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Investigating the Effectiveness of the Zambia's Agricultural Policy towards Women Empowerment: A Case Study of Women in Shimabala in Chilanga District

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Abstract

Zambia is in a unique position to not only leverage agriculture as an engine for poverty reduction and improved nutrition, but to become the breadbasket of southern Africa. Relative to other countries in the region. Zambia has an abundance of fertile land, water, and a generally favorable climate for agricultural production. Moreover, Zambia has a large and rapidly growing urban population, which creates opportunities for rural-urban development synergies that may not exist in other countries. Despite these unique endowments, agricultural growth in Zambia remains stagnant, poverty rates in rural Zambia remain stubbornly high, at 68% of the population, and incidences of stunting, malnutrition, and wasting continue to disproportionately affect rural Zambians. Low investment in the sector and low production and productivity especially among small-holder farmers especially women are some of the serious challenges currently affecting the agricultural sector. The general object of the study was to investigate the effectiveness of the Zambia's Agricultural Policy towards women empowerment. Specific Objectives included investigating how the policy has promoted gender equity in resource allocation and access to agriculture services focusing on women; analysing how the policy improved access to markets for women farmers; investigate how the policy facilitated availability and accessing to land among women for agriculture development; investigate how the policy strengthened the collection and dissemination of information among women and investigate the development of appropriate technology in the sector. The study will help policy makers, auxiliary government institutions, private sector players in the agriculture industry and small scale farmers to effectively come up with interventions that will improve agriculture in Zambia. It is envisaged that there will be strong backward and forward linkages in the agricultural sector that will result from the provision of information. Ultimately, this will contribute effectively to the economic empowerment among small scale farmers especially women.

CHAPTER 1

1. Introduction

Agriculture is often the economic driving force in developing countries. WTO statistics show that agriculture accounts for over one-third of export earnings for almost 50 developing countries, and for about 40 of them this sector accounts for over half of export earnings. However, significant agricultural subsidies provided by Economic Co-operation and Development (OECD) country governments to their farmers compromises the ability of developing country farmers to participate in global agricultural trade reducing their income and profit streams and their ability to escape poverty. At the same time, consumers in OECD countries are denied the benefits of the lower prices food and agricultural products resulting from a competitive marketplace while as tax payers they are forced to subsidize high-cost and often environmentally damaging production. Barriers to agricultural imports also remain high in both developed and many developing countries, creating obstacles not only to North-South trade but also to South-South trade (Boserup,1970).

Zambia is in a unique position to not only leverage agriculture as an engine for poverty reduction and improved nutrition, but to become the breadbasket of southern Africa. Relative to other countries in the region. Zambia has an abundance of fertile land, water, and a generally favorable climate for agricultural production. Moreover, Zambia has a large and rapidly growing urban population, which creates opportunities for rural-urban development synergies that may not exist in other countries. Despite these unique endowments, agricultural growth in Zambia remains stagnant, poverty rates in rural Zambia remain stubbornly high, at 68% of the population, and incidences of stunting, malnutrition, and wasting continue to disproportionately affect rural Zambians.

According to the Sixth National Development Plan (SNDP), Zambia's poverty was as high as 68% in 2004 at the national level while at the rural level it stood at 78%. Furthermore the SNDP further reveals that 60% of Zambia's population resides in the rural areas of which 70% are categorised as poor. The majority of the Zambian rural people depend on agriculture or agricultural related livelihoods which has remained poor due to inadequate infrastructure and support services such as extension and marketing support. Government spending on agriculture has been as little as 5% of the annual budget (FNDP 2006). The rural small scale farmers are hence categorized as poor and largely employed in the informal sector and compelled to migrate to urban centres in search of better livelihoods. The high poverty level in the rural areas in comparison to urban areas is an indication of the skewed allocation of national resources. It is for this reason that the government of the Republic of Zambia recognises the need to prioritize investment in agriculture and rural development in general in order to ensure the delivery of development where the majority of its population resides.

The Zambian government has committed itself to reaching the targets of the Sustainable Development Goals (SDGs). The commitment by government to the goals is an acknowledgement of the need to directly tackle the resultant problems of poverty such as; reducing hunger, ensuring children (both female and male) have at least basic education, work towards elimination of gender inequalities, reduce child and maternal mortality which stood at 70 deaths per 1000 live births for infant mortality and 119 deaths

per 1000 live births for under-fives and maternal mortality was at 729 per 100,000 in 2000 as reported Millennium Development Goals Progress Report (2008).

In order to work towards reducing the poverty experienced by the majority of the population, government realises that it needs to recognise the role of policy in achieving desired goals, hence the National Agricultural Policy 2004-2015.

Agriculture remains the key priority sector in the growth and poverty reduction agenda of Zambia. Despite Zambia experiencing strong economic growth in the recent past, agriculture has not performed well. In order to fully exploit agriculture, Zambia has developed well-articulated agricultural policy and strategies which emphasize objectives such as attainment of food security, maximizing farmers' incomes, promoting sustainable agriculture, and enhancing private sector roles in input and output markets. 80 percent of the rural population depends on agriculture-related activities for their livelihood. The growth of this sector is, therefore, important for the attainment of the long-term vision for Zambia which is to become "a prosperous middle income nation by 2030". This proposal will study the impact the policy has had in the agricultural sector in Zambia and particularly the period under review, 2004-2015.

Zambia's agricultural sector displays a dual structure, where a few (about 740) large commercial farms, concentrated along the railway line, co-exist with scattered smallholders (600 000 - 800 000 families) and some small commercial farmers (25 000 families). Some 40 per cent of rural households are engaged solely in subsistence agriculture (Felgenhauer2010). Under these circumstances, leveraging Zambia's agricultural potential requires multifaceted support strategies. Targeting diversification in agricultural production will not be sufficient without improving market information and promoting linkages between farmers and other participants in value chains.

According to the National Agriculture Policy of 2004, the governments recognizes the dual nature of the agricultural sector in which the vast majority of small-scale farmers is resource poor, have low production and productivity and are usually food insecure. The main thrust of the National Agricultural Policy are increased production, sector liberalization, commercialisation, promotion of public and private sector partnerships and provision of effective services that will ensure sustainable agricultural growth. In doing so, the Government will not ordinarily intervene in inputs distribution or crop marketing in a way that will undermine or undercut private sector participation especially if the private sector has the will or capacity to do so. The Ministry responsible for agriculture will also endeavour to increasingly commercialize some services it is currently providing including cost sharing. These services include research, extension, soil and seed testing and agricultural training. Emphasis will be on developing partnerships between government and farmers, the private sector, NGOs and cooperation partners. All these measures are expected to result in the following: attainment of food security for the majority of households; agriculture's contribution to total foreign exchange earnings will increase from the current 3-5 % to 10-20 % by 2015; agriculture will grow at between 7-10 % per annum from 2005 onwards; overall agricultural contribution to GDP will rise from the current 18-20 % to over 30 % by 2015; and agriculture will be the leading sector in terms

of employment and income generation. Overall, these attainments will place agriculture as the leading sector in terms of food security, economic growth and poverty reduction. (National Agriculture Policy, 2004)

Zambia is divided into three major agro-ecological regions, namely Region I, II and III. Rainfall as well as the quality of soils differs across these regions.

Region I: This region receives less than 800 m of rainfall annually and constitutes 12 % of Zambia's total land area. It consists of loamy to clayey soils on the valley floor and course to fine loamy shallow soils on the escarpment. It covers the Southern province and parts of Eastern and Western provinces. The Region is suitable for production of drought resistant crops like Cotton, Sesame, Sorghum and Millet and has potential for production of irrigated crops, like Winter Maize.

Region II: The Region receives between 800 to 1,000 mm of annual rainfall and constitutes 42 % of the country. It is sub divided into two namely, Region IIa and IIb. Region IIa covers the Central Lusaka, Southern and Eastern fertile plateaux of the country and generally contain inherent fertile soils. Permanent settled systems of agriculture are practised. A variety of crops are grown in this Region and these include Maize, Cotton, Tobacco, Sunflower, Soya beans, irrigated Wheat, Groundnuts and other arable crops. Region IIb covers Western province and consists of sandy soils. It is suitable for production of Cashew nut, Rice, Cassava and Millet

Region III: The region receives more than 1,000 mm up to 1,500 mm of rainfall annually and constitutes 46 % of the country's total land area comprising the Copperbelt, Luapula, Northern and Northwestern provinces. It has good potential for the production of Millet, Cassava, Sorghum, Beans and Groundnuts. Coffee, Sugarcane, Rice and Pineapples are also grown in this area. The agricultural potential of the Region can be enhanced by application of lime and its perennial streams can be utilized for small-scale irrigation.

Statement of the Problem

Despite the fact that the agricultural sector is key to the development of the Zambia economy and is the engine of growth for the next decade and beyond and that Agriculture generates between 18-20 % of the Gross Domestic Product (GDP) and provides livelihood for more than that 50 % of the population little has been provided for the small scale farmers especially women in Zambia's rural areas.

Low investment in the sector and low production and productivity especially among small-holder farmers especially women are some of the serious challenges currently affecting the agricultural sector. Climate Change is exacerbating this challenge due to its threats which include droughts, water logging, seasonal floods, increased temperatures, shortening of the rain season (crop growing period) and long dry spells coupled with poor rainfall distribution. The constraints to growth of the sector include among others: inadequate extension services, high cost of financing, inadequate infrastructure, livestock diseases and poor functioning agricultural markets. In addition the competitiveness of the sector has been adversely affected by poor road network, inadequate storage and limited access to electricity and technology. Despite the government intention to foster growth in the industry little has been achieved especially among women small scale farmers.

