

**ACCESS AND CONTROL OVER AGRICULTURAL INCOME AND LABOUR IN
ZAMBIA'S SMALLHOLDER FARMING SYSTEMS: A GENDERED LOOK FROM
CHIPATA, EASTERN ZAMBIA**

By

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A dissertation submitted to the University of Zambia in partial fulfilment of the requirements for the award of the Masters of Science Degree in Environmental and Natural Resources Management.

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DECLARATION

I, Joan Pelekamoyo, declare that this dissertation which I hereby submit for the award of the Master of Science Degree in Environmental and Natural Resource Management at the University of Zambia, is my own work and has not previously been submitted for any other degree at this or another institution.

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APPROVAL

This dissertation by Joan Pelekamoyo entitled access and control over agricultural income and labour in smallholder farming systems: A gendered look from Chipata, Eastern Zambia is approved in partial fulfilment for the award of science degree in Environmental and Natural Resource Management by the University of Zambia.

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DEDICATION

This work is dedicated to my most precious daughters Visuwa, Alineti Tapiwa and my late daughter Watipanaad; May her soul rest in God's eternal peace. Finally, I dedicate this work to my patient and supportive husband. I love you.

ABSTRACT

This study sought to investigate access to and control over agricultural income and labour in smallholder farming households in Chipata district, Zambia. The objectives were to investigate the agricultural practices employed by smallholder farming households in Msandire and Mkanda areas of Chipata District, investigate decision making over agricultural income by men and women in Msandire and Mkanda smallholder farming households and examine the gendered aspects of household labour allocations among smallholders in Msandire and Mkanda agricultural camps. Methods of data collection that were used in this study included household and key informant interviews, focus group discussions and a desk analysis of publications on gender in agriculture. The HAF was used to identify the roles and assess the access to and control over agricultural resources by men and women farmers in the study area. Descriptive analysis such as means and percentages were used to analyse quantitative data, while qualitative data from the focus group discussions, the key informant interviews, and answers to the open-ended questions of the semi-structured interviews were analysed using content analysis. Results show that agricultural practices which were commonly employed by smallholder farming households were flat culture being the most practiced tillage by both male-headed households (71%) and female-headed households (91%). Ploughing was more common among the households headed by men (16%) and in households headed by women, it only occurred in 7%. Then ripping only occurred in male-headed households with none of the women ripping their fields. Only men had access to and control over cattle resulting in a high prevalence of women using the flat culture system due to limited access to draught animals. Decisions were made jointly in male-headed households (48%) over agricultural income while for female-headed households, joint control occurred only in 19% of the cases. The most frequently made joint decisions concerned harvesting, planting, and crop sale. Over half (58%) of the women in female headed households controlled their household's agricultural income as compared to only 15% of women in the male-headed households. In the male-headed households only 37% of the men controlled their agricultural income as compared to 23% of the men in the female-headed households. Men allocated most of the labour activities in the male-headed households and women only took charge in the absence of men or in female-headed households. Both men and women in male and female-headed households were involved in manual weeding and harvesting. This study concludes that women generally have access to agricultural resources but do not have control over them. Mostly men have control unless in households where the woman is the head of the household. Hence, to ensure equitable access to and control over agricultural income and labour, this study recommends that Government in partnership with the Ministry of Agriculture, NGOs and community based organisations should ensure continued strengthening of gender mainstreaming strategies by identifying and addressing gender inequalities in relation to income and labour resources through the use of gender analysis, and gender-responsive budgeting processes.

Key words: decision making, tillage, agricultural resources, joint control

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CHAPTER ONE: INTRODUCTION

1.1 Introduction

This chapter introduces the study on access and control over agricultural income and labour in Zambia's smallholder farming systems. A gender lens was used throughout the study and is reflected in all the chapters in this dissertation. The chapter presents the problem statement, aim, research objectives, research questions and significance of the study.

1.1.1 Access to and control over agricultural resources

There is an increasing recognition that ownership, access to, and control over agricultural resources constitutes critical elements in the determination of the well-being of farm households (Anaglo et al, 2014). The capacity of a farmer to employ improved technology and investment depends on their access to productive resources. Despite both men and women contributing significantly to agricultural production, their access to agricultural resources differ (Deere and Doss 2006; The Food and Agriculture Organisation (FAO), 2010). Men are usually the landowners, managing cash crops and other high-earning natural resources while women are usually responsible for the plots on which food crops are grown and for obtaining water and firewood for their families (IFAD 2010). Although women contribute 50% of the agricultural labour force in sub-Saharan Africa (SSA), they do not have as much access to and control over agricultural resources as men (Beintema, 2017). The key agricultural resources include land, livestock, new technologies, credit or other financial services, education or extension advice. In some cases, women do not even control the use of their own time (FAO 2011a; Glemarec et al., 2015). Women managed plots are 20–30% less productive (FAO, 2011b).

Consistent evidence suggests that women tend to have more constrained access to agricultural inputs and technology and to critical services such as extension and credit (Marennya et al, 2015). They are under-represented in local institutions and governance mechanisms, and tend to have less decision-making power (FAO, 2017). In addition to these constraints, prevailing gender norms and discrimination often mean that women face an excessive work burden, and that much of their labour remains unpaid and unrecognized (FAO, 2017). Thus, gender difference arising from the socially constructed relationship between men and women affects the distribution of agricultural resources and cause many disparities in development outcomes (Ransom & Bain,

2011). These disparities could be viewed as a result of differences in the socio-cultural, religious, tribal, educational levels across the states (Ngodoo, 2014). Women in agriculture and rural areas have more restricted access than men to productive resources and opportunities, and as a result produce less than male farmers. FAO refers to this challenge as the gender gap (Australia's Government Policy, 2015).

In order to better understand these gender gaps in rural economies and agricultural markets, it is important to follow an integrated framework and a set of causal pathways that link gendered differences with social norms, economic constraints, institutions, international processes, and policy prescriptions (FAO, 2016). According to FAO (2010) and WEFC (2014), women compared with their male counterparts:

- 1. operate smaller farms, on average only half to two-thirds as large;*
- 2. keep fewer livestock, typically of smaller breeds, and earn less from the livestock they own;*
- 3. have a greater overall workload that includes a heavy burden of low productivity activities such as fetching water and firewood;*
- 4. have less education and less access to agricultural information and extension services;*
- 5. use less credit and other financial services;*
- 6. are much less likely to purchase inputs such as fertilizers, improved seeds, and technical equipment;*
- 7. if employed, are more likely to be in part-time, seasonal and low-paying jobs; and*
- 8. receive lower wages for the same work, even when they have the same qualifications and experience.*

In the agricultural sector, there is gender inequality in terms of control over and access to agricultural resources, which limits the sector's development enormously (Carmen and Salazar 2017). Furthermore, the social roles of men and women also generate disparities in the distribution of goods within the home; have a powerful impact on food security and the well-being of families (Ibid). This gender gap in agriculture across SSA ranges widely from 4% to 40%, the majority clustering around 20 to 30% (Kilic et al, 2015). Gender gaps exist for many productive assets, inputs and services, including land, livestock, labour, education, extension and

financial services (FAO, 2013). Within households, differences in resource allocation among plots operated by different household members may be one of the factors that underpin gender gaps in agricultural productivity and welfare (Marenya et al, 2015). Agricultural development policies have promoted a masculinisation of opportunities and tended to displace women's labour, increasingly pushing women into marginal production (ILO 2008).

Gender based resource and income gaps that cut across African production systems explain the slow productivity increases and persistent income poverty in the African smallholder sector as a whole (Quisumbing and Pandolfelli, 2010). Africa's agricultural productivity is the lowest in the world (AGRA, 2015). Large gender inequalities in access to and control over resources constitute a major challenge for sustainable and inclusive development in agriculture, with efficiency and cost implications for the sector that impact the broader economy and society (FAO, 2011b). Thus, to improve the low agricultural productivity pervasive among African farming households, gender inequalities must be corrected.

According to Okali (2011), women have been the core subject of gender and indicated that the term 'gender issues' has been widely used to refer to disadvantages faced by women in the field of agriculture despite the theoretical meaning of gender as roles of males and females. According to Mehra and Rojas (2008), in agriculture, women feature prominently as they are believed to produce more than half of all the food that is grown, specifically, up to 80% in Africa. It has been assumed that if women's access to resources is increased, they may have higher incomes and invest in their children's education, health care and nutrition. However, they are constrained by poor access to resources, taking new opportunities, including new markets, by their limited educational background, poor networks and mobility restrictions (Ashby et al, 2008).

1.1.2 Access to and control over agricultural labour

SOFA Team and Doss (2010) assert that the international development community has recognized that agriculture is an engine of growth and poverty reduction in countries where it is the main occupation of the poor. Women make essential contributions to the agricultural and rural economies in all developing countries (Ashby et al, 2008). Their roles vary considerably between and within regions and are changing rapidly in many parts of the world, where economic and social forces are transforming the agricultural sector. SOFA Team and Doss

(2010) further state that rural women often manage complex households and pursue multiple livelihood strategies. Their activities typically include producing agricultural crops, tending animals, processing and preparing food, working for wages in agricultural or other rural enterprises, collecting fuel and water, engaging in trade and marketing, caring for family members, and maintaining their homes. Many of these activities are not defined as “economically active employment” in national accounts but they are essential to the wellbeing of rural households. The agricultural sector in many developing countries is underperforming, in part because women, who represent a crucial resource in agriculture and the rural economy through their roles as farmers, labourers and entrepreneurs, almost everywhere, face more severe constraints than men in access to productive resources (FAO, 2011b).

According to ILO (2008) the majority of women workers, especially in the less developed countries and the countries with economies in transition, still rely on agricultural employment. But they remain largely invisible in the data, because they work mainly in subsistence agriculture, where unpaid labour on their own land alternates with wage or exchange labour on another’s, and where home based trade, crafts, and small industrial production combine with seasonal agricultural activities.

According to Ragasa (2012), affordability and access to financing can explain that women often rely on less mechanized and more labour intensive technologies than men. Ragasa (2012) further says that the reported value of farm tools owned between male-headed and female-headed households and difference in use and ownership of draft animals and tractors, are likely to be attributed to the relative affordability of these technologies coupled with women’s less income and asset holdings and less access to credit than men.

1.1.3 Access to and control over agricultural resources in Zambia

A growing body of empirical evidence suggests that increasing women’s control of agricultural resources has positive effects on a number of important development outcomes, including food security, child nutrition, and education (Meinzen-Dick et al., 2009; Malapit et al., 2013; Rao, 2016). This knowledge of the need to increase women’s access to and control over productive resources in agriculture has not translated into changes on the ground as gender gaps persist. In Zambia, gender disparities in access to and control over agricultural resources are evident.

Women have lower access to and control over productive resources than men despite being the majority of smallholder farmers in Zambia (FAO, 2010). Men are more likely than women to access credit, own and cultivate more land, and have high productive asset value (Namonje-Kapembwa and Chapoto, 2016). Women are largely excluded from decision making on issues that affect their economic welfare (Sitko et al, 2011), and their control reduces further as commercialisation increases for example, in the Eastern Province of Zambia, groundnut commercialisation reduced women's control over production (Kasanda, 2017).

Using a nationally representative panel survey data, Shipekesa and Jayne (2012) found that the proportion of maize and rice fields controlled by a man rose as the household's degree of farm commercialisation increased. Only 17.6 % of the beneficiaries of the Farmer Input Support Programme (a national agricultural subsidy programme) were female-headed households, while the rest (82.4%) were male-headed households. This gap was attributed to the requirement of minimum 50% the cost of input upfront in order to qualify for the subsidy programme, which disadvantages female-headed households due to their lack of resources (GRZ, 2016).

1.1.4 Access to and control over agricultural labour in Zambia

Labour contribution towards agricultural activities by men and women farmers shows mixed results. While the dominant view is that women farmers provide more labour towards agricultural production than men do (Kasanda, 2017; Blackden, 1999), Shipekesa and Jayne (2012) reported that labour activities were roughly equally split between men and women, especially in maize and rice production. Overall, the gender difference in the proportions of labour hours was statistically insignificant in maize production (Shipekesa and Jayne, 2012, p3). The authors thus cautioned against sweeping generalisations that women account for most of the labour in Zambian agriculture as they could be misleading. The differences reported in the results could be explained by the variations in scale and time, geographical and cultural differences. Kasanda, (2017) noted that there is insufficient country and sector specific empirical knowledge on factors that influence gender differences in Zambia.

