

**AN ASSESSMENT OF ROLES OF WOMEN IN AGRICULTURAL PRODUCTIVITY
IN MAZOWE DISTRICT WARDS 9**

**A dissertation submitted in partial fulfilment of the requirements of the Bachelor of
Agricultural Science Honour's Degree in Agricultural Economics and Management.**

Bindura University of Science Education

**Faculty of Agriculture and Environmental Science
Department of Agricultural Economics, Education and Extension**

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30 MAY 2023

RELEASE FORM

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I hereby certify that the research project, "An Assessment of roles of women in agricultural productivity in Mazowe District ward 9," submitted to the Department of Agricultural Economics, Education and Extension of the Bindura University of Science Education, is a record of original work completed by me Natasha Mufanawejingo Charity under the direction and supervision of Dr V T Munyati and that this work is submitted in partial fulfilment of the requirement

DEDICATION

My family is the inspiration for this dissertation. May God bless you?

ACKNOWLEDGMENTS

The researcher wishes to thank God for giving me life and for the numerous blessings he bestowed upon me during the research period. The project's manager, DR V T Munyati and Mr F Mujeri who gave the study direction, is also acknowledged by the researcher and thanked for his assistance. Special thanks should go out to all other lecturers from the Agricultural Department as well as everyone else who provided ideas and data for this study while the research study was being conducted. The Bindura University of Science Education class of 2023 agricultural economics and management students are also recognized by the researcher for their accomplishments. Last but not least, the researcher would like to thank her family and parents, Mr and Mrs Mufanawejingo for their financial and social support.

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ABBREVIATION AND ACRONYMS

AGRITEX	Agricultural Technical and Extension Services
FAO	Food and Agricultural Organisation
FIES	Food Insecurity Experience Scale
GDP	Gross Domestic Product
ZIMSTATS	Zimbabwe Statistical Organisation

Abstract

In many developing countries, women make major contributions to agricultural output, but their effort is typically disregarded and undervalued. The purpose of this study is to examine the obligations and contributions of women in Mazowe district to agricultural output. In Mazowe, this study uses a mixed-methods approach that combines household surveys, and key informant interviews to investigate how women participate in and influence crop production, livestock rearing, and other agricultural activities. The results demonstrate that women perform the majority of labor for important agricultural operations like planting, weeding, and crop harvesting. They are also primarily in charge of growing small animals and poultry that supply their households with nutrient-rich food and revenue. But when it comes to important productive resources like land, agricultural choices, and inputs, as well as the ensuing outputs and money from agriculture, males often have more control. The empowerment and productivity of women farmers are constrained by this. The results show that gender-sensitive policies and initiatives are required to increase women's access to productive resources, improve their technical skills, and aid in their agricultural endeavors. By recognizing and increasing the crucial roles played by women, it is possible to significantly improve agricultural output, food security, and rural lives in the area. Overall, this dissertation underlines how important it is for the agricultural and economic growth of Mazowe District to support women farmers. The background, methodology, findings, and conclusions of a research looking into the varied roles played by women in agriculture in the Mazowe District.

CHAPTER1: INTRODUCTION

The chapter's introduction includes the study's background, problem description, objectives, and research questions. This chapter contains the research question, the study's relevance, its range and bounds, and its structure. After the chapter's conclusion, a summary is provided.

1.1 Background of the study

Over 70% of the population is employed in agriculture, which supports Zimbabwe's economy and makes up a sizeable portion of its GDP (Mabugu, Maisonnave et al. 2023). Smallholder farmers are mostly female. Who are the main individuals in charge of the agricultural sector? (Monkwe, Gxasheka et al. 2023) The specific roles that women play in agricultural production and how these roles affect overall productivity have not received much attention from studies, despite the enormous contribution that women make (Owoicho, Sennuga et al. 2023).