2 Research Objectives

The general object of the study was to investigate the effectiveness of the Zambia's Agricultural Policy towards women empowerment.

Specific Objectives

1. To investigate how the policy has promoted gender equity in resource allocation and access to agriculture services focusing on women
2. To analyse how the policy improved access to markets for women farmers
3. To investigate how the policy facilitated availability and accessing to land among women for agriculture development
4. To investigate how the policy strengthened the collection and dissemination of information among women
5. To investigate the development of appropriate technology in the sector.

3 Research Questions

In relation to the objectives of this research, the questions included;

1. How has the policy promoted gender equity in resource allocation and access to agriculture services focusing on women
2. How has the policy improved access to markets for women farmers
3. How has the policy facilitated availability and accessing to land among women for agriculture development
4. How has the policy strengthened the collection and dissemination of information among women
5. Has there been development of appropriate technology in the sector

4. Significance of the Study

The study will help policy makers, auxiliary government institutions, private sector players in the agriculture industry and small scale farmers to effectively come up with interventions that will improve agriculture in Zambia. It is envisaged that there will be strong backward and forward linkages in the agricultural sector that will result from the provision of information. Ultimately, this will contribute effectively to the economic empowerment among small scale farmers especially women.

70% of Zambia's population depends on agriculture. However, the challenge is that farmers still experience lower yields and ultimately lower agricultural based incomes leading to food insecurity. Food insecurity currently stands at 70%. Anecdotal evidence further suggests that 68% of the children are malnourished due to inadequate food intake. This is blamed on dysfunctional input markets, lower. The agricultural sector is key to the development of the Zambia economy and will be the engine of growth for the next decade and beyond. Agriculture generates between 18-20 % of the Gross Domestic Product (GDP) and provides livelihood for more than that 50 % of the population. The general object of the study is to investigate the effectiveness of the Zambia's Agricultural Policy towards women empowerment. The specific objectives are to; To investigate how the policy has promoted gender equity in resource allocation and access to agriculture services focusing on women; To analyse how the policy improved access to markets for women farmers; To investigate how the policy facilitated availability and accessing to land among women for agriculture development; To investigate how the policy strengthened the collection and dissemination of information among women; and To investigate the

development of appropriate technology in the sector.

The study is important because it will identify the gaps that have existed in the period when the policy was implemented. The findings of the study will assist in providing the information that will help in improving the policy when reviewed. It brings out information that identifies the weaknesses and strengths of the policy.

5. Limitations of the Study

The major limitation of this study was the fact that the number of respondents, especially the women farmers was small looking at their busy schedule in the fields. This caused the results to differ from expectations. The validity of the results would have been more strengthened with more responses. Further, some farmers where not be willing to cooperate as they referred most questions to cooperatives where they associate. Since this study focused on a case study, the results may not be accepted at face value to be representative of all women small scale farmers in Zambia. More research and investigation is needed in this area to reach a general conclusion.

4 Ethical Considerations

Bellieni and Buonocore (2011) postulates that there are several reasons why it is important to adhere to ethical norms in research, first, norms promote the aims of research, such as knowledge, truth, and avoidance of error. For example, prohibitions against fabricating, falsifying, or misrepresenting research data promote the truth and avoid error. Second, since research often involves a great deal of cooperation and coordination among many different people in different disciplines and institutions, ethical standards promote the values that are essential to collaborative work**,** such as trust, accountability, mutual respect, and fairness. For example, many ethical norms in research, such as guidelines for authorship, copyright and patenting policies, data sharing policies, and confidentiality rules in peer review, are designed to protect intellectual property interests while encouraging collaboration. Most researchers want to receive credit for their contributions and do not want to have their ideas stolen or disclosed prematurely.

According to Bellieni and Buonocore (2011) The following are some of the ethical issues that were considered;

Honesty: The research strived for honesty in all communications by honestly reporting data, results, methods and procedures, and publication status. The research did not fabricate, falsify, or misrepresent data at the time interviews of during analysis.

Objectivity: The research avoided bias in data analysis, data interpretation and other aspects of research where objectivity is expected or required. The questions tailored according to objectives of the study.

Integrity: Researchers kept promises and agreements; act with sincerity; strive for consistency of thought and action. At any stage of the research, the researchers were consistent in thought and action. This was meant to have a similar yardstick when conducting research. Compromises were not accepted.

Carefulness: The researchers avoided careless errors and negligence. Records of research activities, such as data collection, research design, and correspondence with parties were kept well and done in confidence.

Respect for Intellectual Property: Patents, copyrights, and other forms of intellectual property were honored. Credit was given where it is due when compiling data and also in processes such as report writings.
Confidentiality: Confidential communications was protected, such as papers and patient records that were examined in the process.

Definitions of Key Terms

Agricultural land

According to (Zuidberg, *1994)* This is typically land devoted to agriculture, the systematic and controlled use of other forms of life particularly the rearing of livestock and production of crops—to produce food for humans. It is thus generally synonymous with farmland or cropland. The United Nations Food and Agriculture Organization and others following its definitions, however, also use agricultural land or agricultural area as a term of art, where it means the collection of:

- "arable land" (aka cropland): here redefined to refer to land producing crops requiring annual replanting or fallowland or pasture used for such crops within any five-year period
- "permanent cropland": land producing crops which do not require annual replanting
- permanent pastures: natural or artificial grasslands and shrublands able to be used for grazing livestock

A farmer

A farmer (also called an agriculturer) is a person engaged in agriculture, raising living organisms for food or raw materials. The term usually applies to people who do some combination of raising field crops, orchards, vineyards, poultry, or other livestock. A farmer might own the farmed land or might work as a labourer on land owned by others, but in advanced economies, a farmer is usually a farm owner, while employees of the farm are known as farm workers, or farmhands. However, in the not so distant past a farmer was a person who promotes or improves the growth of (a plant, crop, etc.) by labor and attention, land or crops or raises animals (Dyer, 2007)

A Policy

A policy is a deliberate system of principles to guide decisions and achieve rational outcomes. A policy is a statement of intent, and is implemented as a procedure or protocol. Policies are generally adopted by the Board of or senior governance body within an organization whereas procedures or protocols would be developed and adopted by senior executive officers. Policies can assist in both *subjective* and *objective* decision making. Policies to assist in subjective decision making would usually assist senior management with decisions that must consider the relative merits of a number of factors before making decisions and as a result are often hard to objectively test e.g. work-life balance policy (Doss, 1999)

Information and Communication Technology (ICT)

Information Communications Technologies (ICTs) is an umbrella term that includes any communication device or application, encompassing: radio, television, cellular phones, computer and network hardware and software, satellite systems and so on, as well as the various services and applications associated with them, such as videoconferencing and distance learning. ICTs are often spoken of in a particular context,

such as ICTs in education, health care, or libraries (Brailer and Thompson, 2004)

Evaluation

Tufo (2002) defines evaluation as a systematic determination of a subject's merit, worth and significance, using criteria governed by a set of standards. It can assist an organization, program, project or any other intervention or initiative to assess any aim, realisable concept/proposal, or any alternative, to help in decision-making; or to ascertain the degree of achievement or value in regard to the aim and objectives and results of any such action that has been completed. Tufo further adds explains that the primary purpose of evaluation, in addition to gaining insight into prior or existing initiatives, is to enable reflection and assist in the identification of future change.

Information

Data that is accurate and timely, specific and organized for a purpose, presented within a context that gives it meaning and relevance, and can lead to an increase in understanding and decrease in uncertainty (Young, 1997)

Technology

"science of craft", from Greek *techne*, "art, skill, cunning of hand"; is the collection of techniques, skills, methods and processes used in the production of goods or services or in the accomplishment of objectives, such as scientific investigation. Technology can be the knowledge of techniques, processes, etc. or it can be embedded in machines, computers, devices and factories, which can be operated by individuals without detailed knowledge of the workings of such things (Doss,1999)

Women empowerment,

Referring to the empowerment of women in our present society, has become a significant topic of discussion in regards to development and economics. It can also point to approaches regarding other marginald genders in a particular political or social context. While often interchangeably used, the more comprehensive concept of Gender empowerment refers to people of any gender, stressing the distinction between biological sex and gender as a role. It thereby also refers to other marginalized genders in a particular political or social context. Often, women in developing nations are legally restricted from their land on the sole basis of gender. Having a right to their land gives women a sort of bargaining power that they wouldn't normally have, in turn; they gain the ability to assert themselves in various aspects of their life, both in and outside of the home. (Saito and Weidemann, 1990)

CHAPTER 2

5 Literature Review

This Chapter explains what Literature Review is and its importance in the research process. The chapter also brings to the fore the themes that that were covered in the review. The chapter logically and critically analyzed literature written by others in the subject under review.

Green et al (2007) states that a literature review refers to a text of a scholarly paper, which includes the current knowledge including substantive findings, as well as theoretical and methodological contributions to a particular topic. It is a critical summary and an assessment of the current state of knowledge or current state of the art in a particular field. Its main goals are to situate the current study within the body of literature

and to provide context for the particular reader.

By providing a literature review, the researcher is informing the reader that one has not neglected the basics of doing a research because a literature review not only surveys what researches have been done in the past on ones research topic but it also appraises, encapsulates, compares and contrasts, and correlates various scholarly books, research articles, and other relevant sources that are directly related to current research. The purpose of the literature review section of a research article is to provide the reader with an overall framework for where this piece of work fits in the "big picture" of what is known about a topic from previous research. Thus, the literature review serves to explain the topic of the research and to build a rationale for the problem that is studied and the need for additional research (Green et al, 2007).