Both men and women farmers play an important role as decision-makers in agricultural system. They decide when to plant, harvest and process their crops. They decide how much of each crop variety to plant each year, how much seed to save from their own production and what to buy or exchange. In most farming systems, there is a division of labour. This determines the different

tasks for which men and women are responsible. Generally, women have an important role in the production, processing, preservation, preparation and sale of staple crops. Men tend to focus on market-oriented or cash crop production. Often we find a division in crop and livestock management practices. Weeding is often a women's task, while spraying or fertilizer application is mainly carried out by men. Women and children often look after the smaller livestock species and men are often in charge of cattle. These are only a few examples, which are not generally applicable, but will depend on the specific situations and cultures we are working (FAO, 2004)

Decision making among men and women in the agricultural sector is embroiled in a complex web of cultural norms, traditional practices and patriarchal attitudes that are entrenched in society (GRZ, 2016). The interplay of local traditional practices, economic opportunities, and the bio-physical environment result in gender dynamics that reflect the local context. It is thus important to conduct research at a micro level to determine the manifestations of this interplay of factors in order to better inform interventions at a local scale. As echoed by Meijer et al (2015), since there is a high degree of variation in time and space in patterns of household decision making and allocation of resources, there is a need for more context-specific information on how decisions are being made at household level. Therefore, this study sought to investigate using a gender lens access to and control over income and labour between men and women within smallholder farming households in Msandile and Mkanda areas of Chipata District.

1.2 Problem Statement

Despite the diversity in the roles and status of women in agriculture, the empirical evidence from numerous studies have revealed a consistent gender gap against women in access to productive assets, inputs and services (FAO, 2011b; FAO, 2012; World Bank 2012). Agriculture is important to women, but women farmers have less access to productive resources and services required for agricultural production. Women are less likely than men to own land or livestock, adopt new technologies, use credit or other financial services, or receive education or extension advice. In some cases, women do not even control the use of their own time. While the size of the gender gap differs by resource and location, the underlying causes for the gender gap with regards to men's and women's access to and control over agricultural resources in Zambia can be attributed to men's dominance in decision making processes, their dominance in leadership

positions within communities and households as well as the advantage accorded to men by traditions, customs and patriarchal systems (Seebens, 2010).

In many developing countries, statutory and customary laws continue to restrict women's access to land and other assets (Doss, 2015). Female-headed households tend to have less labour available for farm work, as these households are typically smaller, and are less able to hire labour. According to Maher, (2013) women undertake the majority of agricultural work in addition to domestic or reproductive work and have limited control over their own labour. Consequently, there is poor crop yield leading to less food in their households. Moreover, women have unpaid household duties, such as fetching fuel wood and water, that diminish their involvement in income-generating productive activities (Huyer, 2016). Furthermore, women's poor access to credit facilities prevents them from purchasing the needed inputs in the agricultural process.

Disputes over access to and control over agricultural resources already foster conflict between men and women farmers and will become even more important in the face of climate change, resource degradation and population growth. The inequitable distribution of power in decision-making in the agricultural sphere hamper women's ability to enhance their own economic wellbeing. If women have less access to key agricultural inputs such as land, labour, knowledge, fertilizer and improved seeds the family is negatively affected in terms of child health, nutrition, and education. Women's poor access to land may also affect their ability to practice sustainable environmental management and hence impacting negatively on agriculture. These negative effects are potentially more impacting on communities largely dependent on agriculture such as Chipata. Chipata is an agricultural city with the majority of its rural population engaged in smallholder agriculture production. Previous research conducted by Kasanda, (2017) focused on factors that influenced female control over groundnut production in Zambia. They determined the effect of women's groups on female control over groundnuts production and examined the relationship between groundnut commercialization and female control over its production. Orr et al. (2015) also studied groundnut production in eastern province. They concluded that higher sales of groundnuts did not reduce women's perceived level of control over groundnuts and women welcomed the greater male participation in groundnut machine shelling as it reduced the drudgery associated with hand shelling which was previously performed by women in Eastern

Province, Zambia, where groundnuts have historically been regarded as a ‘women’s crop’. These two studies, however, did not investigate the access to agricultural resources as well as control over income and labour in the smallholder agricultural farmers. Therefore, this study sought to investigate using a gender lens access to and control over income and labour between men and women within smallholder farming households in Msandile and Mkanda areas of Chipata District.

1.3 Aim

This study aimed at investigating the access to and control over agricultural income and labour in smallholder farming households in Chipata, Zambia.

1.4 Objectives

The objectives were to;

1. Investigate the agricultural practices employed by smallholder farming households in Msandire and Mkanda areas of Chipata District.
2. Investigate decision making over agricultural income by men and women in Msandire and Mkanda smallholder farming households.
3. Examine the gendered aspects of household labour allocations among smallholders in Msandire and Mkanda areas.

1.5 Research questions

- i. Which gender groups are involved in the various farming operations engaged in by smallholder farming households in the study sites?
- ii. To what extent do male and female members of smallholder farming households’ access agricultural income in the study sites?
- iii. To what extent do men and women members of smallholder farming households’ control agricultural income in the study sites?
- iv. Which gender group(s) determines crops and quantities to be grown for sale in smallholder farming households in the study sites?
- v. Which gender groups determine crops and the quantities to be grown for household use in the study sites?

- vi. To what extent do male and female household members access and control agricultural labour implements in smallholder farming households in the study sites?
- vii. Who in a smallholder farming household in the study sites makes decisions on how household agricultural labour is used?

1.6 Significance of the study

Development initiatives can affect male and female beneficiaries in vastly different ways because of these gender differences and inequalities. Without a deliberate consideration of gender dynamics, women often encounter obstacles to participating in, and benefiting from, development projects (USAID, 2012a). Women undertake the majority of agricultural work in addition to domestic or reproductive work and have limited control over their own labour. Hence, an investigation of gender differences is critical for a complete understanding of factors affecting both men and women for understanding inequalities in smallholder farming households. The results of this study will be useful to agricultural development project designers for improved project designs that take cognisance of the gendered nature of resource use in smallholder agriculture. Also it will be important for policy design and implementation.

By highlighting the gender differences in access to and control over agricultural resources, it is hoped that this study will encourage the government to intensify gender mainstreaming activities aimed at attaining gender equality and equity in access to and control over agricultural resources in Zambia.

Furthermore, the findings of the study can be used to initiate interventions on awareness and sensitisation campaigns on the importance of gender equality and equity to all players including communities and other stakeholders that work in these communities such as the cooperatives and agricultural extension officers.

1.7 Organisation of the Dissertation

This dissertation is arranged in six chapters. Chapter One has already provided the introduction, statement of the problem, aim, objectives, research questions, and the significance of the study as well as the organisation of the study. Chapter Two presents the several literature that focuses on; smallholder farming systems, gender in agriculture, agricultural practices employed by smallholder farming households, access to and control over productive resource, access to and

control over income and labour and finally the theoretical framework is also included in this chapter. Chapter Three focuses on the study area Msandire and Mkanda agricultural camps located in Chipata districts in Eastern province. It outlines the location of Chipata and the study sites, biophysical characteristics of Chipata, socio-cultural and the economic situation of Chipata. Chapter Four discusses the methodology of the study. It highlights selection and choice of methods of data collection, and the analysis used. Chapter Five provides an account of the results and discussion of the study. Then Chapter Six presents the conclusions as well as the recommendations of the study.

CHAPTER TWO: LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1 Introduction

This chapter focuses on literature on access to and control over agricultural income and labour in smallholder farming systems. It reviews studies conducted by researchers both locally and globally focusing on, among other things, the following themes: smallholder farming systems, gender in agriculture, agricultural practices employed by smallholder farming households, access and control over agricultural income and labour by gender as well as gender analysis frameworks. The chapter ends with a summary of the main highlights of the reviewed literature and identification of gaps in the current state of knowledge on access to and control over income and labour in the smallholder sector in Zambia.

2.2 Smallholder farming systems

A farming system is defined as a population of individual farm systems that may have widely differing resource bases, enterprise patterns, household livelihoods and constraints (Giller, 2013). Smallholder farming systems are perceived to share certain characteristics which differentiate them from large-scale, profit-driven enterprises. These include limited access to land, financial capital and inputs, high levels of vulnerability and low market participation (Chamberlin 2007; Chamberlin 2008).

The definition of smallholder farmers differs between countries and between agro-ecological zones. In favourable areas with high population densities smallholder farmers often cultivate less than one hectare of land, whereas they may cultivate 10 hectare or more in semi-arid areas, or manage 10 head of livestock (FAO, 1997). An FAO study (2004) defines smallholders as farmers with limited resource endowments, relative to other farmers in the sector. Smallholder farmers are the drivers of many economies in Africa even though their potential is often not fully realised. These farmers own small-based plots of land on which they grow subsistence crops and one or two cash crops relying almost exclusively on family labour (Republic of South Africa, 2012). According to Heidhues and Bruntrup (2003), the term “smallholder” often overlaps and may be used interchangeably with “small-scale agriculture”, “family farm”, “subsistence farm”, “resource-poor farm”, “low income farm”, “low-input farm” or “low-technology farm”. Murphy (2010), further state that smallholder farmers are characterised by marginalization, in terms of

accessibility, resources, information, technology, capital and assets. Cordaid (2015) defined smallholders as, small-scale farmers, pastoralists, forest keepers, fishers who manage areas varying from less than one hectare to 10 hectares. Smallholders are characterised by family-focused motives such as favouring the stability of the farm household system, using mainly family labour for production and using part of the produce for family consumption. Smallholders sell part of their crops on the market to earn an income to cover for household expenses like clothing, school fees, medicines and transport and this is the characteristic of most rural areas in Zambia.

Smallholder farming is the backbone of African agriculture and food security (Benton, 2014). Of the two-thirds of SSA's population that resides in the rural areas, the majority can be considered as smallholder farmers (FAO, 2015a). Their importance derives from their prevalence, their role in agricultural and economic development, and the concentration of poverty in rural areas.

The gender of decision makers (both production and consumption decisions) within the household is an important factor that influences household strategies (Bodil, 2011). Thus, it is essential to analyse the farm household as a unit within the context of the local economy, community and agro-climatic environment (Ellis 2000).

However, this study refers to smallholder farmers as small-scale farmers characterised by family-focused motives such as favouring the stability of the farm household system, using mainly family labour for production, and using part of the produce for family consumption. Smallholders in this study are defined as those farmers that sell part of their crops or livestock on the market to earn an income to cover for household expenses like clothing, school fees, medicines, and transport and this is the characteristic of most rural areas in Zambia.

2.2 Gender in agriculture

Gender is defined by FAO (2015b) as the relations between men and women, both perceptual and material. Gender is not determined biologically, as a result of sexual characteristics of either women or men, but is constructed socially. Gender aspects relate directly and critically to women's and men's roles and responsibilities in the farming household and to decisions about allocating resources or adopting technologies in farming systems. Resource allocation priority setting is not necessarily shared among household members. Resources are usually allocated

according to the priorities of the most powerful household member, in most cases, a male (Beuchelt and Badstue, 2013). Large gender inequalities in accessing and controlling resources constitute a major challenge for sustainable and inclusive development in agriculture, with efficiency and cost implications for the sector that impact the broader economy and society (FAO, 2011a). Gender differences matter in agricultural production in various farming systems all over the world, where the ownership and management of farms and natural resources by men and women are defined by cultural specific gender roles.

A focus on gender can increase productivity of agriculture and livestock systems, and improve food security and nutrition; Increasing the access of women to productive resources, to be on a par with men, would increase yields by 20-30% (FAO, 2011b). This in turn would raise agricultural output in developing countries by 2.5 to 4%, reducing the number of hungry people by 12-17%, roughly 100-150 million people (FAO, 2010). Improvements in women's status and their control over resources are positively correlated with increased investment in children's education, health and nutrition, and the ability of women to accumulate assets (World Bank, 2012). Therefore, efforts to reduce food insecurity and poverty should include efforts to ensure that men and women are able to equitably access and benefit from development opportunities.

Meinzen-Dick et al., (2012) stated that paying attention to gender is not a matter of ideology but rather a matter of development effectiveness. According to SDC (2015), households do not act in a unitary manner when making decisions or allocating resources. This, Meinzen-Dick et al., (2012), explain, means that men and women within households do not always have the same preferences nor pool their resources. Thus redistributing inputs between men and women in the household has the potential for increasing productivity. Therefore, incorporating gender issues more widely and systematically in agricultural research, development and extension systems contributes significantly to meeting the food needs of the future population or ensuring that productivity translate into the improved welfare of the poor.

