marketing can reduce workload to one sex. This can also help to combat gender inequalities among coffee farmers (men and women) in all activities of coffee production and marketing. The inclusion of gender issues in all coffee programs in the study area can contribute to efficiency and effectiveness of coffee production.

Furthermore, the Agricultural extension officers in Kigoma district council in collaboration with community development officers should carry out sensitization campaign to coffee farmers on the importance of gender equality. This will help in combating negative perception on gender equality in the participation of coffee production and marketing in the study area.

On the other hand, Kigoma district management in collaboration with financial service providers within the district should provide trainings to coffee farmers on credit accessibility basing on gender equality. For women to have more access on financial services there is a need for the district officials in Kigoma and other NGOs to strengthen institutions like VICOBA which have less demanding of collateral. This will enable coffee farmers, especially women to access credit. Credit accessibility can enable women to buy land and input. Also community members have to be sensitized by law makers (the officer responsible at the district level) and NGOs dealing with law in the district on the rights of women to own and inherit land. This will enable them to have access and control over land which is crucial an important resource as far as coffee production is concerned. District cooperative officers should also make sure that women have the right to be cooperative members; this will enable them to access input which is normally provided basing on membership as a prerequisite.

6.0 Areas for further research

Since the factors influencing individuals' level of participation were negatively correlated, then it is recommended that this can be one of the area for other researchers and extension officers to research on so that to understand why being married especially for women affects their level of participation, access on information was also negatively influencing the level of participation meaning that if the farmer understands coffee prices such as low prices is likely to affect the participation in coffee production and marketing. On the other hand, access on credit was negatively influencing farmers' participation in the coffee production and marketing but in a real sense it is expected that as ones has an opportunity of obtaining credit his or her participation would increase, yet in this study it was found that to decrease the level of participation. This requires extension officers at ward level to find out other factors behind this scenario in Kigoma district council.

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APPENDICES

Appendix 1: Questionnaire for coffee farmers

QUESTIONNAIRE No…….....

A questionnaire for coffee farmers on: Assessment of gender inequality in the participation of coffee production and marketing in Kigoma District, Kigoma Region, Tanzania.

My name is Siwajibu Ally Selemani, Msc. student from Sokoine University of Agriculture. I am currently conducting a study on the "Assessment of gender inequality in the participation of coffee production and marketing in Kigoma District Council. You have been randomly selected to participate in this study. The participation is voluntary. This research is being conducted in partial fulfillment of the requirements for my degree of Master of Science in Agricultural Extension and Education. Kindly provide answers to the questions as honestly and precisely as possible. All information provided will be kept confidential and will only be used for the purpose of this research.

Name of enumerator……Date…….....

Location

District…….....

Division…….....

Ward…….....

Village/street…….....

Part 1: Background information

In this section you are required to provide your information by either filling in the blanks or select the appropriate answer among the given answers.

1. Name of respondent…….....

2. Sex. 1=Male 2= Female [ ]

3. Marital status

1= Married

2= Single [ ]

3= Divorced

4= Widowed

4. How old are you in years?

1. Below 18

2. 19-30 [ ]

3. 31-60

4. Above 6

5. Education level of respondent

1=No formal education

2= Primary education [ ]

3= Secondary education

4=Certificate level

5= Diploma and above

6. Main occupation:

1. Salaried employment

2. Farming [ ]

3. Business/Trade

7. Please provide information on your main sources of income and the amounts you obtained from them during the year 2015/16.

Source of income	**Net income**
Crop production	
Livestock production	
Wages/salaries	
Others (specify)	

8. What other crops apart from coffee did you harvest during the previous season?
1……..
2……..
3……
4…….
5…….

9. What other crops apart from coffee did you sell during the previous season?
1……..
2……..
3……..
4……..
5…….

10. Where do these crops you mentioned in question 9 being sold?

1. At the village

2. Village market

3. Nearby village market

4. Urban market

5. None of the above

11. Who has the final say over the use of money obtained from sales of other crops(you mentioned in question number 9?

1. Men/husband

2. Wife

3. All/Joint

12. Do you raise livestock?

1. Yes

2. No [ ]

13. If the answer for question number 12 is 'Yes', what kind and number of livestock do you raise?

Type of livestock	Number of animal kept
Indigenous cattle	
Cross breed cattle	
Goats	
Sheep	
Local chicken	
Ducks	
Others (specify)	

Part II: Activities carried out by men and women in coffee production and marketing in Kigoma district council.