Dellinger (2005) eloquently explains the purpose of a literature review in planning primary research: As the foundation of any research project, the literature review should accomplish several important objectives. It sets the broad context of the study, clearly demarcates what is and what is not within the scope of the investigation, and justifies those decisions. It also situates an existing literature in a broader scholarly and historical context.

Creswell (2007) postulates that a literature review is important because enables one to discuss relevant research carried out in the same topic, provides means for discussing variables that are relevant to the topic, identifies relationships between ideas, places each work in the context of its contribution to understanding the research problem being studied, describes the relationship of each work to the others under consideration, identifies new ways to interpret prior research, reveals any gaps that exist in the literature, resolves conflicts amongst seemingly contradictory previous studies, identifies areas of prior scholarship to prevent duplication of effort and points the way in fulfilling a need for additional research.

In dealing with themes, the following themes were be discussed categorically. These include;

1. Gender equity in resource allocation and access to agriculture services focusing on women
2. Improved access to markets for women farmers
3. Availability and accessing to land among women for agriculture development
4. Collection and dissemination of information among women
5. Development of appropriate technology in the sector

Gender equity in resource allocation and access to agricultural services

Rural women make up the majority of the world's poor. They have the world's lowest levels of schooling and the highest rates of illiteracy. In all developing regions, female-headed rural households are among the poorest of the poor. Numerous studies underscore the social costs of rural women's lack of education and assets, linking it directly to high rates of undernutrition, infant mortality and – in some countries – HIV/AIDS infection. There are also high economic costs: wasted human capital and low labour productivity that stifle rural development and progress in agriculture, and ultimately threaten food security – both for women and men. Gender inequality exacerbates food insecurity, malnutrition and poverty. Strategies for agriculture and rural development do not

always benefit rural populations, particularly women, but sometimes even amplify existing disparities.

That trend is likely to worsen in the face of today's unprecedented challenges, including climate change, international migration, transboundary infectious diseases and the global economic downturn. Unless gender is addressed comprehensively, the global community will not achieve the targets in the Sustainable development goals

A study conducted by FAO on gender equity in 2013 indicates that Women makes major contributions to crop production. They provide up to 90% of the labour used in rice cultivation in Southeast Asia. In sub-Saharan Africa, they produce up to 80% of basic foodstuffs for both the household and sale. In home gardens, rural women grow vegetables that are important to household nutrition. Women's roles in crop production are expanding: the outmigration of young men from rural areas in some regions has led to permanent changes in women's responsibilities and tasks. Yet women have the least access to the means for increasing output and yields, and for moving from subsistence farming to higher-value, market-oriented production. Less than 10% of women farmers in India, Nepal and Thailand own land. Only 15% of the world's agricultural extension agents are women. A study of farm credit schemes in Africa found that women's share of loans was just 10%. Statistics on women's yields, technology adoption rates and use of inputs are rarely reported. The lack of women's participation in commercial crop production is often not a preference, but the result of limited access to inputs and markets. One study calculated that agricultural productivity in sub-Saharan Africa could rise 20% if women had equal access to land, seed and fertilizer. Women's adoption of new crop production technologies is also strongly affected by who controls and ultimately owns the crop: men often move into "women's" crop production when it becomes more profitable (FAO, 2013)

Another study conducted by Ferguson in Malawi and India in 2013 indicates that smallholder farmers currently produce 90 percent of food in Africa and around half of all food worldwide. Across the developing world, women account for 60 to 80 per cent of these farmers- Yet, the majority of people going hungry worldwide are women and girls. So, the very women who are producing our food are the ones who are most likely to go hungry. One key reason for this is that agricultural policies are simply not supporting smallholder farmers. Even where smallholder farmers do get support, a huge gender gap exists in terms of what women receive in relation to men. Women farmers, have less access than men to productive resources and government support, even though they make up the majority of farmers. This has a crippling impact on women's ability to lead empowered lives and achieve basic human rights. Although a justice and human rights issue in its own right, the gender gap in agricultural support also has a devastating impact on poverty, hunger and economies at large across the developing world. The UN Food and Agriculture Organisation recently estimated that bringing the yields on the land farmed by women up to the levels achieved by men would increase agricultural output in developing countries between 2.5 and 4 per cent. This increase in production would in turn reduce the number of hungry people in the world by between 12–17 per cent or a minimum of 100 million people. Despite such evidence, almost all agricultural

policies assume farmers are men. Recent analysis on how agricultural resources are allocated confirms that stark gender inequalities which limit the support women receive tends to be the norm rather than the exception. Yet alternatives exist. Why this report is useful

These examples clearly show the positive impacts that aid given to women smallholder farmers can have on women's rights, gender equality and women's food security. This report also shows donors how to invest in women farmers with a gender equality and Human Rights Based Approach. Fulfillment of women farmers' rights is a huge result in itself, and helps countries to achieve their International Commitments on Women's Rights as shown by the case studies. The case studies also show considerable positive impacts on food security and the eradication of poverty (Ferguson, 2013)

Improved access to markets for women farmers

A study on barriers to trade by small holder farmers in Tanzania by Gabagambi in 2013 indicate that markets are one of the major factors determining the quantity of production of goods in a particular period and particular place, its quality, taste and look. As it is in any other production, agriculture produces also react to the market and stimulate producers (small scale farmers) to produce more or produce less for the market. Small scale farmers will produce more, will produce of expected quality and will produce in a desired time, if reliable and fair market will exist. However, the opposite is the norm of the day. Small scale farmers are marginalised and squeezed in a corner and denied to enjoy the freedom of selling their produce to lucrative markets not only within their countries but also denied to access lucrative market even in neighbouring districts within the same country. The bottom line is to give freedom and information to small scale farmers to determine what to sell, where to sell and how to sell in the market within their districts, within their national boundaries and within the East African common market and wherever possible within the Small scale farmers' freedom of market access should be supported by good policies and practises as well as good and reliable infrastructure on the ground. Rural development agenda is the key to ensure access to energy. Affordable energy will stimulate primary processing industries which are key in value addition while access to information will enable farmers decide where to sell, what to sell and at what time. Fair and profitable market will eventually stimulate the increase of investments and hence increase of production to ensure food security and food sovereignty in the entire East African region (Gabagambi, 2013)

A study by Skjöldevald, Maja in 2012 on Small scale farmers' access to and participation in markets in western Kenya revealed that traditionally in third world countries, access to information has not been viewed as a basic need, but nowadays it is, because of the globalized economy (Bartnager, 2002). The rising demand for information is an emerging new paradigm for agricultural development that challenges the old ways of delivering important services to the agricultural communities in developing countries (Adebayo & Adesope, 2007). Information is now perceived as a factor of production like other factors such as labour, capital and land (Rao, 2006). Dralega (2007) argues that if information is combined with other factors of production, it will enhance

agricultural production and marketing. It is a vital resource for development and empowerment, giving farmers the ability to make informed decisions pertaining to production, marketing and management of agricultural products and services. Kavulya (2007) refers to information and knowledge as the world's most critical resources and driving forces that can be used to address socio-economic challenges faced by Sub-Saharan African countries with greater success. If development projects are driven by the information needs of the poor and not the concerns for technological relevance then it can be certain that the needs of the poor will be identified and met accordingly (Lee, et al, 2002).

Kalusopa's study on Zambia (2006) stresses that those agricultural producers without information remain at the mercy of the global market giants due to their competitive disadvantage. Farmers will remain dependent excessively on the middlemen, making it difficult for them to adapt to ever-changing market and environmental conditions and to get better profits from their yields. Poor information flows within and between government institutions lead to inefficient institutions, poor policies, poor service delivery and the inability to meet the needs of vulnerable and poor communities (Cecchine and Scott, 2003). Information can support livelihoods through its dissemination on better use of resources, markets, commodity prices, income generation projects and support services (Venkalesh, et al, 2002).

The Zambian government must begin to work with partners such as the Zambian national farmers union in coming up with structures that will improve markets for farmers. Apart from information, infrastructure such as roads and facilities such as storage sheds need to be enhanced.

Availability and accessing to land among women for agriculture development

A study by Wonani et all in 2013 in Zambia on gender and equity implications of land-related investments on land access, labour and income-generating opportunities indicate that Zambia has witnessed increased interest from private investors in acquiring land for agriculture. As elsewhere, large-scale land acquisitions are often accompanied with promises of capital investments to build infrastructure, bring new technologies and know-how, create employment, and improve market access, among other benefits. But agricultural investments create risks as well as opportunities, for instance in relation to loss of land for family farmers. While much debate on 'land grabbing' has discussed risks and opportunities in an aggregate way, it is critical to understand the distribution of the costs and benefits created by an investment project. For example agricultural investments create gendered outcomes that are poorly understood. Gender inequalities in Zambia, as seen across much of Sub-Saharan Africa, shape access to land, agricultural assets, inputs, services and rural employment opportunities. These gender inequalities are partially responsible for the underperformance of the agricultural sector. Investments in the agriculture sector must therefore account for and challenge these inequalities if they are to deliver their stated benefits. This study investigates the gender dimensions of agricultural investments in Zambia through two case studies. The first case study is the Kaleya Smallholder Company Ltd (KASCOL), an agribusiness company operating in Mazabuka district in

Zambia's Southern Province since1980. KASCOL produces sugar cane, which it sells to Zambia Sugar PLC. Cane is produced both from KASCOL's nucleus estate and from an outgrower scheme currently involving 160 smallholders who hold 14-year renewable sub-leases on company-leased land. The second case is ETC Bio-Energy Limited, previously Mpongwe Development Company (MDC), in Mpongwe District, Copperbelt Province. ETC cultivates a mix of crops, including jatroph, on company run plantations (Wonani et al, 2013)

The findings show that some primary agricultural investments that have taken place during the last years are having complex and mixed economic, social, cultural and political effects on local communities. Moreover, research has highlighted that positive outcomes do not flow automatically; rather, they depend on many factors, including the prevailing agriculture and rural development model; the institutional, policy and regulatory framework in place; the type and degree of inclusiveness of the business models adopted, and the extent to which social and gender equity issues are considered, among others. Certain types of investments, in particular large-scale land acquisitions, may have negative effects on host countries such as displacing small farmers, undermining or negating existing rights, increasing corruption, reducing food security, aggravating gender and social inequalities and environment degradation. Conversely, other investments adopting more inclusive business models and respecting rural populations' rights seem to be more beneficial for the livelihood of small farmers and workers and for long-term development. Within this context, national governments need to have in place an enabling environment suitable for attracting and supporting agricultural investments conducive to sustainable rural development, poverty reduction and food security.