2.3 Agricultural practices employed by smallholder farming households

Agricultural practices are collections of principles to apply for farm production processes to obtain better agricultural products (Csaba and Nikolett, 2008). For example, ploughing the soil is an agriculture practice, as is minimum tillage, free range raising of poultry, pigs and cattle.

Smallholder farmers depend on hand-hoe cultivation and use little of draught power while depending mainly on unpaid family labour. Further, smallholder farmers are characterised by low use of modern inputs. Where these are adopted, it is usually the use of hybrid maize and fertiliser which were over-promoted by past agricultural policies (FAO, 2002).

2.4 Access to and control over productive resources

Access is the right to use or benefit from a productive resource (March et al. 2005; Berry, 1989) while control is the power to decide how a resource is used, and who has access to it. Women often have access to but no control over resources (March et al, 1999). A woman may have access to a field in that she works on it regularly, but she may not have control concerning the decisions about what and how much is grown there, how much of it is sold and how much is kept for family consumption, or even about what the waste products of the crop are used for (Smyth and Mukhopadhyay, 1999). The person who controls a resource is the one ultimately able to make decisions about its use, including whether it can be sold or not. Decision making encompasses many dimensions of power including influence and authority or legitimate power derived from social and legal norms. Decision making plays a central role in accessing and controlling resources and benefits among various sections of the population (GRZ, 2016). Assignment of decision authority in households may be influenced by variables including age, gender, education level, and access to land and control over resources (Meijer et al, 2015). Gender norms influence access to and control over resources among communities.

Gender norms include everything from cultural beliefs to expected behaviours and practices (Njuguna et al, 2016). Gender norms are social norms that relate specifically to gender differences. In this series we use the term ‘gender norms’ to refer to informal rules and shared social expectations that distinguish expected behaviour on the basis of gender (ODI, 2015). For example, a common gender norm is that women and girls will and should do the majority of domestic work. Gender norms are not static; they change in response to shifting economic, political, and cultural forces, which can create new opportunities for women and men. Additionally, gender norms are in constant dialogue with women’s agency and may determine women’s capacity to act (Njuguna et al, 2016).

Gender norms related to females in many cultures may include expectations of submissiveness, deference to male authority, dependence, virginity until marriage, and faithfulness during marriage. Norms for men, on the other hand, are built around power and control, independence, not showing emotions, risk-taking, using violence to resolve conflict, early sexual activity, and having multiple sexual partners. Such inequality limits young people's control over their reproductive lives and reinforces centuries-old development challenges (USAID, 2012b). Access may be conditional on highly clientelist forms of dependency relationships or extremely exploitative conditions of work or it may be achieved in ways which offer dignity and a sense of self-worth.

2.4.1 Access to and control over agricultural income.

In many countries, women constitute a large portion of the economically active population engaged in agriculture. However, in many parts of the world, women have little or no access to resources such as land, credit and extension services (FAO, 2015b).

When rural African women generate income through their labour, they do not control the income in most cases (Arora, 2013). Most women in SSA do not gain an equal access to household resources (Brown, 1994). Thus, because they often do not control household income even from their own farm labour, female farm plot managers are less likely than their male counterparts to adopt yield-enhancing and soil restoring strategies, and to use modern inputs such as improved seed varieties, pest control measures, and mechanical tools (FAO, 2016; Doss, 2001). This is partly because use of inputs depends on control over other assets such as land or social capital, but also because women tend to have less access to or control of financial capital which is required for the purchase of inputs (FAO, 2016). Differential access to and control over productive resources by men and women farmers need to be addressed as a key component of pro-poor agricultural growth (World Bank, 2009).

2.4.2 Access to and control over agricultural labour

The division of labour between men and women in farming is well defined. The role of men is focused on land clearing and preparation, while women carry out tasks as planting, weeding, harvesting, Winnowing and grinding. So women are crucial in the agriculture sector, mostly in

subsistence agriculture, as they are often the persons who cultivate food (vegetables) crops. In general, women are in charge of food selection, preparation and childcare (WECF 2014).

On smallholder farms, all family members are involved in multiple productive tasks. Women generally engage in productive activities to a much greater extent than men, such as planting, weeding, watering and harvesting (FAO, 2015a). These tasks take up a great deal of women's time during the day and throughout the year, and women generally spend more time engaging in farming activities on a daily and annual basis than men. Adult men, and sometimes male youth, generally engage in activities that require the most physical strength, such as land preparation, ploughing and fencing or use more expensive mechanical technologies. Men, women and children of all ages typically are involved in harvesting of most crops. Overall, women provide productive labour for agricultural value chains (USAID, 2012a).

Labour contribution towards agricultural activities by men and women farmers shows mixed results. While the dominant view is that women farmers provide more labour towards agricultural production than the men (Blackden, 1999), Shipekesa and Jayne (2012) reported that labour activities were roughly equally split between men and women, especially in maize and rice production. Overall, the gender difference in the proportions of labour hours was statistically insignificant in maize production (Shipekesa and Jayne, 2012).

Within rural households in Africa, women supply the majority of the labour for food production, processing, and household chores including care work while men divide their time mainly between farm work and leisure with minimal assistance to women in domestic work (Evers and Walters, 2001). Because women shoulder the bulk of domestic responsibilities in most societies, they are unable to allocate their time to more productive or remunerative uses unless their labour productivity increases (Evers and Walters, 2001; Quisumbing and Pandolfelli, 2010; FAO, 2011a).

Furthermore, men control the most of the resources used in performing productive activities such as land, most tools and equipment, income and savings, raw materials, transportation, most livestock, trainings, farming inputs and information. While women are able to access many of these resources, they are generally unable to make major decisions regarding the purchasing, lending or sale of such resources. Although husbands commonly consult with wives in making

decisions on resources and benefits, men retain the final say (USAID, 2012a). Moreover, women tend to remain concentrated in the informal sector of the economy. In plantations, they often provide labour without employment contracts, on a temporary or seasonal basis or as wives or daughters of male farm workers. FAO (2004) states that men typically move into women's activities once they become profitable with the result that women's control decreases. The risk of male capture of control over resources and benefits can affect women's adoption of agricultural technology negatively.

Nyanga, et al. (2012) observed that the roles of women in agriculture in Zambia covers many of the tasks required under conservation agriculture such as weeding, digging basins, spreading crop residues, and harvesting. Bodil (2011) state that the men are the planners and decisions-makers; at best wives are consulted, but more often they are told what to do. The husband usually sees the woman in her traditional role as wife and mother. Gender differences in agriculture relate not only to labour but also to many other issues. For example, male and female household members can have different varietal crop preferences given their different uses (Beuchelt and Nischalke, 2018). Thus, women's ability to participate in decisions within households is influenced by factors, such as their education levels, their own income generation capabilities and income contribution to the household, as well as their age (Shipekesa and Jayne 2012).

2.5. The gender analysis framework

Gender analysis studies the different roles and responsibilities of women and men, the differences in men's and women's access to and control over resources, and their consequent differences their constraints, needs, and priorities (Doss, 2013). It is a systematic analytical process used to identify, understand, and describe gender differences and the relevance of gender roles and power dynamics in a specific context (Assefa and Roo, 2015).

Gender analysis examines the differences in women's and men's lives, including those which lead to social and economic inequity for women, and applies this understanding to policy development and service delivery (Doss, 2013). It is concerned with the underlying causes of these inequities and aims to achieve positive change for women. Gender analysis provides a basis for robust analysis of the differences between women's and men's lives, and this removes

the possibility of analysis being based on incorrect assumptions and stereotypes (Warren, 2007). When considering the way resources are allocated between women and men, it is important to look at the differences between access to resources and control over them.

Gender analysis in agriculture, according to Chiche (2005), is important as it arises from the need to understand and react to the practical implications of the different roles and responsibilities of women and men of a given community and then towards development prospects. Gender analysis in agriculture involves:

1. identifying gender roles and responsibilities of family members in a given community or field activity such as crop and livestock husbandry, etc.;
2. understanding the differences in women and men's livelihood strategies, social and economic inequalities;
3. identifying individual's capacity, power and decision making ability to access and/or to control available resources and benefits;
4. identifying underlying causes of inequalities gender-specific constraints; and
5. Identifying opportunities and positive interventions for beneficiaries accordingly.

Chiche (2005) adds that, gender analysis helps to collect information on gender gaps particularly on who has access to productive resources, and who has control over them, who benefits from new initiatives and who does not benefit and why. This will eventually help to improve research activities and project performance by understanding different scenarios of people's livelihood in the rural communities.

A gender analysis includes information on women, men, girls and boys in terms of their division of labour, roles and responsibilities, access to, and control over, resources, and their relative condition and position in society (SIDA, 2015). It also involves looking at other norms for how gender may be expressed, including norms relating to sexuality, and identity. It should include social variables such as ethnicity, culture, age, social class, and sexual orientation. A gender analysis should include both quantitative (statistics) and qualitative data (analytical and relative). It further highlights specific vulnerabilities of women and men, girls, and boys (USAID, 2016). It always has an empowerment perspective, highlighting the agency and potential for change in

each group. The scope of a gender analysis can vary and be done in different ways depending on the context (SIDA, 2015).

There are several gender analysis frameworks that have been developed. Some notable examples include;

- 1. Harvard Analytical Framework: the division of labour between men and women in agricultural and in more urban settings*
- 2. Moser Framework: the division of labour between men and women in agriculture and in more urban settings (triple roles)*
- 3. Levy Framework: gender mainstreaming in institutions*
- 4. Gender Analysis Matrix (GAM): gender differentials in the impact of projects at the community level*
- 5. Equality and Empowerment Framework (Longwe): assessment of the contribution of interventions in all sectors to the empowerment of women*
- 6. Capacities and Vulnerabilities Framework (CVA): humanitarian and disaster preparedness issues*
- 7. People Oriented Framework (POP): refugee issues, based on an expanded approach to the Harvard Framework*
- 8. Social Relations Framework (SRF): sustainable development and institutional change*

This study focused on the Harvard Analytical Framework (HAF) also called the Gender Roles Framework or Gender Analysis Framework. This framework was developed by the Harvard Institute for International development in collaboration with the Women in Development (WID) office of USAID, and based on the WID efficiency approach; it is one of the earliest gender analysis and planning frameworks (ILO, 1998). It is explained in detail in 2.5.1.

2.5.1 The Harvard Analytical Framework

This study included the Harvard Analytical Framework (HAF) because it focuses principally on the gender division of labour and the activities and roles of men and women (Warren, 2007). The HAF clearly shows differences in workloads, and in access to and control of resources (March, et al, 1999). Most fundamentally, the HAF is a guide to data collection. The question ‘Who does

what?' is the starting point, and the data on patterns of gender role allocation, and access to and control over agricultural resources is seen to provide the key information for a gender analysis. Although the focus of data collection and its analysis is the household, the framework privileges the roles of individual household members and their individual access to and control over agricultural resources and benefit streams (Okali, 2012). The framework seeks to reveal the differences in gender roles, responsibilities and inequalities between men and women (Meyers, 2012). It has three main components; (i) Activity profile (ii) Access and control profile, and (iii) influencing factors (AWARD, 2014; March et al. 1999). The profile is explained below;

(i) The activity profile

This step identifies all relevant productive and reproductive tasks and answers the question who does what? For smallholder agricultural households, the focus is on the gender division of labour for the main agricultural activities as well as marketing activities. The analysis may also divide the population further into boys, young men, middle aged men, old men, and corresponding categories for women, if such divisions are considered useful.

(ii) Access and control profile

The second step is to make a similar analysis focusing on the access and control of resources. A woman may have access to a field in that she works on it regularly, but she may not have control concerning the decisions about what is grown there, how much of it is sold and how much kept for family consumption, or even about what the waste products of the crop are used for.

The analysis therefore involves first identifying all the relevant resources and then assessing which of the gender groups has, firstly, access to these, and secondly, control over them. It is necessary to examine which resources women have access or control and to ask what is actually meant by access and control for each case.