14. Who performs the following roles in coffee production and marketing?

S/N	**Roles**	**Who does it**	
		M	**F**
1.	**Production**		
	i)Land preparation		
	ii)Planting		
	iii)Weeding		
	iv)Pesticide/Herbicide		
	v)Pruning		
	vi)Harvesting		
	vii)Sorting		
2.	**Marketing**	**M**	**F**
	i) Seeking coffee market information		
	ii)Taking coffee to the selling point		
	iii)Collecting money from coffee sales		

15. Have you ever received credit from a bank or any other organization during the last 12 months?

1. Yes 2. No [ ]

16. If the answer for question 15 is ‘Yes’ indicate credit amount received (Tsh)

……

17. Source of the credit…….

18. If the answer for question 15 is ‘No’, select the reason among the following:

1. Having other sources
2. High interest rates
3. Lack of collateral
4. Not aware on credit accessibility
5. None of the above

19. Purpose of the credit received (Tick all responses mentioned, multiple responses acceptable)

1. Farm development
2. Farm machinery, implements and tools
3. Construction of storage structure
4. Buying food
5. Paying school fees
6. Others (specify)……..

20. Have you ever received input credit from a cooperative or any other organization during the last 12 months?

1. Yes
2. No [ ]

21. If the answer for question 15 is ‘Yes’ indicate credit amount received (in Kg.) …….

22. Source of the credit…….

23. If the answer for question 20 is ‘No’, select the reason among the following:

1. Having other sources
2. High interest rates
3. Lack of collateral
4. Not aware on credit accessibility
5. Not a member of cooperative/group
6. None of the above

Part III: Gender participation in coffee production and marketing

24. Did you attend any training regarding coffee production?

1. Yes [ ]
2. No

25. If the answer on above question 24 is ‘Yes’, what kind of training did you get? (indicate ‘yes’ or ‘no’ to the following:

1. Training on the use of fertilizer
2. Training on the use of pesticides/herbicides/fungicides
3. Training on coffee pruning
4. Training on mulching

26. If the answer in question 24 is ‘No’, why? Give reasons (select from the following answers below)
    1. Not having time
    2. Lack of information
    3. Represented by husband
    4. Represented by wife
    5. Having other responsibilities
    6. None of the above

27. Did you attend any training regarding coffee marketing?
    3. Yes [ ]
    4. No

28. If the answer on above question 27 is ‘Yes’, what kind of training did you get? (indicate ‘yes’ or ‘no’ to the following):
    1. Attending training on how coffee marketing are being conducted
    2. Attending training on how to prepare coffee for better price
    3. Attending training on how coffee prices are being set according to the world market

29. If the answer in question 27 is ‘No’, why? Give reasons(select from the following answers below)
    1. Not given a chance to attend (Leaders are given priority)
    2. Lack of information
    3. Represented by husband
    4. Represented by wife
    5. None of the above

30. Are you aware on how coffee marketing is undertaken in your area?
    1. Yes [ ]
    2. No

31. If the answer for question number 26 is ‘Yes’, where did you get the information (Choose from the list).
    1. From cooperative leaders
    2. Through public meetings
    3. From my husband
    4. From my wife
    5. From neighbors
    6. None of the above

32. If the answer for the question above is ‘No’ give reasons (Choose from the list)
    1. My husband knows for me
    2. My wife knows for me
    3. Leaders knows for us
    4. None of the above

33. Where is coffee being sold?
    1. At the farm
    2. At the village market [ ]
    3. Urban market
    4. In the cooperatives

34. Give reasons why you decide to sell your coffee in the place you mentioned in question number 29?
    1. Its closer to my home
    2. Good price [ ]
    3. Others, specify……

35. Are you involved in the in the processes for preparation of coffee production and marketing?
    1. Yes [ ]
    2. No

36. If the answer for the question number 35 is 'No' give reasons (choose from the list)
    1. Having other responsibilities
    2. Not given a chance by wife
    3. Not given a chance by husband
    4. None of the above

37. Are you involved in the process of coffee marketing?
    1. Yes [ ]
    2. No

38. If the answer for the above question number 33 is 'No', give reasons (Choose from the list below)
    1. Only cooperative leaders knows about coffee marketing
    2. Husband represent the family while I know nothing
    3. Wife represent the family while I know nothing
    4. None of the above

39. Are you satisfied regarding your participation in coffee production?

    1. Yes
    2. No [ ]

40. If the answer for the question number 39 is ‘No’ give reasons (choose from the list)

    1. High cost of production compared to benefits
    2. Coffee farmers are not given input subsid
    3. Low capital to invest in coffee
    4. Lack of transparency/openness within the family
    5. None of the above

41. Are you satisfied regarding your participation in coffee marketing?

    1. Yes
    2. No [ ]

42. If the answer for the question number 41 is ‘No’ give reasons (Choose from the list)

    1. Farmers are not given chance to decide on the price
    2. Low price given compared to cost of production
    3. Only husband is the one who knows the amount received from coffee sell
    4. Only wife is the one who knows the amount received from coffee sell
    5. None of the above

43. What are the factors that influence gender participation in coffee production and marketing? (Answers to be filled in the following table)

Item	Factors
Not owning coffee field	1. 2. 3.
Not involved in coffee production trainings	1. 2. 3.
Not involved in coffee marketing trainings	1. 2. 3.
Not involved in the processes for preparation of coffee production	1. 2. 3.
Not involved in the processes for preparation of coffee production	1. 2. 3.
Not participated in decision making with regards to income from coffee production	1. 2. 3.