Further, studies in 2011 by Women in Agriculture, Closing the Gender Gap for Development (FAO, 2011), provides solid evidence that gender inequalities in access to agricultural assets, inputs, services and rural employment opportunities are partially accountable for the underperformance of the agricultural sector in many developing countries. Therefore without sustainable improvements in gender equity in access to land, employment and income-generating opportunities, the achievement of global food security and poverty reduction targets will be seriously undermined.

Collection and dissemination of information among women

A study by Nnenna Obidike in 1995 in Nigeria on Rural Farmers' Problems Accessing Agricultural Information: A Case Study of Nsukka Local Government Area of Enugu State, Nigeria indicates that due to some constraints that lead to lack of access to timely and up-to-date information which would have enabled them to achieve optimal yield from their farmlands. Such information is highly desired by these farmers and can only be made available to them via extension workers, community libraries, state and local government agricultural agencies. Obidike hightlights that Having accessing to agricultural information is an essential ingredient that would always lead to better crop and livestock production in any community. Farmers in Nigeria seldom feel the impact of agricultural innovation either

because they have no access to such vital information or because it is poorly disseminated (Ozowa, 1995). In this study, the Nsukka rural farmers' respondents have in the past benefited from a wide range of agricultural information thus leading to higher yields.

Agriculture plays a vital role in the social and economic development of most African countries and is the main contributor to economic growth and stability. Small-scale agriculture and the harvesting of natural resources provide livelihoods for over percent of the African population. However, most smallholders are resource-poor and face many challenges. Agricultural information has the potential to increase agricultural productivity through communicating knowledge and information to rural agricultural communities, providing capacity building, accessing markets and credit, restructuring of extension and scaling up inter-linkages of development interventions.

Equitable access to information is one of the most important necessities in the emerging global information economy, and it cannot be doubted that information is an important tool for the survival of any organisation irrespective of size, management or type of ownership (Enakrire & Onyenania, 2007). In agriculture, information facilitates needed steps in each of the agricultural process, be it production, harvesting, distribution, storage and marketing. Government must put in place policies that will foster information dissemination among small scale farmers in order for them to contribute to the social and economic development of the country.

Development of appropriate technology in the agricultural sector

Agriculture represents the single most important sector in the economy of many low-income
countries, and 75 per cent of the world's population is engaged in related activities (UNFCCC, 2006). In acknowledgement of the sector's vulnerability to climatic impacts (IPCC, 2014), countries have prioritised agriculture as a critical focus for climate change adaptation. Technologies are often highlighted as a crucial resource for ensuring effective adaptation in agriculture.

Technologies are often classified into three types: hardware, software, and orgware. In considering adaptation, it is important to understand the differences between these technology types, as well as their synergies and complementarities. Hard technologies, or hardware, refer to physical tools; soft technologies, or software, refer to the processes, knowledge and skills required using the technology; and organizational technologies or orgware, refers to the ownership and institutional arrangements pertaining to a technology (Christiansen et al., 2011, UNFCCC, 2014b). In the agricultural context, hardware is exemplified by different crop varieties, software by farming practices or research on new farming varieties, and orgware, by local institutions that support the use of agricultural adaptation technologies.

A study conducted in Tanzania in 2014 by the United Nations highlighted the need to secure user investment in agricultural adaptation technologies, which is often guided by the cultural perspectives and priorities of society and individuals. For example, the introduction of manually-operated water pumps for irrigation in

East Africa was initially met with a lack of enthusiasm from the target farmers, who do not prioritise responses to climate change in their activities. Effective promotion, encompassing an understanding of the market and sensitivity to customer dynamics, achieved user engagement and eventual adoption of the water pumps (UNFCCC, 2014). It is also apparent that less risk-averse users are more likely to adopt a technology and become 'opinion leaders' who ultimately encourage the wider community to adopt the technology as well (UN-FCCC, 2014). The adoption of agricultural adaptation technologies can, therefore, be strengthened by strategic marketing approaches that are based on the values and priorities of the target audience.

6 Theoretical Framework

Theories are formulated to explain, predict, and understand phenomena and, in many cases, to challenge and extend existing knowledge within the limits of critical bounding assumptions. The theoretical framework is the structure that can hold or support a theory of a research study. The theoretical framework introduces and describes the theory that explains why the research problem under study exists (Swanson, 2013)

For the purposes of this study, the Kotter's Change Management Theory and the Rogers Innovation Diffusion Theory in implementing change especially in rural areas.

Initiating a change is a complicated process, and following a theoretical framework can provide a basis for making informed decisions that allows for better control over the outcomes of action (McEwen & Wills, 2007).

Two theories on change and innovation that have been used successfully to facilitate change are the Rogers' Innovation Diffusion Theory and Kotter's Change Management Model (Campbell, 2008; Wolf, 2006). Both of these models provide steps and guidelines for engaging individuals and organizations to support both willingness and ability, thus helping to improve the likelihood the Electronic records structures to be adopted.

Kotter's Change Management Theory

There are many different change management models, but one that has been used successfully (Clark, 2010), and specifically to address the adoption of innovations (Campbell, 2008), is John Kotter's eight-stage process for transformational change (Kotter, 1996). This dynamic model is comprised of eight stages that can be organized into three phases. The first phase is "creating a climate for change" and includes establishing a sense of urgency, creating a guiding coalition, and developing a vision and strategy. The second phase is "engaging and enabling the organization" and includes communicating the vision, empowering action, and creating short-term wins. The final phase is "implementing and sustaining the change" and includes consolidating gains and producing more change, and anchoring new approaches in the culture.

Creating a climate for change

The first stage is establishing a sense of urgency. The biggest mistake in attempting change is to allow complacency (Kotter, 1996). This is a critical step because without a sense of urgency people will cling to the status quo and resist change. Creating urgency involves helping people see and feel first hand why a change needs to occur (Campbell, 2008).

The second stage is creating a guiding coalition. The guiding team members need to have the knowledge, credibility, influence, and skills required to mobilize change (Kotter,

1996). The third stage is developing a vision and strategy. In this stage you need to create a clear and defining vision that is shared by all stakeholders. The result should be a compelling statement that clearly articulates what you are trying to achieve that can be explained in five minutes or less (Kotter, 1996). The vision needs to include a collective sense of what a desirable future looks like, in clear and measurable terms that all stakeholders can stand behind (Clark, 2010)

Engaging and enabling the organization

The first stage in this phase is communicating the vision. Once the vision has been created and agreed upon by members from all stakeholder groups, it is imperative that it be communicated frequently and convincingly to all groups. This involves communicating the vision in words and actions by leading through example. Members from all groups need to be hearing the same message from everyone in order to gain buy-in and guide them from awareness of the change to a state where they feel empowered to advocate for the change (Campbell, 2008). This involves engaging in continuous dialogue with stakeholders to build commitment and trust.

The next two stages in this phase are enabling action and creating short-term wins. At this stage all parties need to work together to remove obstacles and empower all members to participate. It may involve providing incentives for embracing change, and feedback on how they can use the changes for their benefit (Campbell, 2008). Changing the culture of a workplace takes time, and as time goes on urgency drops and complacency rises (Kotter, 1996). Creating short-term wins can help keep the momentum going. Wins should be celebrated in a highly visible way that is connected to the vision and then that momentum can be used to set new achievable goals (Clark, 2010). After each win it is important to analyze what went right and what needs improvement.

Implementing and sustaining the change

The seventh and eighth stages are consolidating gains to produce more change and anchoring new approaches in the organizational culture. The warning in these stages is not to declare victory prematurely. Declaring that the change has been successfully implemented means that people lose all urgency and if the changes have not been firmly anchored into the culture, people will slip back into the "old" way of doing things (Kotter, 1996). In this phase there needs to be a continued focus on the desired vision and the strategic steps required to achieve it until the change becomes a permanent part of the organization's culture and is reflected in the shared norms and values (Clark, 2010).

Rogers' Innovation Diffusion Theory

Rogers (1983) defined innovation as "an idea, practice, or object that is perceived as new" (p. 11), and diffusion as "the process by which an innovation is communicated through certain channels over time among the members of a social system" (p.10). As a new idea or innovation is shared throughout an organization there will be individuals within that organization that adopt the innovation sooner than others. According to Rogers (1983) there are five classifications of individuals when it comes to the adoption of an innovation. The very first people to adopt the innovation are known as the innovators, followed by the early adopters, early majority, late majority, and followed lastly if at all by

the laggards. Innovators are keen to change and try new things, and represent a very small percentage of the population. Early adopters are the opinion leaders in an organization that other people will observe to determine if an innovation is worthwhile. The people in the early majority group take more time to consider if they will try an innovation than the early adopters, while those in the late majority group tend to adopt an innovation only after the majority of individuals in the organization have already done so. The laggards are the last group to adopt an innovation after everyone else has accepted the change, and some individuals in this group may never adopt the innovation.