(iii) Influencing factors

The third step in the analysis is to analyse what factors or determinants lie behind the patterns of activities, access and control observed. These include all those factors that shape gender relations and determine different opportunities and constraints for men and women. They include

community norms and social hierarchies such as family/community forms, cultural practices and religious beliefs, demographic conditions, institutional structures, and infrastructure.

The HAF gives a clear and simple picture of who does what, when and with what. It makes women's work visible and helps planners to avoid mistakes such as underestimating women's existing workloads as it clearly shows differences in workloads, and in access to and control over resources (Smyth and Mukhopadhyay, 1999).

The access and control profile for examining men and women's access to and control over resources and benefits to collect data is an example of which is partially represented in Table 2.1 indicates who has access to resources and control over their use. Benefits realised from household (and community) production and use of resources are also identified and listed. Columns indicate whether or not women and men have access to them, and control over their use.

Table 2.1 Example of Harvard Tool: Access and Control Profile

Resources			Benefits		
	Women	Men		Women	Men
Land	A/C	A/C	Credit programme		A/C
Credit		A/C	Extension programme	A	A/C
Machines		A/C	Planting and work in nursery	A	A/C
Fertiliser		A/C	Stoves provided by project	A	A/C
Paid work	A/C	A/C	Incentives		A/C
Key: A = Access, C = Control					

Adapted from: March, et al, (1999)

2.5.2 Limitations of the Harvard Analytical Framework (HAF)

The framework has however been criticised for not drawing out power dynamics, and not showing how people bargain and make decisions. Looking only at production cycles and access and control over resources does not give a full picture of the negotiations and decision making processes over key stages (Smyth and Mukhopadhyay, 1999). However, an attempt to mitigate this limitation was made in this study by adding questions on the power dynamics and decision-making processes during important farming operations, and probing why gender roles were as reported.

2.6 Summary of Literature Review

The literature reviewed has shown that several studies on access to and control over agricultural income and labour in smallholder farming have been undertaken. The literature portray that women have little or no access to resources such as land, credit and extension services. When rural African women generate income through their labour, they do not control it in most cases.

The literature reviewed also showed that women do not gain an equal access to household resources because they often do not control household income even from their own farm labour and they are less likely than men to adopt yield-enhancing and soil restoring strategies, and to use modern inputs such as improved seed varieties, pest control measures, and mechanical tools. This is because use of inputs depends on control over other assets such as land or social capital, but also because women tend to have less access to or control of financial capital which is required for the purchase of inputs.

The review further showed that decision-making among men and women in the agricultural sector is caught up in a multifaceted web of cultural norms, traditional practices and patriarchal attitudes that are entrenched in society. Women smallholder farmers face labour constraints and these arise from a range of reasons, including poverty; low levels of education and awareness of the importance of improved agricultural tools; use of poorly manufactured tools; cultural perceptions limiting the adoption of tools and implements; lack of linkages with local toolmakers; and inadequate market research by tool producers, particularly in relation to tools used by women smallholders with limited purchasing power.

Differential access to and control over productive resources by men and women farmers need to be addressed as a key component of pro-poor agricultural growth. This demonstrates that the role of women is key in agricultural production and in food security. Women are the primary farmers and producers in a large part of the world; however, their work continues to go largely unrecognized. Recognising that inequality between men and women is a relational issue in the agricultural system, it implies that it can only be resolved through a focus on both men and women.

Having reviewed the literature on gender analysis, similar studies like Shipekesa and Jayne, (2012), reported regional differences in the relative male and female labour input on maize, cassava, and rice fields, as they examined the relationship between relative labour input by males and females, and control over the decisions on maize, cassava, and rice fields in rural Zambia. Sichilima and Ngoma-Kasanda, (2016) concentrated on factors that influenced female control over groundnut production in Zambia. Hence, there is no study that points out access to and control over agricultural income and labour in smallholder farming households by men and women in Chipata District in Zambia. Hence this makes this study stand out as filling in this knowledge gap.

CHAPTER THREE: DESCRIPTION OF THE STUDY AREA

3.1 Introduction

This chapter describes the location, bio-physical characteristics and the economy of Chipata district.

3.2 Location of Chipata and the study sites

The study was carried out in Msandire and Mkanda Agricultural Camps which are two of six agricultural camps in Mshaba Chiefdom, which is in Chipata district in the Eastern Province of Zambia (Figure 3.1).

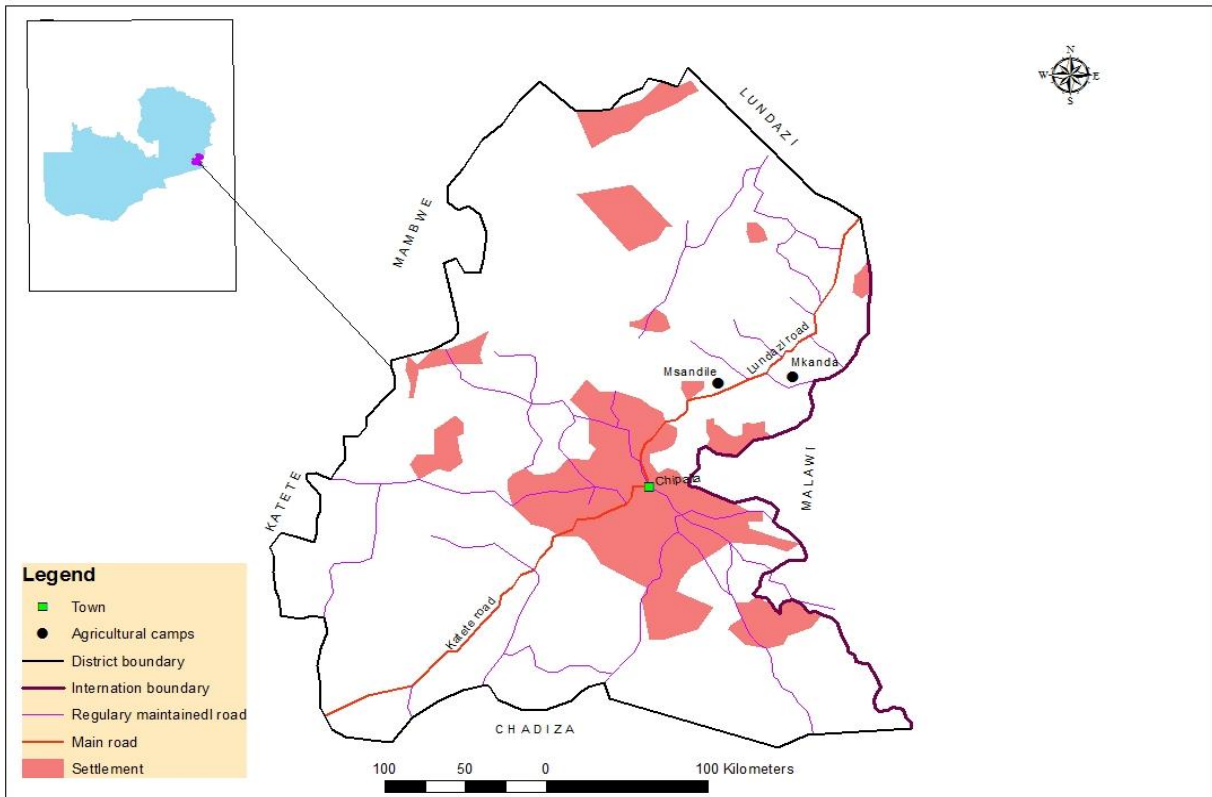


Figure 3.1: Chipata District Agricultural Map (adapted from Chipata District Agricultural Office, 2014).

Chipata is located between 32.5° and 33° East and 13.5° and 14° South and shares an international boundary with Malawi in the east (Taylor et al, 2013). It is the administrative

capital of the Eastern Province of Zambia. It is the newest city in Zambia. It was declared the fifth city in the country, after Lusaka, Ndola, Kitwe and Livingstone, by President Edgar Lungu on 24 February 2017. It was projected to have a population of 512,511 in 2016 and a population density of 38 persons per km² (Central Statistical Office, 2013).

The study site, Mshaba Chiefdom, has 72 villages, each headed by a village headperson. Village headpersons aid the chief in the day to day governance of the chiefdom. The smallholder farming households that were interviewed for this study were drawn from five villages: Chingongolingo and Changa, which are part of Mkanda agricultural camp, and Khabango, Ngozi and Mgwazo from Msandire agricultural camp.

3.3 Bio-physical Characteristics of Chipata

Chipata district stands at an altitude of 960–1,669 meters above sea level. The district size is approximately 11,986 km². Forest area covers 5.76 km². Out of a total area of 6111.75 km² of arable land, 1730.37 km² is cultivated (SDC, 2015). Generally, the climatic condition in the district is favourable to most crops under rain-fed conditions, with annual rainfall of 800-1000mm and a growing period of 125 to 140 days (Aagaard, 2007). The district lies in the central plateau zone of the agro-ecological zones of Eastern Province. Soil types vary from area to area: clay loam, clay-sandy loam and sandy with a pH range of between 5.0 and 6.5 and rich in Phosphorus (USAID, 2014b). The most predominant soils in the district are the clay and sandy loams (ibid).

3.4 Socio-cultural and Economic situation of Chipata

The predominant tribes in Chipata are the *Chewa* in the north and *Ngoni* in the south of the district. Mshaba Chiefdom is dominated by the *Ngoni*. The *Ngoni* are a warrior and pastoralist tribe that follows a patrilineal system of inheritance and patrilocal or virilocal residency pattern. This entails that land is passed on to male heirs, and upon marriage, the couple lives in the husband's village. Women access land through their male relations. A married woman moves to her husband's village and farms the land that is allocated to the couple for use by the man's family (Takane, 2008). All her rights and claims to such land are contingent upon her continued relationship to her husband. In cases of divorce, she loses all her rights to this land. In case of widowhood, she is free to keep using the land provided she had children with her deceased

husband and for as long as she does not remarry. As observed by Lunduka (2009), inheritance systems provide differing tenure security to individuals in the household, depending on the amount of land they bring into the marriage and into their residential area.

The economy of Chipata is agro-based with maize, cotton, groundnuts, and tobacco being the major cash crops. Cotton and tobacco are intended almost exclusively for the export market. Other crops grown are sunflower (*helianthus nannus*), soya beans (*Glycine max*), cassava (*Manihot esculenta*), cowpeas (*vigna unguiculata*), sorghum (*sorghum bicolor*), millet (*eleusine coracana*), sweet potatoes (*Ipomoea batatas*), common beans (*Phaseolus vulgaris*) and various species of cucurbits (GRZ, 2015b). Most of the rural based farming households practice mixed farming; combining both pastoral and arable activities. Pastoral farmers concentrate on keeping cattle and other small livestock e.g. goats, pigs, sheep and poultry.

Having a town, a modern market, a Central Hospital, shopping malls, DMI University St. Eugene (DMISEU), colleges and a number of schools, Chipata is the business and administrative hub that serves the region. The town has modern facilities including a four star hotel, a golf course, an airport, a mosque, and even a "welcome arch". Developed low population density areas include Kalongwezi, Moth, and Bombay. Chipata is situated near the border with Malawi, and lies on the Great East Road which connects the capitals Lilongwe and Lusaka. The town is a popular access point for the South Luangwa National Park (ChaloChatu.org [accessed 12.06.19]). There is a very good road network in Chipata.

Chipata district is a hub of several NGOs. These include COMACO, Feed the Future Zambia, Catholic Relief Services, NGOCC, CFU just to mention a few. These NGOs have different roles that they perform; The Non-governmental Organization Coordinating Council (NGOCC), a women-initiated and led NGO focused on gender and development, is leading much of the gender-related work for COMACO. Feed the Future Zambia Mawa Project is a five-year project (2012-2017) managed by Catholic Relief Services in partnership with Caritas Chipata, Golden Valley Agricultural Research Trust (GART), Women for Change and University Research Company. Mawa promotes nutrition-sensitive agriculture, integrating nutrition and gender messages into agriculture extension messages. CFU focuses on a very specialized technology and PACO offers thoughts on differences between Camp, District and Provincial levels when it comes to joint planning and coordination (USAID, 2014b).

CHAPTER FOUR: METHODOLOGY

4.1 Introduction

This chapter describes the procedures and methodology used in collection and analysis of data collected from the field. Several methods of data collection were used in this study. These included household and key informant interviews, focus group discussions, and a desk analysis of publications on gender in agriculture. The chapter also discusses issues of ethical considerations and finally, concludes with the limitations of the study. Fieldwork for this study was conducted between February and March 2016.