Women in agriculture have more difficulties than males do. These difficulties include having less access to resources that can be used to produce goods, such as land, inputs, credit, and information. The output and productivity of women are negatively impacted by these disparities. The production, processing, and marketing of agricultural products are all areas where women play numerous and important roles(Elias, Zaremba et al. 2023)

Women in agriculture have a variety of responsibilities that give them access to significant indigenous knowledge about agricultural productivity, resource management, and coping mechanisms (McKune, Borresen et al. 2015) Policymakers and development partners can create focused interventions to boost productivity by better understanding these gendered roles, particularly as they pertain to women (Farnworth and Colverson 2015). Reduced gender gaps in agriculture could increase production and improve food security, according to research from several African countries, including Uganda, Tanzania, and Ethiopia (Ruel, Quisumbing et al. 2017). The relationship between women's roles and agricultural output must be studied in the context in which it occurs.

This study aims to assess the roles that women play in agricultural production in the Mazowe district and how these roles affect overall agricultural productivity. Historically, Mazowe District is well known for growing maize and citrus .Most of the people their lives depend on agriculture as their source of income. The findings of this study may assist policymakers and

development partners in implementing gender-sensitive policies to support the agriculture sector in Mazowe and similar regions of Zimbabwe.

1.2 Problem statement

Women typically have less access to resources and opportunities and their output was still below what it could be. Women play an important role in agriculture, but they face several challenges that limit their production and income. (Achandi, Mujawamariya et al. 2018). Due to a lack of understanding in our society, women's duties have not been recognized. Nations' different educational systems reflect their deeply ingrained traditions and ideas in their ideological, political, economic, and sociocultural contexts. The women have a wide range of different types of property. Women in our country do not have the same rights as men when it comes to owning property (Gateru 2016).

In Zimbabwe, women confront several obstacles that reduce their agricultural output and income. The restricted availability of resources like land, credit, and technology as well as prejudiced societal norms and cultural customs some of these challenges prohibit people from taking part in decision-making processes (Perez, Jones et al. 2015) and (Ochieng 2015) .The productivity of women in the sector is further impacted by climate change-related issues including droughts and floods (Yesintu and Kantu 2015). Furthermore, the dominance of men in many income-generating industries has a substantial influence on women's economic empowerment.

Inequalities between men and women in Zimbabwe's agricultural sector are further exacerbated by the failure to acknowledge women's contributions to agricultural production and food security (Jones, Holmes et al. 2017). They face more constraints than men in productive activities, including limited access to resources and opportunities. Oftentimes, women's contributions to agriculture are undervalued and overlooked, which restricts their access to resources and opportunities to raise the production of the industry (Assan 2014).

With full access to resources women have proven they can dramatically improve productivity and increase household food security (Ogato 2013). But realizing women's full potential in agriculture ultimately requires dismantling discriminatory social norms and empowering women with more equitable rights and greater influence over their lives and livelihoods. Investing in women is investing in the overall progress of communities and the agricultural sector.

Since it's crucial for the industry to increase the productivity of women, attaining sustainable development objectives and lowering poverty and hunger, the issue of gender disparity in agriculture in Zimbabwe has important economic ramifications. As a result, it is critical to address gender inequities in Zimbabwean agriculture and provide women with the tools they need to fully contribute to the sector's production.

1.3 Research question

The study addressed the following research questions:

1. What measures and strategies can be put in place to improve the contributions of women farmers to the economy of Zimbabwe?
2. What are the obstacles that young women farmers have encountered in their contribution to agriculture?
3. Does agriculture help to improve household food security status of the rural young women in Mazowe District

1.4 Objectives of the study

1.4.1 Main objective

To assess the contribution of women to household income.

1.4.2 Specific objectives

1. To assess household food security status of female headed households.
2. To assess the constraints faced by women in agricultural productivity.

1.5 Research hypothesis

There is a significant level between roles of women in agriculture and agricultural output.

1.6 Significance of study

More than half of the population is made up of women, and their cooperation in fulfilling the nutritional requirements of their families is critical. However, society didn't pay them as much attention. As a result, the purpose of this study was to provide light on how women fill the gap in family food production in agriculture. The study's findings could have a big impact on how decision-makers approach developing programs that are gender sensitive by giving

them useful information about how women are viewed in agriculture, other fields, and the workload. Finally, it raises awareness of the role performed by women and how important their contributions are among the general public.

1.7 Scope of the study

This paper will concentrate on the obstacles women in Zimbabwe's agriculture encounter that restrict their production as well as the effects of gender inequality on agricultural output. The study will use a mix of qualitative and quantitative data collection methods. The study will take place in one of the irrigation areas in Mazowe District (Negomo irrigation Scheme, where agriculture serves as the primary industry for employment and income generation.