Rogers (1983) identified five main stages in the innovation diffusion process: knowledge; persuasion; decision; implementation; and confirmation. Rogers (1983) stated that knowledge occurs when an individual is exposed to the innovation's existence and gains some understanding of how it functions. At the knowledge stage an individual wants to know what the innovation is, and how and why it works. In this stage people want to decrease the uncertainty about the outcome of using an innovation. People want to know the advantages and disadvantages of an innovation and how its use would ultimately affect them.

The decision stage is the stage where a choice is made whether or not to implement an innovation (Rogers, 1983). Factors that may hinder or facilitate the decision to adopt an innovation are related to the perceived attributes of the innovation which include its relative advantage, compatibility, complexity, trialability, and observability. These perceived attributes of an innovation are what make it more or less appealing (Ting-Ting Lee, 2004). The relative advantage is the degree to which an innovation is perceived as better than the current practice. It is the perception of how beneficial the change will be. Compatibility is the degree of fit between the proposed change and the individuals or organization that is undergoing the change (Horner, et al., 2004). This relates to how consistent the innovation is with individual and organizational "values, beliefs, past experiences, and needs" (Ting-Ting Lee, 2004, p. 232). The complexity is the degree to which an innovation is perceived as difficult to understand or use. Trialability refers to the availability of opportunities to test the innovation before wide-scale adoption, and observability refers to the extent that the results are visible to others. Innovations with a high degree of observability tend to be adopted faster than those where the results are not highly visible (Rogers, 1983).

Once the decision is made to accept an innovation, the implementation stage begins. The implementation stage is the actual implementation of the innovation, and the confirmation stage involves evaluating the worth of the innovation over time. In the following section I discuss how using Rogers' Innovation Diffusion Theory in conjunction with Kotter's Change Management Theory can guide the successful adoption and implementation of electronic records use in instiutions.

CHAPTER 3

Research Design and Methodology

Methodology used refers to the various aspects of the research process that were be put in place to ensure that relevant data is systematically and successfully collected, compiled, analysed, interpreted and ultimately for the production of comprehensive research findings.

1. *Population*

The population from which the sample was drawn consisted of women small scale farmers.

2. *Sample*

The sample size will comprised 50 women (small scale farmers). This sample size is representative of the population given the fact that probability sampling was employed. Moreover, the sample size was manageable, easy to control, cost effective and data was be easy to analyse and generalize.

3. *Sampling design strategies*

The research employed probability sampling techniques. To be more specific, simple random sampling was be used. In this procedure, each member of the population had an equal and non-zero chance of being selected.

4. *Data Collection Method*

The research dealt with a semi-literate population. Therefore, interviews were used. Consistency was ensured because questions were asked in the same way for ease coding of data.

5. *Piloting of the Questionnaire*

Piloting was meant to establish if the questions attracted consistent interpretation by different respondents. The questionnaire was tested on 10 random respondents to see the consistency and how easy it could be to answer the questions.

6. *Data analysis and interpretation*

The data collected was checked for consistency, accuracy and uniformity. Critical analysis of the data was done thoroughly. A computer program called SPSS was used to facilitate the analysis of the data collected since it the currently the most suitable instrument for analysis of quantitative data.

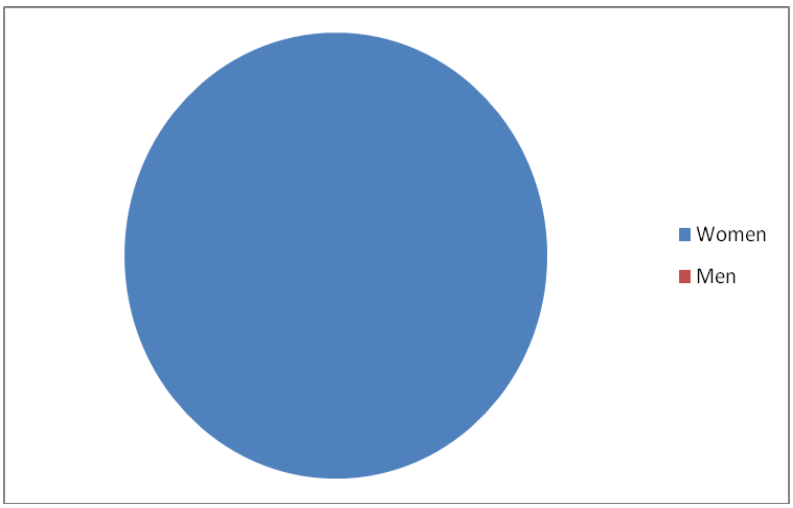
The advantages of SPSS are: It is user friendly, it has enough space for long range number, Mathematical manipulations are easily dealt with through its own in-built functions, it saves time, SPSS package is used for both entry and analysis, Graphs, tables and percentages will be used to aid our interpretation of data, SPSS is efficient and allows cross tabulation of numerous variables.

CHAPTER 4

Data Analysis

This chapter presents analyzed data. According to this study, analysis of data is a process of inspecting, cleaning, transforming, and modeling data with the goal of discovering useful information, suggesting conclusions, and supporting decision-making.

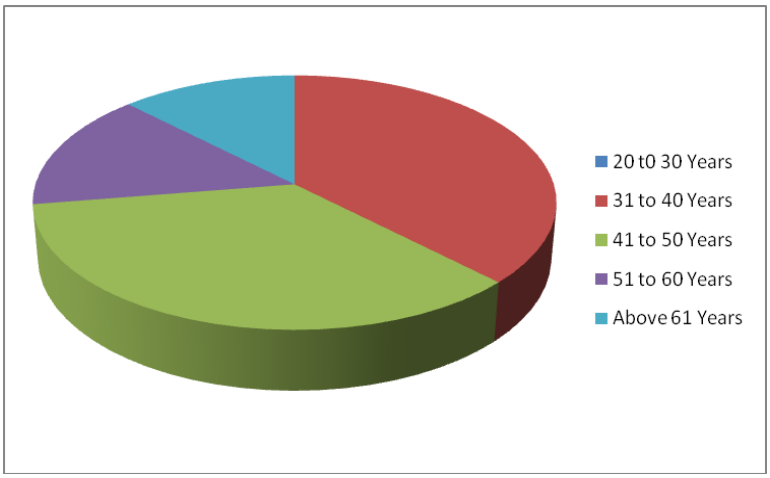
1. Gender



All the respondents in the study were women

2. Age distribution

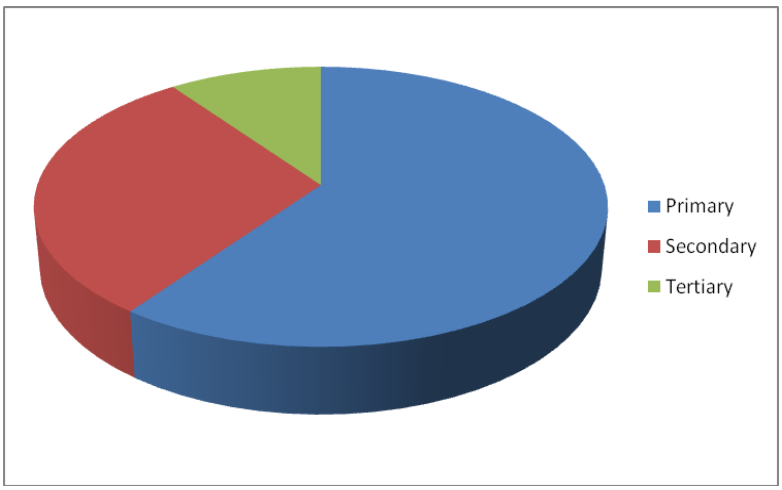
		Percentage
20 t0 30 Years	0	0
31 to 40 Years	15	30
41 to 50 Years	14	28
51 to 60 Years	6	12
Above 61 Years	5	10



The majority of the women interviewed are those between 31 and 40 years giving 30% whilst the least are those above 61 years giving 10%. None of the women farmers was below 30 years.

3. Highest education attainment:

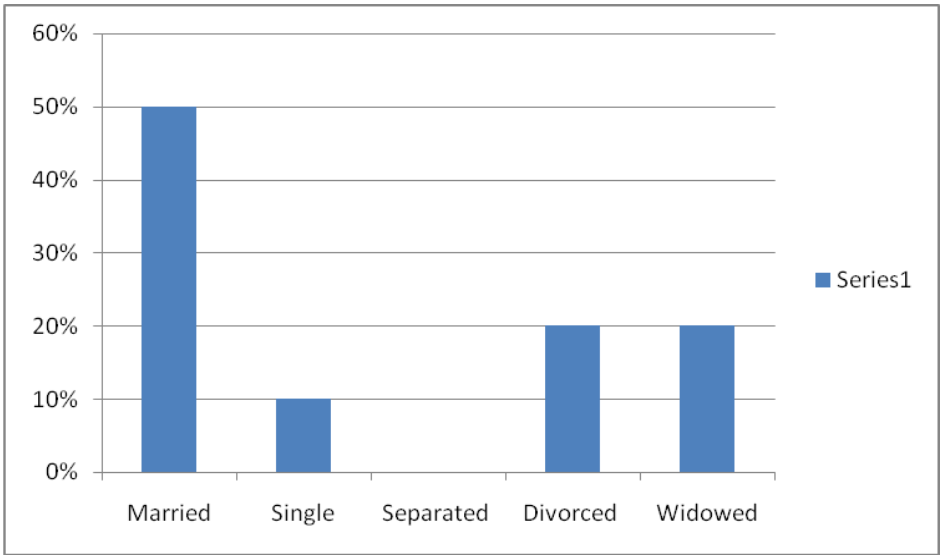
		Percentage
Primary	30	60
Secondary	15	30
Tertiary	5	10



In the study 5 women from 50 had tertiary education giving 10%. 30 from 50 only attained primary education giving 60% whilst 30% attained secondary school education.