4.2 Research Design

This study used a mixed methods approach combining quantitative and qualitative research strategies. Creswell (2009) defines mixed methods research as an approach to inquiry that combines or associates quantitative and qualitative strategies. Quantitative methods emphasize objective measurements and the statistical, mathematical, or numerical analysis of data collected through polls, questionnaires, and surveys, or by manipulating pre-existing statistical data using computational techniques. Quantitative research focuses on gathering numerical data and generalizing it across groups of people or to explain a particular phenomenon (Babbie, 2010). Quantitative is used to quantify attitudes, opinions, behaviours, and other defined variables and generalize results from a sample to a larger population. Quantitative research uses measurable data to formulate facts and uncover patterns in research. Quantitative data collection methods are much more structured than qualitative data collection methods.

Qualitative research, on the other hand, is concerned with collecting and analysing information in as many forms, chiefly non-numeric, as possible. It tends to focus on exploring, in as much detail as possible, smaller numbers of instances or examples which are seen as being interesting or illuminating, and aims to achieve 'depth' rather than 'breadth' (Blaxter, Hughes and Tight, 2001). Qualitative research is used to gain an understanding of underlying reasons, opinions, and motivations. It provides insights into the problem or helps to develop ideas for potential quantitative research. Qualitative research is also used to uncover trends in thought and opinions, and delve deeper into the problem. Qualitative data collection methods vary using unstructured or semi-structured techniques. Some common methods include focus group discussions,

individual interviews, and participation/observations. The sample size is typically small, and respondents are selected to fulfil a given quota.

Each of the traditional research approaches, quantitative and qualitative, has strengths and weakness. Nonetheless, Johnson and Onwuegbuzie, (2004) argues that the mixed methods approach offers an opportunity to draw from the strengths and minimise the weaknesses of both in a single study. It is for this reason that a mixed method approach was used in this research (Creswell, 2009).

4.3 Target Population

Mugenda and Mugenda (2003) define population as an entire group of individuals, events or objects having common observable characteristics. This section looked at the population study site from which the sample size was drawn. According to the farming households list obtained from the agricultural camp officer, the five villages of interest had a total number of 402 households as shown in the Table 4.1.

Table 4.1 Total population of farming households in study sites

Village	Total number of households		
	Agricultural camp	Households	Sampled
Changa	Mkanda	41	12
Chingongolingo	Mkanda	27	8
Ngozi	Msandire	23	7
Khawango	Msandire	26	8
Mgwazo	Msandire	285	85
TOTAL		402	120

Source: Field data, (2016).

4.4 Sampling Frame

A sampling frame is the actual set of units from which a sample is drawn. It contains properties that can identify every single element to be included in the sample (Cohen et al, 2007). For this study, the sample frame comprised five villages as presented in table 4.1.

4.5 Sampling Procedure

To select the study sites in the study area of Mshaba chiefdom in Chipata district, purposive sampling was used to come up with the five (5) villages out of 72 due to proximity to each other. Hence, in order to have a fair and equal representation of the respondents from the agricultural camps, stratified sampling method was used to select a 30% of households from each village for the study. This was achieved by multiplying each village size by 30% hence resulting in a sample of 120 households as seen in Table 4.1. The researcher selected out every third name on the list of cases of households until a sample size of 120 was formed. The researcher then begun selecting identified household unit between one and three, and then picked a respondent from every third household unit in each village.

To select key informants, purposive sampling was also used. Kombo and Tromp (2006) state that the power of purposive sampling lies in selecting information rich cases for in-depth analysis related to the central issues being studied. They further state that purposive sampling can be used with both qualitative and quantitative studies. Hence, three (3) Officers from the District Agricultural Office as well as one (1) agricultural camp officer who managed agricultural camps in Mshaba chiefdom, CFU officers, Headpersons and Contact/lead Farmers were purposively selected to which key informant interviews were conducted (Appendix 2). These were chosen to provide key information of the smallholder farmers in the study area.

4.6 Data Collection Methods

This section is presenting the different methods that this study used to collect data.

4.6.1 Semi-structured Interviews

To get information from the two selected agricultural camps, semi-structured interviews were conducted using an interview schedule Bryman, (2008) administered by the researcher (Appendix 1).

4.6.2 Focus Group discussions

A focus group discussion is an interview with several (usually six to ten) people on a specific topic or issue (Bryman, 2008). Hence the four-tier focus group discussions consisted of six members each from each agricultural camp. The focus group discussants from each agricultural camp included six-non-youth female, six youth female, six non-youth male and six youth male who discussed in their respective groups and later came together. This was done in order to investigate their views in a single and mixed gender group setting (Appendix 3). A youth is a person aged between 15 and 35 years old (GRZ, 2015a), therefore those above 35 years old were considered non-youth by this study. The FGDs of either men or women were separately chosen allow free flow of conversations among participants within their group while a mixed later on allowed the researcher to observe the differences between the genders. The information from the FGDs was recorded using a recorder and notes were written down in a notebook. Verbal consent to record was obtained from the discussants, after the research topic was introduced to them.

4.6.3 Key Informants Interviews

Purposive sampling was used to select key informants who were interviewed and these included officers from the district agricultural office, the agricultural extension officer for the study area, two zone leaders, two men and two women conservation farming unit (CFU) lead farmers, two men and two women contact farmers, and two village head persons and two women from the women clubs. According to Bryman (2008) purposive sampling is strategic and entails an attempt to establish good correspondence between research questions and sampling, meaning that the researcher samples on the basis of wanting to interview people who are relevant to the

research questions. Therefore, the key informants provided information concerning the operations of the various projects from Msandire and Mkanda agricultural camps.

4.7 Data analysis

The Harvard Analysis Framework (HAF) was used to identify the roles and assess the access to and control over agricultural resources by men and women farmers in the study area. According to AWARD (2014) the HAF comprises three distinct sections; work profile, resources profile, and influencing events. Meyers and Jones (2012), assert that gender analysis asks questions that can lead us in a search for information to understand why a situation has developed the way it has. It can also lead us to explore assumptions about issues such as the distribution of resources and the impact of culture and traditions. It can provide information on the potential direct or indirect benefit of a development initiative on women and men, on some appropriate entry points for measures that promote equality within a particular context, and on how a particular development initiative may challenge or maintain the existing gender division of labour.

Descriptive analysis such as means and percentages were used to analyse quantitative data, which was entered into Microsoft Excel 2013 (Microsoft Corporation, 2013) spreadsheets. The analysed data was then presented in tables, bar graphs and as percentages. Qualitative data from the focus group discussions, the key informant interviews, and answers to the open-ended questions of the semi-structured interviews was analysed using content analysis through the use of the qualitative data analysis software QDA Miner 4.0 (Provalis Research, 2011). According to Taylor and Gibbs (2010), QDA miner is “the range of processes and procedures whereby we move from the qualitative data that have been collected into some form of explanation, understanding or interpretation of the people and situations we are investigating. Qualitative data was used to complement and interpret the results from the quantitative data.

4.8 Ethical Considerations

Before conducting the research, the researcher sought permission from the respondents. This was facilitated through a letter of introduction from The University of Zambia, under the School of Natural Sciences in the Department of Geography and Environmental Studies outlining why the study was being carried out. The letter also confirmed that the study was solely for academic purposes. It declared that the identity of the respondents was not to be revealed in any manner

and data collected was not to be revealed to any unauthorized person; otherwise it would lead to breach of confidence. The researcher also provided information on the nature and purpose of the study, explaining to the respondents as a way of providing sufficient information before they decided to participate. The researchers also scheduled the work based on appointments made with the respondents. Respect, treating respondents fairly and confidentiality were the basic guiding principles at all stages of the research.

4.9 Study Limitations

This study was confined to two agricultural camps with only five selected villages in the Mshaba chiefdom of Chipata District of Eastern Province. Owing to funding challenges, the study could not be extended to the whole chiefdom or the entire district of Chipata or to all the ten provinces of Zambia. Therefore, the findings of the study may not easily be generalised to other provinces. Although this research was carefully prepared and reached its aims, there were unavoidable limitations. The study involved a relatively small sample size of 120 respondents excluding the key informants. For this reason, these findings cannot be generalised to the broader community based on this study alone. This calls for a nation-wide study in the future.

CHAPTER FIVE: RESULTS AND DISCUSSION

5.1 Introduction

The chapter presents and discusses the findings of the study on access to and control over agricultural income and labour in smallholder farming households of Msandire and Mkanda Agricultural camps in Chipata district, Zambia.

5.2 Demographic Characteristics of Respondents

Out of the 120 respondents with whom semi-structured interviews were conducted, 44% were women while 56% were men. Over three-quarters (77%) were married, 12% were widowed, 9% were divorced and 2% were single. For married couples, the men were considered to be the heads of the households, according to local social norms. Widowed, single and divorced women were reported as heads of households even where there were adult men in the households. The adult men were invariably their brothers, cousins and/or adult children. They all participated in agricultural activities, and thus formed part of the target population of smallholder farmers for this study. The population was generally of productive age also referred to as the working age population which is defined as those aged 15 to 64 (OECD, (2019)). The mean age of female-household heads was 45.5 years (standard deviation 15.2) while mean age of male-headed households was 43.7 (standard deviation 17.54).

The study site had relatively low literacy rates of men and women. From the household interviews, 87% of the men and 63% of the women had completed at least primary education. Furthermore, the study revealed that the educational levels of men were higher than those of women. Respondents in the study area explained that this was related to the withdrawal of girls from school at a younger age because of socio-economic and cultural factors. Households with limited resources generally preferred to invest in the education of their sons rather than their daughters, as their sons were to become the breadwinners of the family and caretakers of their parents. Similarly, FAO, (2011a), states that, in most regions women and girls still lag behind in education: this is particularly acute in rural areas, where female household heads sometimes have less than half the years of education of their male counterparts.

Farming activities were the main source of livelihood for most respondents, both men and women in the study. 97% of the respondents mentioned farming as their main occupation; 3% in combination with other occupations such as trading, teaching, carpentry, tailoring, fishing, etc.

5.3 Agricultural practices

Flat culture, the complete inversion of soil using a traditional hand hoe, was the most practiced tillage method by both male and female headed households (Figure 5.1). Ploughing and ripping, which both require animal draught power for operations, were more common among the households headed by men. Not a single female headed household ripped its fields, and only seven per cent ploughed their fields.

Basins were unpopular between men and women headed households (Figure 5.1). The women respondents explained that land preparation by hoe (clearing the field, constructing ridges or making basins) was done by both men and women jointly.

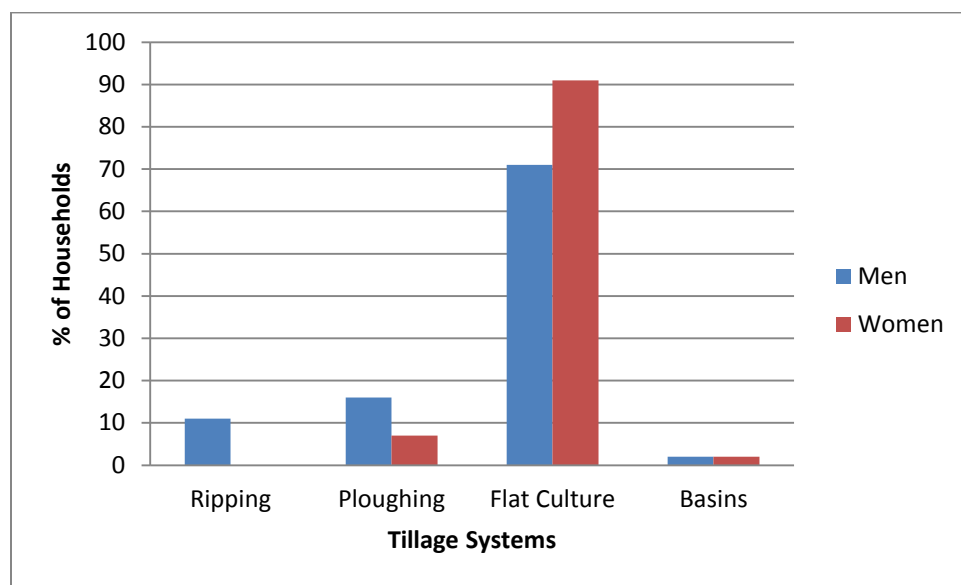


Figure 5.1. Tillage systems used by male and female headed households

Source: Field data (2016)

When ploughing or ripping methods were used for tillage, the women said that the plough and the ripper were heavy to be operated by them. Hence it was the men that operated the equipment pulled by oxen while the women followed closely behind them, planting the seed. And also there are very few smallholder farmers who owned cattle, and these were mostly men as in Table 5.3. Discussants in all the four focus groups observed that only men undertook the ploughing, ripping

and animal draft powered weeding tasks. Both men and women were involved in manual weeding and harvesting. The views from the FGDs are summarised in Table 5.1.