1.8 Limitation of the study

The sample size is the study's primary flaw because it will be conducted in one of the irrigation schemes in Mazowe District. The study's results might also be constrained by the cost involved in quantity, quality, and possibility of bias in the data gathering and processing.

1.9 Organization of the study

Chapter 2 offers reviews of the theoretical and empirical literature. Chapter 3's primary focus is on the techniques and processes employed to carry out the study. The descriptive statistical analysis of the data is presented in Chapter 4, followed by the econometric estimation and discussion of the results. Chapter 5 summarizes the study's results and policy recommendations

CHAPTER 2:LITERATURE REVIEW

2.0 Introduction

This chapter reviews the literature that is pertinent to the study issue. This study includes definitions for important words, information on Zimbabwean women's responsibilities, and difficulties faced by women in agriculture. The examination of the many empirical investigations conducted on the same topic, a theoretical framework, and an insight from the literature section all serve to highlight the various research gaps that have been identified.

2.1 Definition of terms

2.1.1 Agricultural productivity

Agricultural productivity is a measure of the efficiency with which agricultural resources are used to produce agricultural output. It is a ratio of agricultural output to agricultural inputs such as land, labour, and capital (Rada 2013). A farm, a region, or a country can all be used as levels of measurement for agricultural productivity. It is crucial for raising agricultural output, enhancing food security, and fostering economic development in many nations.

Infrastructure such as roads, irrigation systems, and storage facilities also influences agricultural productivity. Good infrastructure can enable farmers to access markets, transport their products, and store their harvests. Education and training can improve farmers' knowledge and skills in agricultural production and help them adopt new technologies and practices (Chopra, Magazzino et al. 2022)

There are several techniques to quantify agricultural productivity, including yield per unit area, labor productivity, and total factor productivity. A measure of agricultural productivity, yield per unit area shows how much is generated on each unit of land. Agriculture productivity is measured by the quantity of output produced per unit of labor input, or labor productivity. The efficiency with which all inputs are utilised to produce output is measured by the agricultural productivity metric known as "total factor productivity." (Alston and Pardey 2014)

2.1.2 Food security

When all people, at all times, have physical, social, and financial access to enough, safe, and nutritious food that satisfies their dietary needs and preferences for an active and healthy life, they are said to be in a state of food security (Pérez-Escamilla 2017). Food security is a

multifaceted idea that includes aspects of food accessibility and availability as well as its safety, quality, and cultural acceptance (El Bilali, Callenius et al. 2019). Food access, utilization, availability, and system stability make up the four pillars of food security. (Savary, Bregaglio et al. 2017)The quantity and calibre of food that is produced and imported are referred to as food availability.

At various scales, including the individual, household, and national levels, food security can be assessed. The incidence of stunting, wasting, and obesity as well as the Food Insecurity Experience Scale (FIES) are the most often used indicators of food security.

Exists once everyone, at all times, has physical, social, and financial access to enough, safe, and nutritious food that satisfies their dietary needs and food choices for an active and healthy life. This idea is applied to families at the level of the household, where the main concern is for the people living there (Pérez-Escamilla 2017).

2.1.3 Gender.

The social and cultural roles associated with gender, expectations, and responsibilities assigned to men and women in society or gender is a social construct that varies across cultures and over time. Social, cultural, and economic variables influence gender roles, which are frequently reinforced by laws, policies, and organizations. (Bradshaw, Castellino et al. 2017). The opportunities and limitations that men and women encounter in society are influenced by gender roles, which also have an impact on their access to resources, authority, and decision-making. Gender examines the differences in how men and women acquire resources, meet their needs, and live their lives. (Owoicho, Sennuga et al. 2023)

2.1.4 Household income

Household income is the total amount of money earned by all members of a household from all monetary sources, such as salary, wages, self-employment income, pensions, and government transfers (Berg 2015). Household income is a critical measure of economic well-being, as it determines the ability of household's to meet their basic needs and improve their standard of living. Household income can be measured at several levels, such as the individual, household, or governmental levels.