4. Farming brackets

All the farmers were small scale farmers giving (100% women small scale farmers)

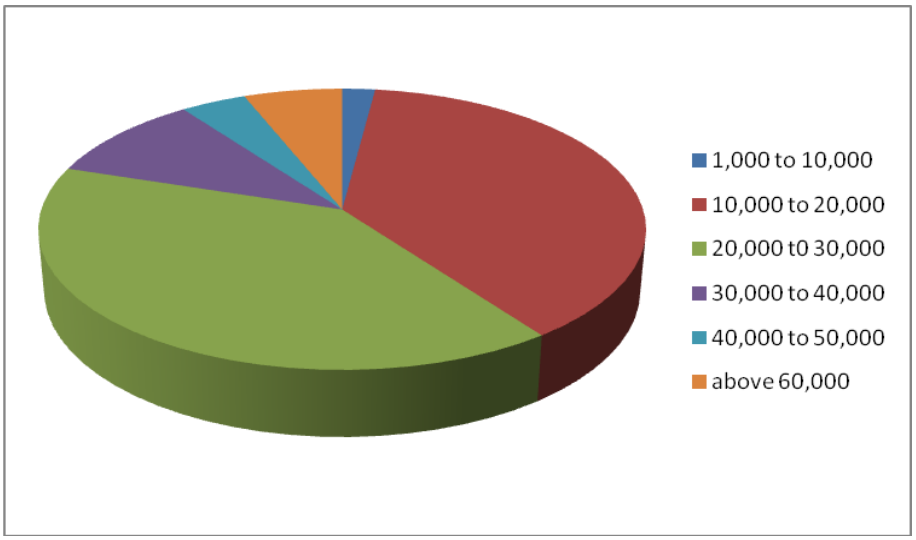


5. Marital status

50 women were interviewed on their marital status, 50% were married, 10% single and none of the women was on separation. 20% were divorced whilst 20 were widows.

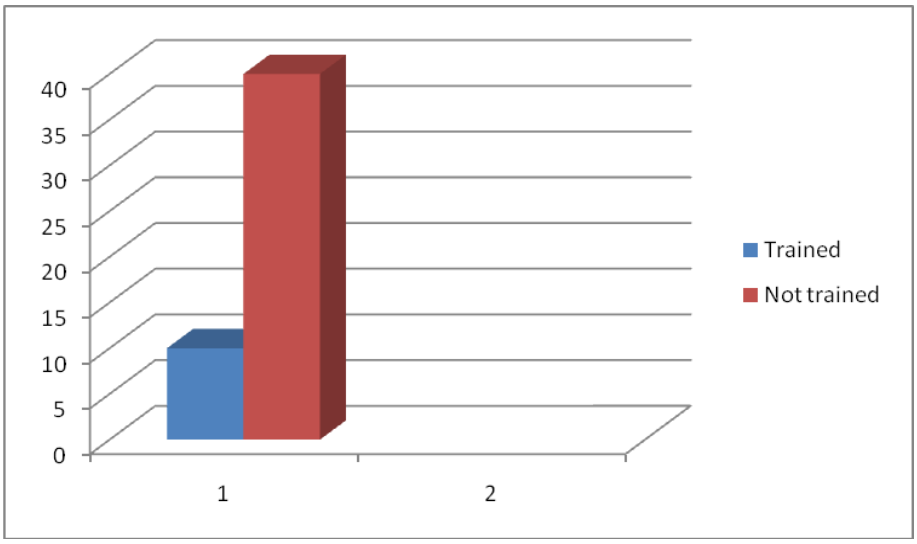
6. Total annual income (In Zambian Kwacha)

		%
1,000 to 10,000	1	2
10,000 to 20,000	19	38
20,000 t0 30,000	20	40
30,000 to 40,000	5	10
40,000 to 50,000	2	4
above 60,000	3	6



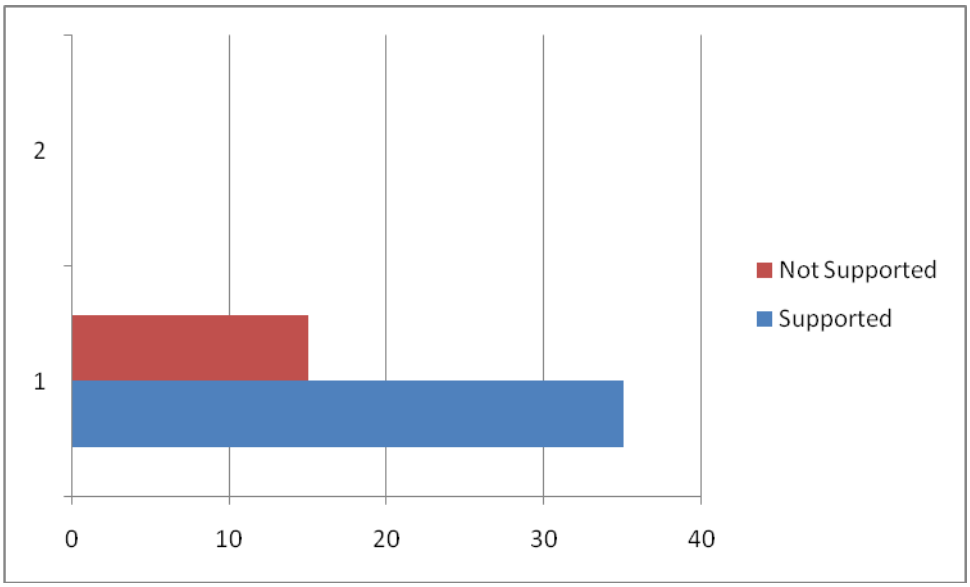
In farming related activities, 2% of the women earned K1,000 to K10,000 in a year, 6% earned above K60,000 in a year. The majority which is 40% earned between K30,000 and K40,000 in a year through agricultural related activities

Training in any agricultural related activity to help in increasing output for agricultural products



10 or 20% were trained whilst 40 or 80% where not trained in agricultural related activity to help in increasing output

Support to women by local government to access services

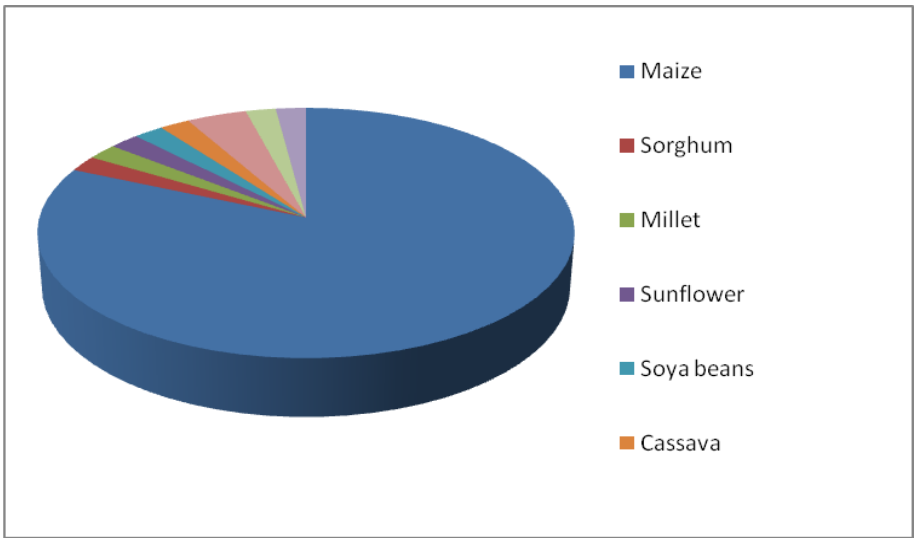


35 women or 70% received support from the government Support to women by local government to access services whilst 15 or 30% did not.

Improved access to markets for women farmers

Commodity mostly produced

		%
Maize	40	80
Sorghum	1	2
Millet	1	2
Sunflower	1	2
Soya beans	1	2
Cassava	1	2
Wheat	0	0
Poultry related (Eggs or meat)	2	4
Animal products related (Milk or meat)	1	2
Vegetables	1	2
Fruits	0	2
Total	50	100

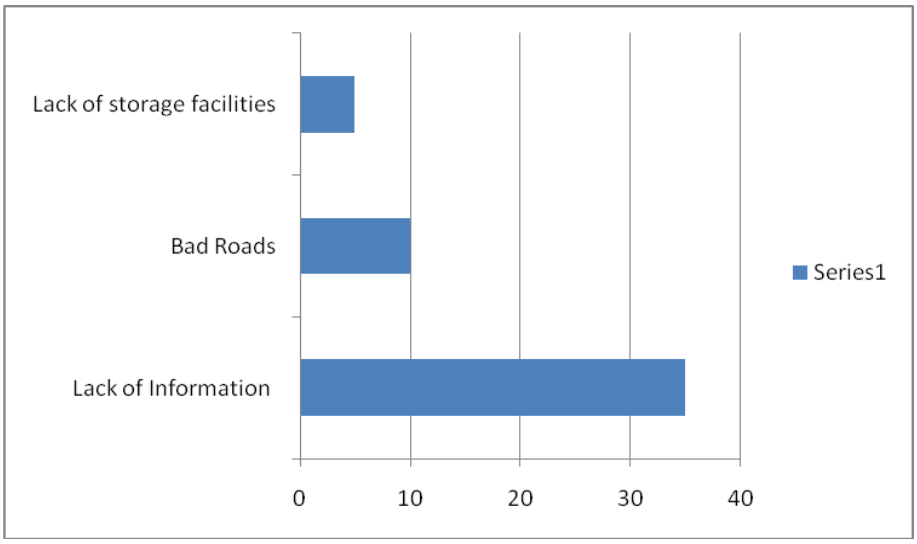


Maize was the crop most grown by women taking 80% followed by women who reared chickens taking 4%.