Table 5.1 Views on participation in various farming operations

Farming operation	Views from men	Views from women
Land preparation	<ul style="list-style-type: none"> -Tree cutting during field expansion done by men. -Ploughing done only by men as women not physically strong. - Constructing ridges or basins was done jointly. 	<ul style="list-style-type: none"> - Constructing ridges, basins and flat culture was done jointly - Cutting down of trees using an axe preference was left to men.
Planting of seed	Done jointly by men and women	Men and women both engaged in planting seed.
Manual weeding (using hand hoe)	Done jointly by men and women	Done jointly by men and women
Herbicide weeding	Done by the men only	Done by the men only
Harvesting	Done jointly by men and women	Done jointly by men and women
Storage of harvest	<ul style="list-style-type: none"> - Mostly women when packing into granary for home consumption. - Jointly done when packing into sacks for sale. 	<ul style="list-style-type: none"> - Mostly women when packing into granary for home consumption. - Jointly done when packing into sacks for sale.
Threshing of maize cobs	Women and children unless the grains are for sale then men participate.	Women and children, unless the grains are for sale then men participate
Winnowing	Done by women only	Done by women only

Source: Field data, 2016

As observed from the Table 5.1, the study found out that men and women jointly make decisions on farming activities at the various stages of the farming cycle such as land preparation and

planting cash crops, whereas women make decision about planting food crops, food storage, and food processing. These findings are similar to SOFA Team and Doss (2011:13), who asserted that;

In reality most situations the question of women's contribution to agricultural and food production cannot be addressed with any degree of accuracy. Women do not usually produce food separately from men. With their labour contributions in a collaborative process, both men and women produce most food. Quantifying the share of food produced by women involves making subjective assumptions about gender roles in the production process, which are not likely to hold universally *ibid*. For example, if men typically provide the labour in the clearance of the field and women plant and weed the crops, both men and women are involved in harvesting. In these and other similar cases it becomes impossible to separate output by gender.

FAO, (2018) also has similar views that a greater percentage of female-headed households are involved in food production while there is comparatively greater participation of male-headed households in cash crops.

Ploughing and ripping were commonly done by men and not by women. The views of the women were that ox-drawn drought power is a man's job as the equipment is heavy and mostly the men are in charge of the cattle. There is also a belief in both men and women in the study area that work related with drought power is a man's job which is related to their cultural norms. Similarly, Lemlem et al. (2010) reported that men are typically responsible for the heavier manual tasks such as land preparation and tillage with oxen.

The study also found out that herbicide weeding was done by men in both female and male households. This was alluded to women's inability to handle the sprayer as they said that it is very heavy and difficult to handle and that it was a job for men. This also can be due to lower literacy rates of women as they are unable understand the technical requirements of the chemicals before application to the fields. This could also be as a result of men having control over agricultural income which they use to buy the herbicides. Similarly, FAO, (2004), said that from a technical point of view, conventional sprayers are often too large and heavy for women to use, or men are culturally allocated spraying tasks.

5.4 Access to and control over agricultural income

Nearly half (48%) of the couples in male-headed households reported that they engaged in joint decision making over how agricultural income was spent, that is, they both had control over the income (Figure 5.2). For female-headed households, joint control occurred in only 19% of the cases. This was most probably because the adult men in these households were not spouses to the women household heads but mere relations (brothers, uncles, cousins or adult children), and thus some of the women household heads may not have felt the need to consult them over what they essentially perceived to be their (the women's) homes. In the cases where consultations were made, it was reportedly out of respect for the men's contributions in terms of labour, especially for chores that are considered to be in the men's domain.

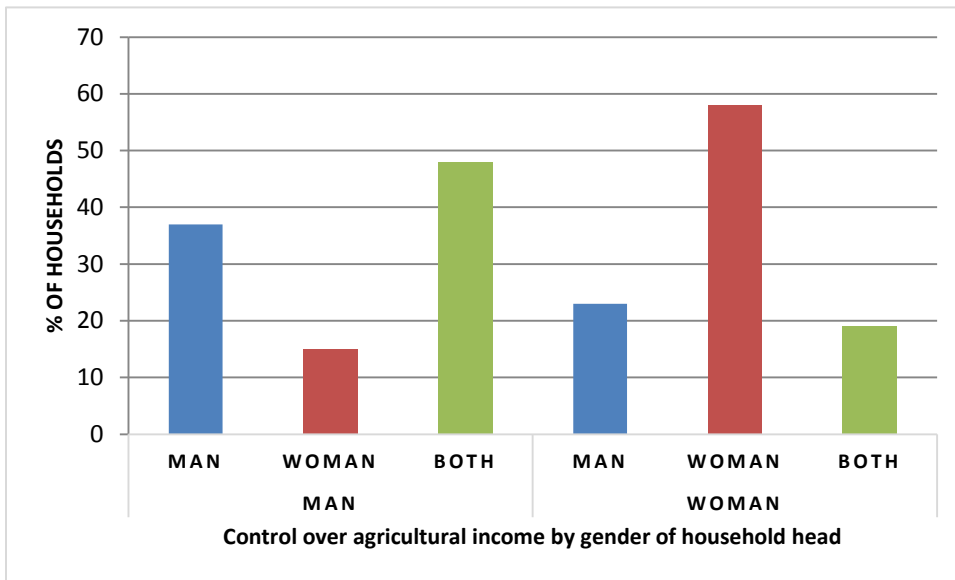


Figure 5.2 Decision making over agricultural income among male and female headed households

Source: Field data (2016)

Over half (58%) of the women in female-headed households controlled their household's agricultural income. This was much higher than the percentage of men that singly controlled agricultural incomes in male-headed households. The young men and adult men FGDs revealed that in many household's men preferred to have their spouses keep and control the agricultural income for the good of the household as women were perceived to be more reliable and trustworthy. Furthermore, the young men discussants acknowledged that they were poor

managers of household finances, often spending money for their own benefit particularly on alcohol and at times on girlfriends as “*it is prestigious to have a girlfriend besides a wife.*” Both young men and young women focus group discussants noted that couples were usually in conflict over monies needed for the schooling of children, and the assurance of household food security. They attributed these conflicts to men having little concern over household issues like food, clothes or children’s needs. This finding echoes that by the World Development Report (2012) that increasing the share of household income controlled by women, either through their own earnings or cash transfers, changes spending in ways that benefit children. Similarly, Jones (2012) noted that; although women may not be able to make final decisions over household incomes, they play a significant role in keeping incomes earned by other household members; they are generally the guardians of household money, with men giving most and sometimes all of their income to women for safekeeping. This was largely attributed to the perception that women are better able to save money and resist temptation to spend money outside of the family. In their role as managers of the family’s income, women are able to exercise some authority over spending. However, this authority is still limited. While women are able to purchase food and small items from the family’s supply of income, they must seek male permission to purchase larger items.

Women in both the young and adult women FGDs explained that men often did not use the income from cotton for household basic needs. The women focus group discussants further expressed frustrations at major decisions on crops marketing being made by their men. They lamented that they did not know how the money realized from cotton sales was spent or even how much was realized from such sales. Conversely, the men while in their single gender FGDs narrated that they used the income from cotton for buying assets such as iron roofing sheets, agricultural implements, and medicines and vaccines for livestock. However, during the household interviews with men it was clear that most men were in the habit of using the income from cotton on personal items and not on goods and services for the benefit of the whole family. Studies by Haggblade and Tembo (2003) similarly showed that cash crops were often under the men’s domain.

Livestock ownership was not very common among the respondents (Table 5.2). Only men in the male-headed and female-headed households respectively owned livestock. For the male-headed

households that owned livestock, men and women were responsible for its husbandry and sale. Control of income was dependent upon the type of livestock and was mainly controlled by the men if it were big livestock like cattle. For the small ones especially poultry on the other hand was almost universally owned by men and women. But in all, the men in both households were in control of the livestock and even had the final say in whatever decisions were to be made; either selling or domestic consumption.

Table 5.2. Livestock ownership by household type.

Household head	Control over livestock	No. of Households	% of livestock owning households
Male	Man	16	89
	Woman	0	0
	Both	2	11
Female	Man	3	100
	Woman	0	0
	Both	0	0
44 male-headed and 43 female-headed households did not own livestock			

Source: Field data (2016).

The young women FGDs explained that they only sold livestock and livestock products when their men were willing to. They noted that it was rare to find both men and women deciding on livestock marketing; it was usually the decision of the household head, the man. The common view from all the FGDs was that the more valuable the livestock were, the less the possibility that women would make decisions on their purchases and sales. In addition, if the livestock serve a purpose which is in the women's realm of responsibilities, e.g. feeding the family, her influence on decision making was greater than for livestock that largely fulfilled farming purposes, such as draught oxen. Kristjanson et al. (2004) observed that when higher production and marketing activities become more important, women often lose their control over livestock products and income. Thornton et al., (2002), also reported that, within pastoralist and mixed farming systems, livestock play an important role in supporting women and in improving their financial situation and women are heavily engaged in the sector.

The Sudan Consortium - African and International Civil Society Action for Sudan (2016), contended that women lack authority in making livelihood decisions, clearly manifested in the sale of livestock and management of cash, which are key resources in times of scarcity and unmet needs. This renders women more vulnerable, as decisions of livestock and cash use rest almost entirely in men's hands, even when men are further removed from their families and less familiar with their needs. The two organisations further found that women remain excluded from influence over high value assets reflecting a deeply embedded bias against women and an understanding in the Nuba Mountains that wealth and status are, quite simply, a man's domain. In such an atmosphere, raising livestock, cultivating or boosting a household's cash assets can be seen as exploitative rather than empowering for women.

During this study, two key informants from the local agricultural office explained that the district agricultural office were providing agricultural extension services to 60% men and 40% women. They noted this to be an improvement as in the past only 20% of the smallholder farmers that received services from them were women. They further observed that, when it came to leadership, women were not willing to take up leadership positions. Concomitantly, all smallholder farmer leaders were men except for women groups. For instance, in the eight agricultural zones in the district, all the top leaders were men with the exception of lead farmers for the Conservation Farming Unit (CFU) where there were a few women. Women only took up leadership positions in exclusive women's groups. Men are not allowed to take up top leadership positions in women's groups. Rural women generally are not educated hence it is difficult to take up responsibilities which require them to be literate. This is supported by multiple studies that have suggested that lack of education opportunities and training can negatively influence women's self-confidence, and therefore, their participation in producer organizations (Ouattara et al., 2010). This is because women may fear that their views will not be fairly considered. Kaaria et. al, (2016), that untrained and illiterate women are likely to experience difficulties in speaking in public and thus lack authority and recognition; elements that are fundamental in order to be a more active member in the group.

Another key informant further held that women's role in agricultural growth is significant, but public sector programmes fail to reach them. Most of the women farmers are less likely to receive agricultural implements, and when they do, the number of women that receive is

significantly lower than that for men. He further observed that women were poorly represented in agricultural extension and training programmes. He contended that most of the men do not allow their women to get involved in various agricultural programmes as they perceive this to be a waste of time.

According to another key informant from the Department of Agriculture office based in one of the study sites - although farmer composition was 52% men to 48% women, it was rare to find women in leadership positions. He explained that women are prioritised by the Department of Agriculture, but they are not willing to take up leadership responsibilities as they fear their men. He further explained that *“even when you call for a farmers meeting, the most people in attendance are usually men. Hence, they are the ones with an upper hand on the farming inputs because they are also the ones holding most of the leadership positions”*.

Some discussants in the combined FGDs asserted that men were nowadays more willing to engage in joint decision-making with their wives although they generally still considered themselves as household heads. It was said that joint-decision-making results in a more rational use of resources. The access to and control over agricultural resources by men and women in the study area is summarised in the access and control profile in Table 5.3.