44. Are there any unfavorable policies/local institutional setups, traditions or taboos that hinder gender equality in the participation of coffee production?

1= Yes

2= No [ ]

45. If the answer for question number 44 is ‘Yes’ please explain. (Choose from the list)
    1. Community members sees coffee as men’s crop
    2. Women sees coffee as men’s crop
    3. None of the above

46. Are there any unfavorable policies/local institutional setups, traditions or taboos that hinder gender equality in the participation of coffee marketing?

    1= Yes

    2= No [ ]

47. If the answer for question number 41 is ‘Yes’ please explain. (Choose from the list)
    1. Community members sees coffee as men’s crop
    2. Women sees coffee as men’s crop
    3. None of the above

Part IV: Access and control over technologies, resources and income from coffee production

48. Do you own the coffee field?
    1. Yes [ ]
    2. No

49. If the answer is ‘No’ in question number 49 explain why?
    1. Unable to buy land
    2. Not profitable [ ]
    3. Not having land

50. If the answer is ‘Yes’ in question 43 how did you get it?

    1. Bought
    2. Inherited [ ]
    3. Hired

51. If you own land, what is the size of that land (in ‘acres’)…… ……..

52. What is the distance of the field from home in Km……...

53. Who control expenditures from coffee production?

    1. Husband
    2. Wife [ ]
    3. Joint/All

54. On average, what amount of money from coffee production you can make decision over its use without consulting your wife/husband?

    .....……

    .....……

55. On average, what amount of cash money from coffee production you can’t make decision over its use without consulting your wife/husband?

    .....……

    .....……

56. Is coffee beneficial to you?

    1. Yes
    2. No [ ]

57. If the answer for the question number 51 is 'Yes', mention the benefits

    1. Personal benefits……..…

       ……..

       …….

    2. Family benefits

       ……

       ……

       ……

Part V: Coffee farmer's perception on gender participation in coffee production and marketing.

58. Please kindly say whether you agree or disagree with the statements and the extent to which you do so (Key: 1=Strongly disagree, 2=disagree, 3=Undecided, 4=Agree, 5= Strongly agree

No	Statement About perception	Connotation	1	2	3	4	5
	Coffee production is only for men						
	Coffee production is only for women						
	Coffee marketing is only for men						
	Coffee marketing is only for women						
	Women are not allowed to participate in coffee marketing						
	Gender equality in the participation of coffee production is not important as it can't bring any change in terms of benefits accrued from coffee sell						
	Gender equality in the participation of coffee marketing is not important as it can't bring any change in terms of benefits accrued from coffee sell						
	Gender equality in the participation of coffee production is important as the benefits accrued from coffee sell will benefit all the family members and the community as whole.						
	Gender equality in the participation of coffee marketing is important as the benefits accrued from coffee sell will benefit all the family members and the community as whole.						
	When a woman participate in coffee marketing, the community see her as doing the men's job						
	The following social economic factors which may hinder participation in coffee production and marketing need open discussion in order to have gender equality: Ownership or access to land						

	Access to farming inputs						
	Access to information technologies						
	Access to market information						
	Access to credit						
	Decision on expenditure and savings.						

Appendix 2: Checklist for Key informants (Extension Workers, Cooperative Leaders and Village Leaders)

1. Have you conducted any seminar, training, or public meeting to coffee farmers this year 2016?
2. Do gender equality being considered in the participation of seminar, training or public meeting?
3. Are there any cultural norms that hinder gender equality in the participation of coffee marketing activities in this area?
4. What is the situation of ownership of resources (between genders) concerning coffee subsector in this area?
6. Where is the market of your farmers for coffee?
7. What is the situation of gender inequality in coffee production and marketing in this area and why?

Appendix 3: Checklist for Focus Group Discussion (FGD)

1. Name of District Council:.....

2. Name of village/street: .....

3. Are both men and women aware of coffee production activities carried out in your area for the last 12 months?

4. Are both men and women aware of coffee marketing activities carried out in your area for the last 12 months

4. What are those activities that both men/women are aware of?

5. Did men/women participate in the processes for preparation of coffee production activities in your area?

5. Did men/women participate in the processes for preparation of coffee marketing activities in your area?

6. How do they involved in planning? (men/women)

7. Were there problems associated with men and women participation in coffee production?

7. Were there problems associated with men and women participation in coffee marketing?

8. If yes, what were those problems?

9. Can you give your views on how to improve gender equality in the participation of coffee production activities?

10. Can you give your views on how to improve gender inequality in the participation of coffee marketing activities?