All the women targeted Lusaka province as the final destination for their produce.

Challenge to accessing markets

		%
Lack of Information	35	70
Bad Roads	10	20
Lack of storage facilities	5	10

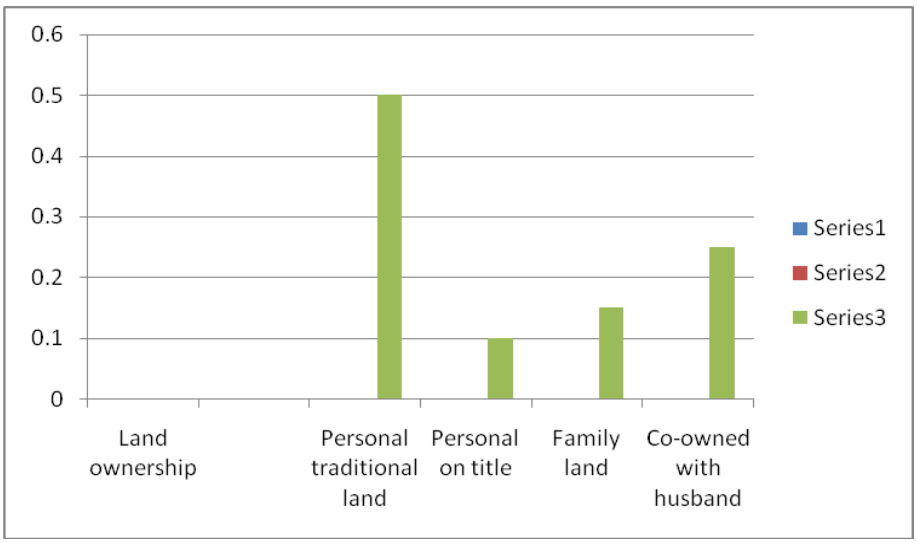


70 % of the women said they lacked information on commodity prices whilst 20% said poor road networks made it difficult to access markets and 10% lacked storage facilities.

All the women interviewed said the setting up of floor prices by the government was not good

Availability and accessing to land among women for agriculture development

1. Status of the land / ownership



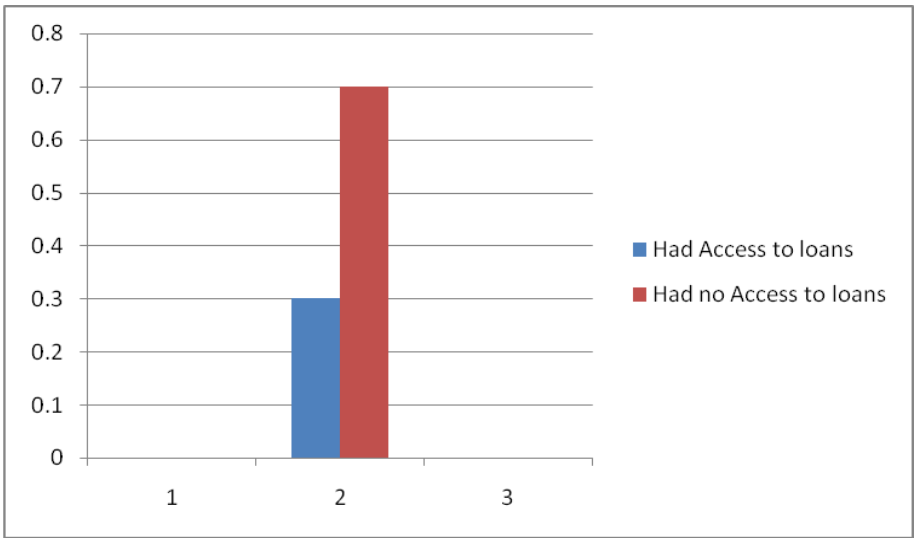
Land ownership

Personal traditional land	50%
Personal on title	10%
Family land	15%
Co-owned with husband	25%

Of the women interviewed 25 or 50% were conducting agriculture on traditional land whilst only 10% had title. 15% was family land whilst 25% was co-owned with husbands.

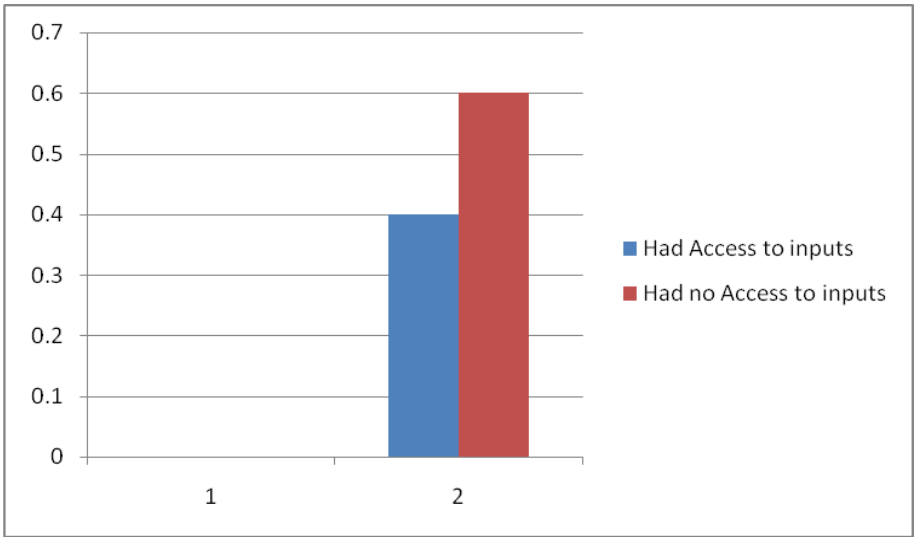
All the women were conducting agriculture on land that is more than 5 acres with monetory value being over K100,000 for all of them

Access to loans meant to boost agriculture



70% of the women had no access to loans whilst 30% has access to loans to boost agriculture. 100% of those that had access indicated that it was not easy to get loans from lending institutions.

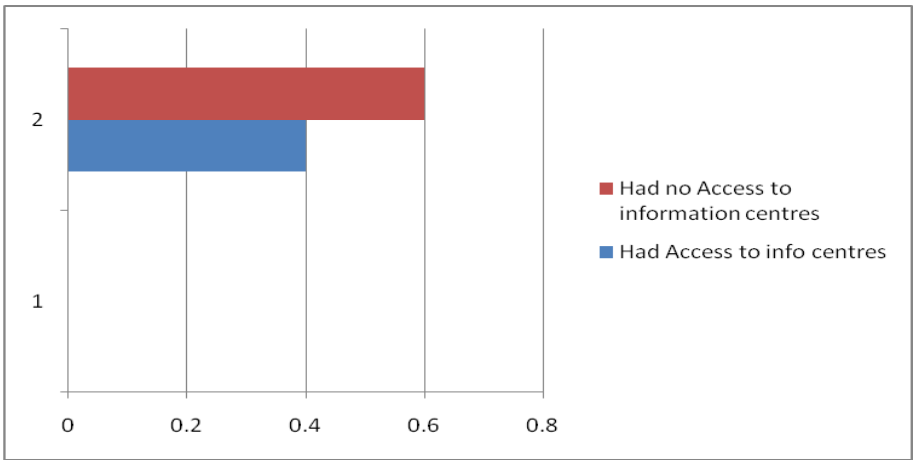
Access to agriculture inputs supplied by the government



40% of the women had access to agricutultural inputs supplied by the government through cooperatives. 60% of the women had no access to inputs. 100% of those who had access indiacted that it was easy to access inputs through cooperatives

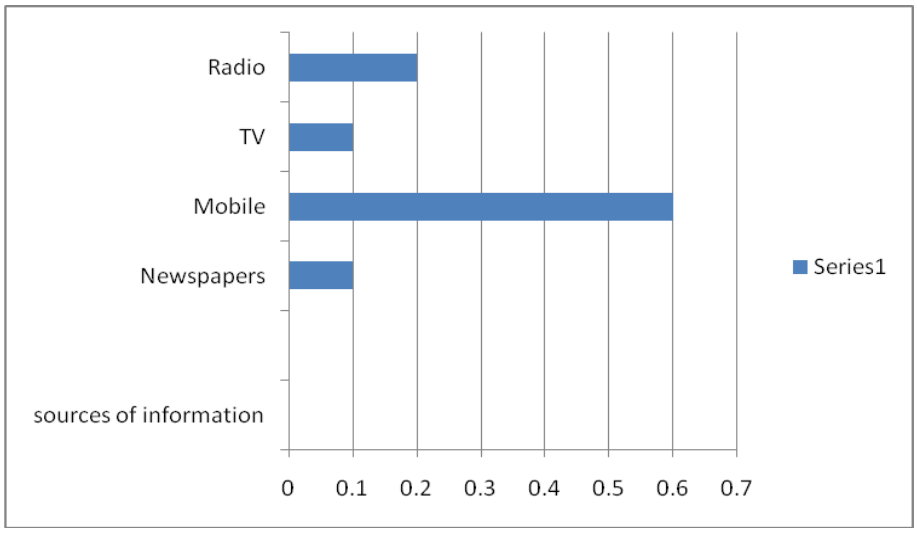
Collection and dissemination of information among women

1. Access to information centres to help provide information on agricultural



40% of the women had access to information through cooperatives on markets and places to sell crops. 60% had no access to information. Information is stored through books by cooperative clerks. None of the cooperstives had a computer.