As observed from Table 5.3. Land is mainly owned by men as this is a patrilineal society. And when the woman gets married, she moves to the husband's home and now becomes the responsibility of the husband. The woman only gets access to land through her husband unless those born within the clan. Hence all the major final decisions are made by the man. The ownership also of cattle and goats was mainly for men and only the smaller ones like chicken were in domain of women, but the final decision making was done by the men if they were the husband to the women.

Table 5.3 Access and control profile for men and women from respondents.

Resources	Access		Control	
	Men	Women	Men	Women
Agricultural land	Major owners	Access through men	Major decision maker	Decision made by the man if married
Livestock Cattle Goats	Major owners	Access through men	Major decision maker	Waited upon the men, hence had no authority
Poultry	Few had	Majority had	Major decision maker	Had authority especially if they were the owners
Crop income	Mostly gave women for keeping	Was the keeper	Made decisions alongside the women in male headed households was much high	- Control was much higher for women heads of the household, - Had decision making power on smaller household purchases
Livestock income	Major owners	Had none	Made all decisions	Had none
Large farming implements	Major owners	Waited upon the man	Major decision maker	Waited upon the man
Food crops e.g. maize	Left it to women to look after	Had to keep for home use	Mostly gave authority to women	Was major decision maker
Cash crops e.g. cotton, groundnuts	Owned cotton, tobacco,	Owned maize, groundnuts,	Was the major decision maker	In male-headed households, they waited for the man to decide

(Source: Field data, 2016)

Some of the key informants interviewed about the gender relations between men and women on access to and control over agricultural income explained that women do a lot of work in the fields yet men do all the marketing activities. One key informant explained that the men take up the leading role in crop marketing but tend to misuse the money on other women. Another key informant observed that it was difficult for women to take control because they were not educated and their culture was such that they were supposed to rally behind their men. The key informants further noted that women could not take any decisions concerning agricultural incomes in the absence of their men. This meant that fields often times failed when men were

absent from home for extended periods. One key informant went further to assert that women had no say in investment decisions. In line with this, Mehra and Rojas (2008:10), explain that;

Women’s success in high-value agriculture also depends on their ability to participate knowledgeably and effectively in markets. It is important for smallholder farmers to be able to negotiate terms and prices with powerful buyers. Smallholder farmers in general and women even more so, are at a disadvantage in these negotiations because they tend to have limited experience and lower levels of education and mobility. Even though women engage in marketing in varying degrees and in many different ways, their access to more lucrative export markets is restricted. In sub-Saharan Africa, for instance, women market traditional crops such as maize, sorghum, cassava, and leafy vegetables, mainly in local markets.

5.5 Decision making in crop production choices

In half the interviewed households headed by men, respondents reported that decisions over which crop to produce were made jointly by the man and his spouse (Figure 5.3). Women in male-headed households rarely (only 10%) decided which crops to grow on their own but men did this much more frequently. The key informants and household respondents independently explained that male heads of households generally made all the decisions regarding what crops to plant. Very little discussion with other household members was conducted, though women usually offered advice.

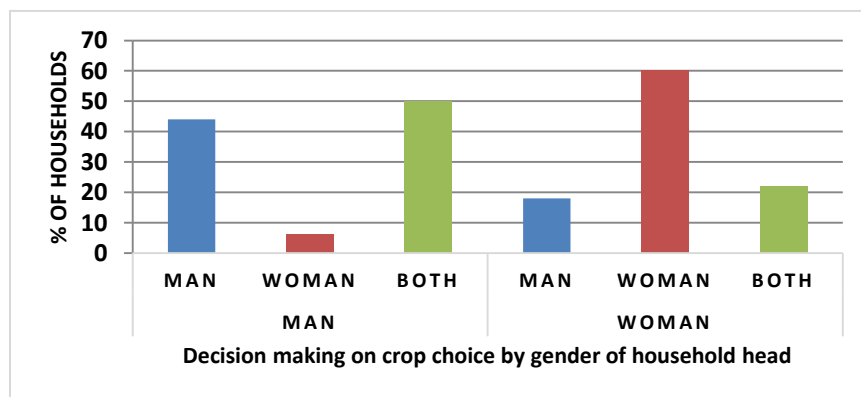


Figure 5.3 Household decision making over crop production choices

Source: Field data (2016)

The general views of the key informants were that crops such as cotton, tobacco, and sunflower - essentially cash crops - were under the men’s domain. Therefore, men decided if, and how much

of the crops to grow. Men were usually in control of the income from cotton and tobacco. They thus took a keen interest in making decisions concerning the production of such crops. However, results from the household interviews show that for households headed by men, decisions on crop sales were predominantly made jointly as 90% reported the man and his spouse jointly deciding whether or not to sale some or all of a particular crop. For households headed by women, two-thirds reported that the women head's jointly decided with the men in their homes.

5.6 Decision making over household expenditure

When it came to expenditure on household goods, there were a variety of responses from the respondents; men made the decisions on what to purchase in about a quarter of the households in which they were heads (Figure 5.4). The rest were either jointly made or were made by the women. The situation was different in the households headed by women with the women dominating the decision making (Figure 5.4). Household expenditure was on goods such as food, cooking utensils, clothes, solar panels, and roofing sheets. Expenditure on agriculture related to the purchase of fertilizer, hybrid seeds, farming implements such as ploughs, axes, hoes, rippers, and ox-carts was mainly done by men.

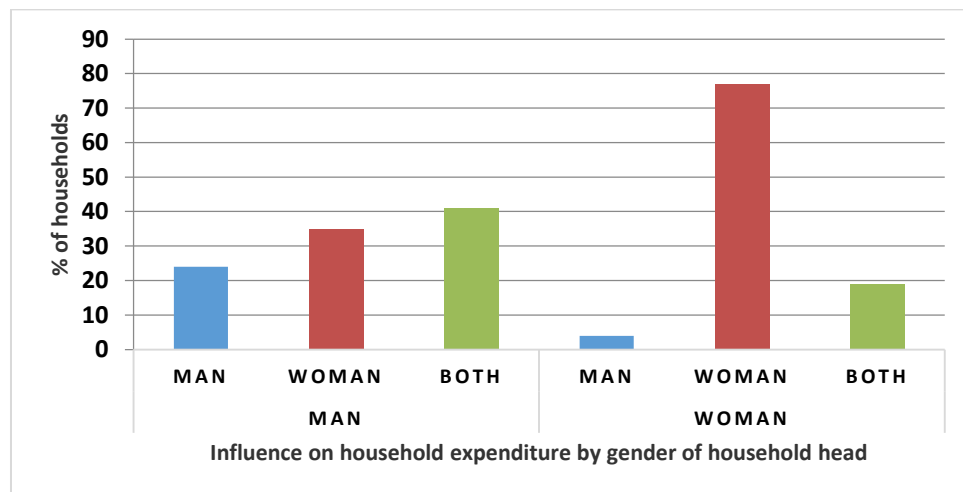


Figure 5.4 Decision making for household expenditure among male and female headed households

Source: Field data (2016)

It was uncommon for men in female-headed households to influence household expenditure. As earlier noted, some women heads were unlikely to consult adult men that they perceived to be

their dependents. Decision making in households was influenced largely by local norms on gender roles. These are discussed further in the next section which explores influencing factors to complete the three profiles of the Harvard Analytical Framework.

5.7 Household gender aspects on access to and control over agricultural labour

As observed from the results in Figure 5.1 (the tillage methods), the men were more involved in ploughing and ripping because they had more access to oxen as seen in figure 5.3 than women. This was also the case with FGDs where it was said that men were the sole or major owners hence they made the final decisions concerning the labour divisions in the households. As the men had access to drought power, they also controlled its use.

The men also explained that they preferred offering more of their labour and solely deciding on how they used their own labour because *“women are slow and weak to handle certain agricultural tools such as axes. Women also use part of their time doing house chores, so they would delay agricultural activities if men had to wait for them before making decisions”*. Focus group discussants’ knowledge on management of agricultural activities in the households was higher among the older women and older men compared to the youths especially the young women. The young women were disadvantaged because of cultural inhibitions. According to them, young women do not attend agricultural meetings because they have to stay at home performing various tasks such as cooking, doing laundry, washing dishes, and child care. They argued that this negatively impacts their knowledge on latest agricultural technologies. They thus find it prudent to let the men dominate agricultural related decision making because they (the men) have more knowledge. Younger women are more likely to have young children in need of child care, than older women whose children are usually older and either away at school during the day, or have households of their own and no longer under their parents’ care. This frees the older women to attend community meetings and participate in other community activities. This finding is in agreement with Jones et al., (2012), whose study showed that women generally engaged in productive activities to a much greater extent than men, such as planting, weeding, watering, and harvesting. These tasks take up a great deal of women’s time during the day and throughout the year, and women generally spent more time engaging in farming activities on a daily and annual basis than men. Adult men, and sometimes male youth, generally engage in

activities that require the most physical strength, such as land preparation, ploughing, and fencing or use more expensive mechanical technologies.

Some members of the young men and adult men FGDs narrated that they participate in hand weeding by either availing their own labour or by hiring others to do it. However, during the combined FGDs, some of the women disagreed. One women reported that, “*Not all men do that [hiring labour to assist women in weeding]; only a few men actually do that for their wives and families.*” A common view across the respondents and discussants was that men in relatively less resourced households were more likely to ‘help women’ with hand weeding compared to men from better resourced households. Both the young and adult women noted that women’s dependence on men for agricultural labour was also influenced by whether or not oxen were needed, as draught power was seen to be the preserve of men. The young women were reported to be far more dependent on men than older women for successful crop production.

The discussants from the youth men group explained that they had a way that they performed their work especially during harvest period. They insisted that all household members participated regardless of gender. One discussant from the group illustrated as follows:

For example, in the case of maize, cutting of stalks in the field is done by the entire family, the head of household, the spouse and the children in the house. Stacking is also done by the entire family. Removing of cobs from stalks is done by men, women and the youth of the community. Transporting is done by use of ox-carts. Only men undertake this activity because women do not have enough strength to handle the ox-carts. However, women participate in the loading of the ox-carts in the field. The men drive the ox-carts to the homesteads and offload them with the help of women in some instances. The women then load the maize into the granary. Shelling is done by the whole family. We also invite friends from the community to help especially, when we have bumper harvests and we want to sell most of the hybrid maize.

Winnowing was primarily a women’s activity as was cleaning and packaging the maize (Table 5.1). If the maize was for sale, insecticides were not applied to it. For maize that was to be stored in bags, it was the men that applied insecticides because of the general belief that they had the knowledge of how to do it. This probably stems from men’s relatively higher level of literacy, a requirement for reading instructions on how to use technologies such as insecticides, herbicides,

and medicines for livestock. In Zambia, such instructions are written in English and are technical in nature.

Both adult women and adult men groups mentioned that when the maize was stored in the granary, it remained the responsibility of the woman of the house to retrieve some for consumption and to control access to the granary. The adult men and adult women further noted that, in the event that the man had no spouse, the eldest daughter or any adult woman in that household controlled access to the granary and had authority over retrievals from it. One participant from the adult men FGD observed that: *Traditionally, the granary was the property of the woman. If a man was seen concerning himself with affairs of the granary, he would be a laughing stock in the village, but now things are changing. The introduction of modern storage facilities is enabling us men to take control of maize because maize is already shelled so I do not need my wife to clean it.*

Another discussant from the adult men's FGD added, *"We may build the granary for the household but it is viewed as a woman's property because of her gender roles of cooking and taking care of the family."* Yet another from the same group continued, *"As far as the community is concerned, the woman is the custodian of the food stock in the household. Access to and control over the granary is vested upon the women."* This finding is similar to CIMMYT (2015), which noted that communities perceived the woman to be the custodian of the food stocks in the household.

5.8 Influencing factors

Influencing factors shape gender relations and determine different opportunities and constraints for men and women in the agricultural realm. From the study area, community norms and practices have been identified pertaining to household headship, women's reproductive roles, and land inheritance as being the most influential. These work synergistically with the state of infrastructure and the bio-physical environment to produce context-specific gendered practices and norms.

The adult male is expected to be the head of the household by the community, and in this role, it is commonly accepted that he will make some decisions concerning the running of the household, including about agricultural activities unilaterally. In exchange for this right to make

decisions, the responsibility to find money for meeting household needs and wants that require cash purchases is placed squarely on him.