The sources of household income might range from labor income to capital revenue to transfer income to remittances. The most frequent source of household income is labor

income, which includes self-employment income as well as wages and salaries. Income from investments, such as dividends, interest, and rent, is referred to as capital income.

2.2 Patriarchy nature of agriculture

In both practice and culture, agriculture has traditionally been a male-dominated industry. Historically, males have made up the majority of farm workers and farmers, with women typically taking care of the home. This patriarchal structure, which is strongly ingrained in agriculture, has impacted gender roles and social conventions in rural communities.

Patriarchal values can also be found in farming environments and methods. The development of agricultural machinery further entrenched the gender divide of labour within the home, as tools and machines have been built with males in mind (Iregui-Bohórquez, Melo-Becerra et al. 2020). The majority of physically demanding, time-consuming, and tedious tasks were typically performed by women. Tractors, plows, and other tools were created with men in mind, but jobs deemed more suitable for women were thought to be labour-intensive and physically demanding (Glover and Kusterer 2016). These gendered equipment and environments are now widespread in agriculture, yet they actually reflect and reinforce patriarchal views.

The patriarchal system in agriculture fosters unequal power relationships that disadvantage and stigmatize women. Women are underrepresented in the agricultural sector and encounter major barriers to land ownership, financial stability, educational opportunities, and employment in the agricultural sciences (Tukahirwa, Mugisha et al. 2022). Patriarchal beliefs that associate farming with males and domestic work with women are to blame for the marginalization of women in agriculture (Mudege, Mdege et al. 2017). In order to change these deeply embedded patriarchal structures, it will be required to challenge traditional gender norms and promote women's empowerment in all parts of farming, from the fields to research institutions to leadership.

In Zimbabwean society, which is a patriarchal one by nature, there are obvious and distinct gender roles, and people live their lives in accordance with these roles. In traditional African countries like Zimbabwe, a woman is thought to have her place in the home, where she is limited to taking care of the home and children while the man roams the streets looking for work (Cumber and Tsoka-Gwegweni 2015). In other words, a woman tends to and nurtures the family and the home while a man serves as the head of society.

In the agricultural industries, gender discrepancies are a typical occurrence. Men are much more likely than women to be technologically savvy and to take on risky business initiatives. (OGALLO, WAMBUA et al. 2022). The patriarchal nature of many African communities is typified by this. Women and children make up the family labour pool, but men continue to wield the power of decision-making (Antwi-Agyei, Stringer et al. 2014), which is not optimal for households' ability to produce food efficiently. Sadly, women must provide for their families by putting food on the table but their ability to make decisions is constrained by the patriarchal nature of the society they live in.

Women are frequently side lined and excluded from decision-making processes despite their contributions. More than half of all agricultural workers worldwide are women, but they only receive 10% of all government agricultural subsidies. In many nations, males work on big farms that generate the majority of the food consumed by urban populations, while women cultivate small plots of land with low output (Agarwal 2014). Due to this unequal access to land, female employees earn less money and are more likely to be exploited by employers (particularly while working in hazardous situations).

There is a need for more inclusive approaches that take into account gender equality issues within these fields while also recognizing how they differ between rural and urban areas, as women typically have less access than men to education or training programs specifically relating to agriculture. The productivity of agriculture is significantly influenced by women. Even though women constitute nearly half of the world's population, their involvement in agriculture has long been undervalued. There are several reasons for this, including rigid gender norms and patriarchal cultures that place a higher priority on females.

The inclusion of women in agricultural projects, however, has been demonstrated in recent research to boost productivity on farms all over the world. The explanation for this is straightforward: women are clearly more knowledgeable than men about what makes food taste good or how to grow crops on land where nothing seems possible (or even edible). This is true of both cooking techniques and seed selection.

2.3 Women in agriculture in Zimbabwe.

Zimbabwe has an agrarian economy, with agriculture serving as the economic engine of the nation. Women are essential to the development of this sector because they account for the majority of smallholder farmers. In Zimbabwe, women do participate in agriculture, but there

are gender inequities and regulations that limit their productivity and overall contribution to the industry. This paper analyses the research on women in Zimbabwean agriculture, focusing on the obstacles they experience and the initiatives that have been put in place to encourage female involvement in this field (Jaka and Shava 2018).