Information sources



Most farmers interviewed accessed information through mobile and this accounts for 60%. The least used medium is the newspaper taking 10%. TV had 10% and radio 20%. 100% of the farmers said it was easy to disseminate information through phones.

Development of appropriate technology in the sector

Develop technologies to help improve yields

All the women interviewed agreed that technology was important in agriculture as it helped in increasing yields.

CHAPTER 5

Zambia is in a unique position to not only leverage agriculture as an engine for poverty reduction and improved nutrition, but to become the breadbasket of southern Africa. Relative to other countries in the region. Zambia has an abundance of fertile land, water, and a generally favorable climate for agricultural production. Moreover, Zambia has a large and rapidly growing urban population, which creates opportunities for rural-urban development synergies that may not exist in other countries. Despite these unique endowments, agricultural growth in Zambia remains stagnant, poverty rates in rural Zambia remain stubbornly high, at 68% of the population, and incidences of stunting, malnutrition, and wasting continue to disproportionately affect rural Zambians. This chapter explains the findings in chapter 4 on given scenarios.

Gender and age

All the respondents in the study were women. The majority of the women interviewed are those between 31 and 40 years giving 30% whilst the least are those above 61 years giving 10%. None of the women farmers was below 30 years. This entails that most young women do not take interest in agricultural related activities. This adds to traditional beliefs that suggest that farming is for men only. This simply means that the value of agriculture is not given to young women at ages between 20 and 30 thirty. Further it can be deduced from the evidence that most young women would take up other careers as opposed to farming. It is important therefore that young women be introduced to farming through social institutions in societies they live.

Highest education attainment

From the study it can be deduced that most women small scale farmers interviewed are those who only had primary school education. 60% of the women attended primary school and only 10% had tertiary education. This has a bearing on understanding modern farming techniques. Most agricultural inputs and applications are either in a foreign language, English for the case in Zambia or selected local languages. Having basics in reading therefore is key in agriculture so as to know best knowledge practices in the industry.

Farming bracket

All the farmers were small scale farmers giving (100% women small scale farmers). 70% of Zambia's population depends on agriculture. Women are the major players in the industry. The agricultural sector is key to the development of the Zambia economy and will be the engine of growth for the next decade and beyond. Agriculture generates between 18-20 % of the Gross Domestic Product (GDP) and provides livelihood for more than that 50 % of the population especially women.

Total annual income (In Zambian Kwacha)

In farming related activities, 2% of the women earned K1,000 to K10,000 in a year, 6% earned above K60,000 in a year. The majority which is 40% earned between K30,000 and K40,000 in a year through agricultural related activities. This simply means that women need to be trained in taking agriculture as a source of livelihood. Most women grow food to feed their families but its important to engage other stakeholders so that they start engaging women small scale farmers in this aspect.

Training in any agricultural related activity to help in increasing output for agricultural products

10 or 20% were trained whilst 40 or 80% where not trained in agricultural related activity to help in increasing output. Training in key in agriculture as the sector is dynamic. Training ought to be done continuously by stakeholders especially the government through extension services. A lot of women will benefit through such interventions. Training programmes need to be tailor made so as to suit the local needs found on the ground. The agricultural policy must therefore see to it that this aspect prevails in women farmers.

Support to women by government to access services

35 women or 70% received support from the government Support to women by government to access services whilst 15 or 30% did not. Government needs to ensure that agriculture packs are sent to all women groups through their respective cooperatives. Support in many areas such as pre and post harvest interventions need to be given to women. The agricultural policy must therefore see to it that this aspect prevails in women farmers.

Improved access to markets for women farmers

Maize was the crop most grown by women taking 80% followed by women who reared chickens taking 4%. There is a need for government to start engaging farmers to diversify crops as the traditional crop for most people in along the line of rail is maize. Policies need to be produced that will assist crop diversification.

70 % of the women said they lacked information on commodity prices whilst 20% said poor road networks made it difficult to access markets and 10% lacked storage facilities. Information is vital in the process as it enables farmers to find markets for their produce. Information has to be timely as well. Most produce from the farms is perishable in nature and thus the need for government to assist groups with storage facilities. Road transport plays an important role in agricultural development. This is because it is the major means of transporting agricultural produce from the farms to the markets as well as to various urban communities.

All the women interviewed said the setting up of floor prices by the government was not good as it affects their profit margins. The government in a bid to provide food security in the country must engage farming bodies in setting prices for products.

Availability and accessing to land among women for agriculture development

Of the women interviewed 25 or 50% were conducting agriculture on traditional land whilst only 10% had title. 15% was family land whilst 25% was co-owned with husbands. Land owernship is key as this has a bearing on production. Women need titles for their land anf the government must expedite the enaction of the land policy in Zambia. Women must also be given priority on land ownership.

Access to loans meant to boost agriculture

70% of the women had no access to loans whilst 30% has access to loans to boost agriculture. 100% of those that had access indicated that it was not easy to get loans from lending institutions. This translates to the fact that lending institutions in Zambia have a bias towards lending as they favour mostly large scale farmers. Government needs to look into re opening banks such as Lima Bank.

Access to agriculture inputs supplied by the government

40% of the women had access to agricutultural inputs supplied by the government through cooperatives. 60% of the women had no access to inputs. 100% of those who had access indiacted that it was easy to access inputs through cooperatives. The governmnet must continue to support women through cooperatives in proving farming inputs. Basic inputs such as fertiliser need to be priotised.

Collection and dissemination of information among women

40% of the women had access to information through cooperatives on markets and places to sell crops. 60% had no access to information. Information is stored through books by cooperative clerks. None of the cooperstives had a computer. However, ICT in agriculture offers a wide range of solutions to some agricultural challenges. It is seen as an emerging field focusing on the enhancement of agricultural and rural development through improved information and communication processes. In this context, ICT, used as an umbrella term encompassing all information and communication technologies including devices, networks, mobiles, services and applications; these range from innovative Internet-era technologies and sensors to other pre-existing aids such as fixed telephones, televisions, radios and satellites. E-agriculture continues to evolve in scope as new ICT applications continue to be harnessed in the agriculture sector. More specifically, agriculture involves the conceptualization, design, development, evaluation and application of

innovative ways to use ICTs in the rural domain, with a primary focus on agriculture. Provisions of standards, norms, methodologies, and tools as well as development of individual and institutional capacities, and policy support are all key components of agriculture. Women need to be supported in creation, storage and dissemination of information.

Information sources

Most farmers interviewed accessed information through mobile and this accounts for 60%. The least used medium is the newspaper taking 10%. TV had 10% and radio 20%. 100% of the farmers said it was easy to disseminate information through phones. Mobile phone usage in third world countries like Zambia is playing a vital role for the enhancement of farmers business towards agriculture. Recently, communication through mobile phones is considered very important in enhancing farmers' access to better understand agricultural market situation. Farming communities appreciate mobile phone as easy, fast and convenient way to communicate and get prompt answers of respective problems. Nowadays, the mobile phone has generated an opportunity for the farmers especially to get the information about marketing and weather. Through this important technology, they directly keep in touch with market personals and offer their produce with reasonable prices. The use of mobile phone also keep them aware for weather forecast for agriculture input application like fertilizer and pesticides which might be affected by unforeseen seen disasters as communicated by meteorological department. This device has given new direction and approach to farmers to communicate directly and share about recent advances with each other. Other media is important too but is less accessed by farmers. The government and other stake holders need to take advantage of this by providing information to farmers through mobile phones either through codes or online platforms.

Development of appropriate technology in the sector

100% of the women interviewed agreed that technology was important in agriculture as it helped in increasing yields. Advantages of technology in agriculture include expediting crop production rate and crop quantity, which in turn reduces costs of production for farmers and food costs for consumers, and even makes crops more nutritious and livestock bigger and meatier. Technology in agriculture produces benefits for small-scale farms and national farming operations alike. Government through its ministry and other auxiliary department must expedite policy implementation that will enhance access to technology by women farmers.

CHAPTER 5

CONCLUSION

The research concludes that the economic emancipation of women and economic development of small scale farmers is closely linked to their ability to good services for their agricultural business. This study provides evidence to the fact that indeed, the promotion and implementation of good agricultural policies can be a catalyst for spurning economic growth and development for women scale farmers in Zambia.

6.2 RECOMMENDATIONS

1. The research recommends that there is a need for financial institutions to bridge the gap for women to access credit financing. Financial institutions do not lack money to lend to low-income groups such women cooperatives. It is the perceived risks, rightly or wrongly associated with low-income people that pushes them away, rather than providing credit lines and financial support to financial service providers. Therefore, it is prudent that the following aspects be embedded in interventions aimed at empowering women. These include financial education, business development services, market information and product design.
2. The research recommends that there is need to increase the range of assets accepted as collateral by financial institutions, given that most women claimed not to hold assets or title deeds even in cases where they own houses or land, formalization of assets such as houses is a way to increase their acceptance as collateral by banks.
3. The research recommends that there is need to create a collateral registry bureau to enable increased confidence in the financial institutions acceptance of a variety of collaterals.
4. The research recommends that there is need to design financial products that respond to women´s business and individual cash flow problems. Well-designed credit guarantee lines can be used to increase credit to business women while reducing the risk of commercial banks to lend to women in agriculture.
5. The research recommends that all publicity and advertisements on agriculture services and products should emphasize that those products and services are suitable for both male and female clients. These messages should be tailored to address the needs that concern women and women farmers.

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