Women are expected to keep a clean house, look after the children and cook for the family. These reproductive roles demand that women spend a lot of their time at home or not far from home. Because they are responsible for child care and cooking, which are daily activities, there are strong local norms to discourage women from taking part in activities that take them away from home for long periods. These activities include participation in marketing activities and agricultural trainings outside their locales. Women thus focus on the production of food crops for home consumption or restrict themselves to selling either from their homes or local markets, even when this entails selling at lower prices and over longer periods.

The common marketing practice of this study is that the men take the agricultural produce to urban markets or periodic markets that are far from home. This is especially common in areas with poor road infrastructure and unreliable transportation services. Men are expected to ride bicycles or use ox-carts for long distances to reach the more lucrative urban or periodic markets, sometimes resulting in them being away from home for days. Women that engage in such marketing activities face more challenges because they depend on men to help them with loading and offloading of produce. These men charge the women higher rates for their services because women are perceived to be in a hurry to complete their business and go back home. Women traders are perceived to be poorer at negotiating lower prices for services and goods they buy, and at negotiating higher prices for their produce, compared to their male counterparts. Women also find it difficult to jump onto large trucks, a necessity for transporting bulky agricultural produce as trucks are in most cases the only available mode of transportation. Thus, in order to avoid all these challenges, most women prefer to let their men take control of the produce marketing. The downside is that their men do not bring back all the monies raised from their marketing adventures. Men hiding agricultural income was a complaint made in all the women's FGDs and during informal chats during the course of this study.

Patrilineal land inheritance patterns favour the acquisition of land by men. According to the *Ngoni* custom, upon marriage, the woman moves to her husband's village where she gains access to his land; essentially clan land given to him by his parents. Unless she is from the same village as him, the woman does not bring any land into the household. It is implicitly known that the

man has the final say over what happens on and to 'his' land. The woman's decision-making authority over the land is limited. Women have joint control over land when the land is purchased by the couple during marriage. Independently-purchased land is considered to be jointly owned and the couple is free to alienate it however it sees fit without seeking approval from the clan. However, it is rather uncommon nowadays for couples to purchase land from within the chiefdom as land sales are usually banned by traditional authorities.

Smallholder farmers in Zambia - and the study area is no exception - are highly dependent on rain for their agricultural activities. This entails that their farming operations are synchronised with seasonal rainfall patterns. Smallholder farmers have to till the land, plant their crops, weed them, and hope they reach physiological maturity within the crop growing periods of their agro-ecological regions. This influences how household labour is allocated during particular farming operations. For instance, weeding of crops has to be started and completed before the crops get overwhelmed by weeds and negatively affect their growth and production. During weeding time, decisions have to be made about which fields to prioritise. Decisions also have to be made about which fields, and crops receive the limited purchased inputs such as mineral fertilisers and herbicides that the household is able to obtain. Such resource allocation decisions are expected to be made by the household head, either unilaterally or in consultation with the spouse and sometimes other adult members of the household. When household heads are away from home at such critical times, agricultural production usually is negatively affected.

CHAPTER SIX: CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

This study aimed at investigating the access to and control over agricultural income and labour in smallholder farming households in Chipata, Zambia. The objectives were to investigate the agricultural practices employed by smallholder farming households in Msandire and Mkanda areas of Chipata District, investigate gender relations over agricultural income by men and women in Msandire and Mkanda smallholder farming households and Examine household gender aspects over agricultural labour among smallholders in Msandire and Mkanda agricultural camps.

In terms of the agricultural practices employed by smallholder farming households' flat culture was the most practiced tillage method by both male-headed households 71% and female-headed households 91%. Ploughing and ripping which require draught animals were more common among the households headed by men as access and control of livestock such as cattle is in their domain causing high prevalence of women engaging in flat culture system. Women heads of households are thus less likely to commit their scarce resources to the purchase of agricultural implements such as ploughs, rippers and oxen, which they cannot routinely use themselves.

With reference to gender relations on access to and control over agricultural income and labour in smallholder farming households, the study demonstrated that household decision making was usually done jointly as man and woman if it was a couple and by the head of the house where it was not a couple. Within households, a range of decisions that were being made were about what crop to be planted, inputs to be purchased, which of the harvest to be sold and which parts are kept for household consumption. Decisions were also made on who was to provide what labour at what stage of the farming cycle, and on how the income derived from the sale of crops was to be used but the overall result was that the major decision maker was the man.

On access to and decision making over agricultural income by men and women in Msandire and Mkanda smallholder farming households, 48% in male headed households engaged in joint decision making over how agricultural income was to used or spent. For female headed households, joint decision making occurred in only 19%. 58% of the women in female headed households controlled their household's agricultural income as compared to 15% in the male

headed household. This was much higher than the percentage of men that singly controlled agricultural incomes in male headed households. This was most probably because the men were not spouses to the women household heads but mere relations and thus some of the women household heads may not have felt the need to consult them over what they essentially perceived to be their (the women's) homes. In the cases where consultations were made, it was out of respect for the men's contributions in terms of labour, especially for chores that are considered to be in the men's domain.

In the smallholder farming household agricultural income allocation is that men tend to have different spending priorities than women. Men are more likely to have personal spending priorities, while women seek first to ensure that household food and other needs are met especially on children.

Women generally had access towards agricultural resources but did not have control over them. Mostly men were the ones who made the final decision unless in homes where the woman was the head of the household. This suggests that assignment of control over agricultural resources is vested based on household headship, and not primarily gender. Men end up dominating control over resources because local cultural norms identify them uniquely and unquestionably as household heads.

With reference to gender relations on household labour in the smallholder farming households in the study sites, while men and women expend their labour on productive activities it is mostly men involved in the sale of agricultural output giving the impression that women have no control over the income and their labour input. In addition, men are primary owners of key assets such as land and livestock; 89% of the male headed households compared to none for female-headed households and only 11% who joint ownership by both men and women. Thus, although women input significant labour, control of agricultural income rests with the men.

Women have access to resources as long as their relationship with the men exist, but in exchange, they (women) are expected to contribute their labour towards the management of said resources. In land preparations especially if it involves a hoe, women participate more. It has also been established that women do most of the planting, weeding and participate more in harvesting. Men allocate most of the labour activities if it is in the male-headed households and

women can only take charge in the absence of men or if it is in female-headed household. Both men and women in male and female households were involved in manual weeding and harvesting. Some tasks are almost exclusively undertaken by men, and some by women. Predominantly male tasks include ploughing with oxen, digging holes, the purchase and use of chemicals and the sale of produce. Women usually undertake sowing, harvesting, winnowing, pig and poultry-rearing. Other tasks, such as weeding, shelling and crop storage, are almost equally undertaken by both women and men.

6.2 Recommendations

In line with the findings, the study gives the following recommendations:

1. To ensure equitable access to and control over agricultural income and labour, this study recommends that Government in partnership with the Ministry of Agriculture;
 - i. Should ensure continued strengthening of gender mainstreaming strategies by identifying and addressing gender inequalities in relation to income and labour resources through the use of gender analysis, and gender-responsive budgeting processes.
 - ii. Take measures such as putting much importance on reaching out to smallholder women farmers and providing checklists to ensure the full participation of women in planning and decision-making on agricultural management and increase the number of women participating in agricultural training programmes.
 - iii. Supporting increased research and data collection on women's access to and control over land, labour, income and other productive resources, to inform policy and strategy development.
2. The study further recommends that agricultural sector policy makers, extension programmers, and agricultural project designers and the executives need to focus on key issues by stakeholders in the Agricultural sector;
 - i. Consider the roles of women as economic agents who operate in agricultural productive and commercial areas, acknowledging their current and potential roles in the rural economies of the country.
 - ii. Strengthen women's participation and representation in community based organisations such as cooperatives and make sure women farmers are increasingly

represented in instructional and decision-making roles and as first-line extension agents by encouraging chiefs, ministers, and other leaders to promote women's selection as first priority at their local meetings.

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APPENDICES

APPENDIX 1: INTERVIEW SCHEDULE FOR SMALLHOLDER HOUSEHOLD FARMERS

Date of Interview: _____

INTRODUCTION

My name is Joan Pelekamoyo conducting research on access to and control over agricultural income and labour in smallholder farming systems: A gender lens study. I am a student at the University of Zambia in the Department of Geography and Environmental studies. The information obtained will be used for academic purposes only and will be treated with confidentiality and anonymity.

1. A. Sex: Male: _____ Female: _____
 - B. Age _____ Years
 - C. Marital status: (a) Single (b) Married (c) Widow (d) Divorced
 - E. How many are you in your household including your children? _____
 - F. Highest education level attained by household head: _____
 - G. If married, for how long have you been married? _____
 - H. How many people including yourself live in your household? _____
 - I. How many go to school? _____
1. a. Are you engaged in any agricultural project activities? _____
 - b. Mention the organisation. _____
2. In your household, which agricultural practice do you employ? _____
3. Mention the tillage method used in your household. 1. Hand hoe (flat culture) 2. Basins 3. Ploughing 4. Ripping: _____
4. Which method is faster in terms of preparation? _____
5. Which method uses more men and more women in terms of labour? _____

6. In your opinion why is the gender mention above more involved in the method used?

7. Have you done any training for the farming method you are engaged in? _____
8. Who owns the land that you use for agricultural activities? _____
9. Who makes decisions in your household concerning agricultural activities?

10. Are you a member of farmers' association? _____
11. Who decided the one to be a member of farmers' association: _____
12. What is the name of the association? _____
13. Who decides on the crops to plant? _____
14. Who makes the decision on the types of crops to grow in farming season?
15. Who does the purchasing of farm inputs/household assets? _____
16. Do you by any chance discuss on who is supposed to do the selling of your farm produce?

17. Who controls the money realised from the agricultural produce? Man ___ Woman ___
18. In connection with question 21, briefly explain how the agricultural income is used by the; Man _____ Woman _____
19. Who influences the buying of household goods or agricultural inputs from the money realised from the agricultural produce? Man _____ Woman _____
20. In your opinion, is it worth it discussing with your spouse concerning any decisions to be made on the agricultural produce? Yes _____ No _____ Give a reason to your answer.

21. After the selling of your agricultural produce, briefly explain how you use the money?

22. Do you have any livestock, poultry or any farm animals reared? _____

23. Who makes the major decisions on the livestock or poultry management in terms of farming activities or selling?

24. How is the ownership allocation in your household?

25. Any comments:

Thank you for your cooperation and time.

APPENDIX 2: INTERVIEW GUIDE FOR KEY INFORMANTS

1. Name of organization.
2. In terms of gender, what are your community development roles and obligations?
3. Mention the type of extension service vis-à-vis community development that you offer and in what areas?
4. Current farmer to community development worker ratio.
5. What are the numbers and percentages of target clientele currently serviced in terms of gender (percentage male and percentage female)?
6. Give the major source of income and economic activity of your organisation.
7. Kindly comment on the way you address issues in your organisation on the kind of training towards men and women in terms of:
 - a. Admission for training sessions
 - b. Distribution of resources such as finances Treatment of men and women when sharing information
 - c. Women participation in the agricultural programmes
 - d. Responses to leadership opportunities; between men and women, any differences?
 - e. Challenges faced by men and women agricultural meetings
8. How do you treat men and women when distributing agricultural related information or funds?
9. What challenges do you face when admitting men and women in your organisation?
10. In your opinion how is the men-to-women relationship on access and control over agricultural income?
11. Do you do sensitisations on gender equity in agriculture?
12. If yes, how do the members respond towards it?
13. Any further comments:

Thank you for your time.

APPENDIX 3: GUIDE FOR FOCUS GROUP DISCUSSIONS

1. Between the man and the woman who contributes the most labour in the field at each stage of farming beginning with field preparation?
2. List the reasons to question 1.
3. Who makes decisions in your households concerning the agricultural activities? i. land preparation ii. Sowing iii. Weeding iv. Harvesting, answer by giving reasons.
4. Who is supposed to have the authority to make a decision on the one to be a member of farmers' association in the household? And why?
5. Who makes the decision on the varieties of the crops to grow between a man and woman in the household?
6. Do you by any chance discuss on who is supposed to do the selling of your farm produce?
7. Explain the agricultural produce controlled by the woman and the ones controlled by man in the household.
8. Who influences the buying of household goods from the money realised from the agricultural income? Man__ woman__ Both

9. Is it worth it discussing with a man/woman in the household concerning any decisions to be made on the agricultural produce? List the reason to your answer.

After the selling of the agricultural produce, discuss the best person to handle the money giving reasons.

Thank you for your time.