Women have always had a quiet and minor role in agriculture in Zimbabwe, However, a new breed of young female farmers is beginning to make their presence known. Women have usually been the unseen faces of agriculture (Kaziboni 2018). Women from rural areas make up the majority of the agricultural work force in Zimbabwe. National Gender Profile of agriculture estimates that women in rural regions perform roughly 70% of the household work. Although women are powerful forces in the agricultural industry, they are often weighed down by home responsibilities including looking after young people, the aged, and the sick. Women face societal discrimination, fewer assets, such as land, are owned by them, and fewer of them have the collateral required by financial institutions to obtain loans. Additionally, it is nearly impossible to get financial facilities if you are not a landowner.

Due to farming's financial advantages, more young women are starting their own businesses and adding value to the agriculture sector. The world is changing; even the younger generation is starting to recognize how Africa is changing and how the business and money are currently in agriculture. In addition to raising crops and domesticating animals, more young women are now active in agribusiness value chains, a trend that increases economic value and career prospects (Ingram, Schure et al. 2014). The likelihood of finding employment is quite low because we live in a nation with a high unemployment rate, but we have the land and all the resources necessary to generate income, and the market will always exist.

The Zimbabwean government has over the years launched a number of programs to assist young people in agriculture. As a result, young women have shown an unprecedented increase in interest in the field. The southern African nation's economy is built on agriculture, which makes up a large portion of GDP. In order to close the gap in the nation's food supply and attain food security at the family level, the government believes that young people, especially young women, must be included in the agricultural sector.

However, it is still challenging for women in agriculture to receive financial institution support, and because it is challenging for young women to acquire credit facilities, they must

come up with alternative means of funding their agricultural endeavours. The government has also prioritized giving land to women and young people in recent years as part of its attempts to assure their full participation in economic development. To encourage female business owners.

The Zimbabwe Women's Microfinance Bank was established by the Zimbabwean government in 2018 with the express purpose of providing financial assistance to women and young people. By providing loans for diverse income-generating initiatives, the bank wants to help female business owners get past the obstacle of a lack of collateral that keeps many would-be female entrepreneurs from realizing their dreams. The World Bank estimates that closing the gender gap in agriculture may increase the yields of female-run farms by 20–30%, increasing the region's overall agricultural output by 2.5–4%.

2.4 The role of women in agricultural productivity.

Women have a crucial role in agriculture all throughout the world, while not frequently receiving credit for it. In underdeveloped countries, women make up about 43% of the agricultural workforce.(Human 2020) However, because of patriarchal societal systems and gender discrimination, women typically experience greater impediments to participation in agriculture and less access to resources than males.

All aspects of farming, including crop cultivation, animal care, food processing, and marketing, are carried out by women. Women "contribute substantial labour as unpaid family workers, wage workers, and self-employed workers in the production and marketing of agricultural goods,(Do Amaral Valèrio 2019). Unlike subsistence farming, which is traditionally controlled by males, food processing is typically controlled by women. Their labour is essential for ensuring household food security as well as for growing surplus crops for profit and commerce.

Many scholars notably contend that women make a sizable economic contribution. In the developing world, women generate more than 50 percent of the food, and in Africa, they may produce as much as 75 percent. In addition to being heavily involved in the storage, processing, and selling of food and cash crops, women are frequently in care of small animals.

Among the many roles played by women in agriculture include crop cultivation, animal management, and post-harvest tasks including processing and marketing (Abass, Ndunguru et

al. 2014). But they frequently do not get enough credit for what they do, and they get little help and support. Women's activities in agriculture are essential for the nutrition and food security of households (Smith and Floro 2017).

In subsistence agriculture, where they are in charge of planting, weeding, and harvesting crops, women play a vital role in agricultural production (Seleti and Tlhompho 2014) . A study conducted in Kenya by Kiptot and Franzel (2012), women's involvement in tree planting and management increased household income and enhanced food security (De Giusti, Kristjanson et al. 2019). Similar to this, Increasing women's access to resources, such as land, enhanced agricultural productivity and reduced poverty, (Meinzen-Dick, Quisumbing et al. 2019).

Women have a crucial role in post-harvest activities like processing and marketing agricultural products. Women's participation in agro processing activities raised household income and improved food security, a study by Kabeer et al. (2013) done in Bangladesh. Encouragement of women's participation in post-harvest work can also reduce food loss and improve

In addition to managing livestock, women are essential for feeding, watering, and milking animals (Patel, Patel et al. 2016). Women's involvement in livestock management was positively correlated with household income and increased food security. Women's involvement in livestock management can also have beneficial social and cultural effects, such as advancing gender equality and women's empowerment (Galiè, Teufel et al. 2019).

Women still face major inequities in agriculture despite their great involvement. Socially imposed gender stereotypes sometimes restrict women to manual work and agricultural help for male farmers rather than resource management or decision-making (Leder 2022) .Women experience disproportionate disadvantages when it comes to land ownership, access to agricultural supplies, financial services, agricultural extension services, and membership in farming groups, especially in developing countries. These obstacles result from patriarchal structures that control social, political, and economic aspects of life (Ragasa 2014).

There are numerous advantages to empowering women in agriculture. The crop yields, household food security, incomes, and bargaining power of women in communities are all improved when they have equitable access to resources and opportunities (Auma 2016) By eliminating the gender gap in agriculture, farm yields might rise by up to 30%, while the

world's hunger could drop by up to 17% (Agarwal 2018). Investment in women's access to resources, education, and skill development can considerably promote both gender equality and agricultural development.

Even if policies and programs encouraging women's empowerment in agriculture have gained popularity recently, systematic gender inequality still has to be eliminated. Women's empowerment in agriculture is an essential step toward just and sustainable food systems worldwide because they are both primary caregivers in their homes and communities and producers (Quisumbing, Heckert et al. 2021). When given equitable opportunity, women's leadership and decision-making can influence global agriculture practices to make them more productive, resilient, and nutrient-dense.

2.5 Constraints faced by women in agriculture.

Women in agriculture in Zimbabwe face various challenges that limit their productivity and overall contribution to the sector. Lack of access to useful resources, such as land, credit, and agricultural supplies, is one of the major problems (Mgbenka, Mbah et al. 2016). Women farmers in Zimbabwe often have limited access to land due to cultural and social norms that discriminate against women's land ownership (Mafongoya 2018). Moreover, women farmers have limited access to credit, which hinders their ability to invest in their farms and increase their productivity (Mafongoya 2018). In Zimbabwe, women farmers also struggle to obtain agricultural inputs like seeds, fertilizer, and pesticides, which prevent them from implementing innovative techniques and methods that could increase output.

Zimbabwean women who work in agriculture also struggle with an absence of extension services. In Zimbabwe, extension services are frequently dominated by men and do not specifically address the demands and difficulties that women farmers confront (Clarkson, Dorward et al. 2022). Additionally, since face-to-face contacts are so prevalent in Zimbabwe's extension services, they are less accessible to women farmers who may have restricted mobility as a result of cultural and societal convention (Chingombe and Musarandega 2021)

Women farmers in Zimbabwe are similarly disadvantaged by sociocultural norms. Women are more burdened by household responsibilities including child care, cooking, and cleaning, which reduces their time for work-related pursuits (Clarkson, Dorward et al. 2022). In communities and homes run by men, women also have less decision-making authority, which undermines their agency and control over resources (Sohail 2014). Studies have shown that

increasing women's agency and giving them equal voice in household decision-making can produce better results.

Another major barrier facing women is limited access to financial services. Due to lack of collateral and excessive interest rates, women have less access to formal loans. In addition, microfinance organizations favour lending to men who are regarded as "heads of households" (Hassanain 2015). Women are especially susceptible to predatory lending when they lack financial awareness.

2.6 Interventions to Promote Women's Participation in Agriculture in Zimbabwe

Numerous programs have been implemented in Zimbabwe to support women working in agriculture. The promotion of gender-equitable legislation and policies are one such intervention. The Gender Commission Act, which Zimbabwe approved in 2013, intends to advance gender equality in all spheres of life, including agriculture (Chabaya and Gudhlanga 2013). The Act calls for the creation of a Gender Commission, whose mandate is to advance and defend gender equality in all spheres of life, including agriculture.

Promoting women's access to economic resources like finance and land is another measure. The Fast-Track Land Reform Program, which aims to transfer land to formerly excluded groups, including women, is one program the Zimbabwean government has put into place to support women's access to land (Chiweshe 2016). Additionally, the Zimbabwe Women's Microfinance Bank was founded by the government to give women farmers access to credit so they can invest in their farms (Mazwi and Mudimu 2022)

Lastly, Zimbabwe has put into practice strategies that encourage women's involvement in collective action. In Zimbabwe, women farmers have created a variety of organizations, including cooperatives and self-help groups, which give them access to resources that are productive, including land and credit, and allow them to discuss issues and come to choices as a group (Moyo et al., 2018) (Fletschner and Kenney 2014). Additionally, these organizations give women farmers a platform to access extension services and gain the information and skills necessary to embrace cutting-edge methods and technology.

2.7 Empirical review

Women's contributions have recently been quantified in a number of studies. According to a research conducted in Ghana, women produced 60–70% of the food crop labour and

generated 50% of the household revenue. Women provide 55–66% of household income from agricultural activities, according to research in Bangladesh, Nepal, Pakistan, and Tanzania (Poulsen, McNab et al. 2015) These data demonstrate that women's involvement in agriculture provides households with vital revenue, which frequently translates to higher expenditure on things like food, education, and healthcare.

Additionally, it was shown that female-headed families in sub-Saharan Africa had agricultural output that was 20% – 30% lower than that of male-headed households, which had a detrimental effect on their ability to access food (Mishra, Khanal et al. 2017). However, a study conducted in Ethiopia indicated that families headed by women had greater food security than normal homes, which was ascribed to women's significant contributions to the preparation and purchase of food for the household (Gebre, Isoda et al. 2021) Further study is necessary to fully comprehend the complexities of women's agency and empowerment in various circumstances as a result of these discrepant results.

An increasing corpus of studies has shown how important a role women play in farming, caring for animals, and processing food, particularly in poor nations (Reisch, Eberle et al. 2013). But in agricultural jobs, women experience greater barriers and burdens. In comparison to males, they frequently have poorer access to resources including land, loans, and extension services (Reisch, Eberle et al. 2013). Additionally, they are responsible for a larger proportion of domestic and caregiving duties, which reduces the amount of time they have available for agricultural work (Khraise 2020). According to research conducted in various African nations, including Uganda, Tanzania, and Ethiopia, decreasing gender disparities in agriculture could boost productivity and enhance food security (Wudil, Usman et al. 2022) Context-specific research on the connection between women's roles and agricultural output is required.

In agricultural communities, gender inequality has a severe negative influence on women's livelihoods and wellbeing. Women face time and energy demands that might have a negative impact on their health and limit their free time and social interactions (Jabeen, Haq et al. 2020). Women's productivity and income-generating capabilities are also limited by a lack of resources and agricultural training (Roy, Prakash et al. 2022). Numerous studies Crop yields, food security, and women's empowerment could all increase if the gender gap in agriculture were to be closed. (Rawe, Tank et al. 2015)

Gender disparity one of the most important problems society face today is gender disparity. Numerous aspects of gender inequality have been documented empirically, including lower educational achievement for girls, restricted access to healthcare, and lower employment rates for women. The yearly Global Gender Gap Report (Sharma, Chawla et al. 2021) examines how well nations are doing at closing gender gaps, which include those in political empowerment, educational attainment, health and survival, and economic involvement.

Women play a critical role in ensuring household food security in Zimbabwe. A study by (Sharma, Chawla et al. 2021) assessed women's contribution to household food security in Zimbabwe, it was found that women significantly contributed to household food security by growing food for both consumption and sale. The study emphasizes the significance of women in agriculture because they are in charge of about 70% of the agricultural work in Zimbabwe.

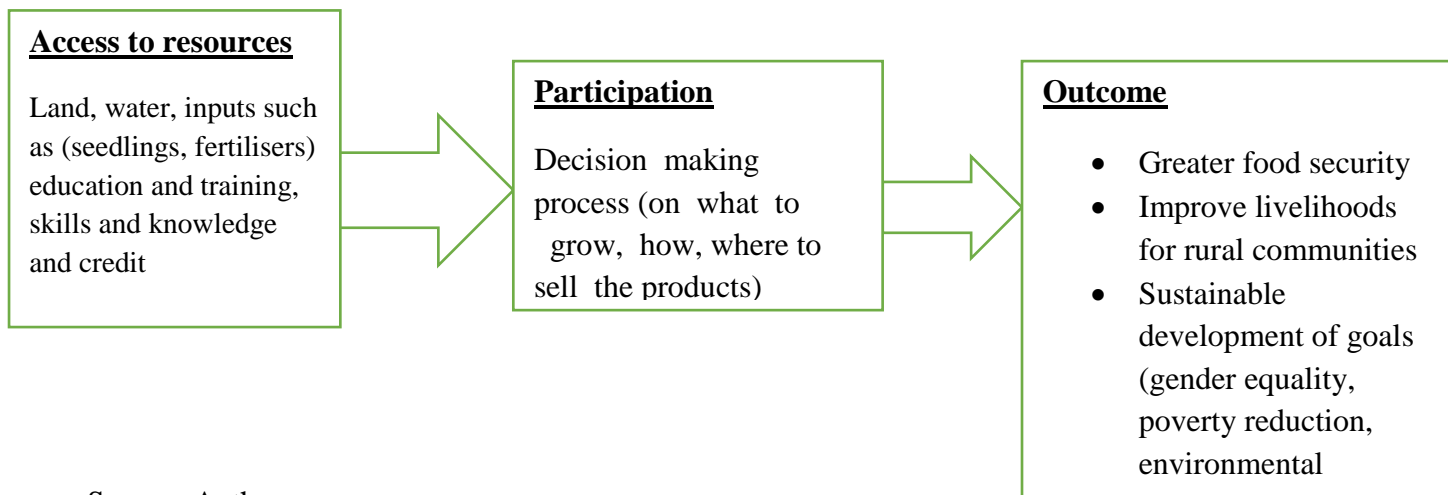
The creation of measures to aid female farmers is receiving more attention. In some situations, microfinance initiatives, cooperatives, and programs to give women ownership of agricultural assets or land titles have demonstrated promise (Woldu and Tadesse 2015). To satisfy the needs of women and take into account the power dynamics in communities that can reinforce gender barriers, these programs must be properly crafted (Kieran et al., 2015) (Sachs, Barbercheck et al. 2016). In policy and program design, women's voices and leadership should be more fully included, according to researcher (Davis and Maldonado 2015). They also advocate for more comprehensive strategies that lessen the home responsibilities of women by funding essential infrastructure like electricity, transportation, and childcare (Patel 2019).

Finally, call attention to the significant issues caused by unequal access to resources and opportunities. Due to cultural norms that favor men's farm ownership and control, women in Uganda and Tanzania reported not having access to inputs including fertilizers, better seeds, and agricultural equipment (Peterman, Behrman et al. 2014). Women farmers in nations like Burkina Faso, Nepal, and Pakistan have also been said to face obstacles due to lack of access to loans, training, and extension services (Croppenstedt, Goldstein et al. 2013). By overcoming these barriers, women's agency in agricultural decision-making and output can be greatly increased, as can food security and economic prosperity.

2.8 Conceptual framework

The conceptual framework presented the relationship between access, participation, and outcomes for women in agricultural productivity. The framework is based on the premise that access to resources and participation in decision-making processes are critical components shaping women's role in agricultural productivity.

Figure 1: Conceptual framework



Source: Author

How much women can increase agricultural output depends on their access to resources like land, water, and inputs. Women's access to resources is a major barrier to their engagement in agriculture, according to a number of studies (Theis, Krupnik et al. 2019). The ability of women to participate in agricultural activities is also influenced by their access to education and training, which enhances their knowledge and skills and increases their contribution to agricultural productivity.

The level of women's participation in agricultural decision-making is referred to as participation. It is commonly acknowledged that women's participation in decision-making processes plays a crucial role in influencing both their access to resources and their contribution to agricultural output. Women who participate in agricultural decision-making tend to have more ownership and control over resources, allowing them to make more significant contributions to agricultural output (Woldu and Tadesse 2015)

Women's participation in agricultural productivity has many different effects. Women's engagement can increase agricultural output, increase food security, and improve rural communities' quality of life. Achieving sustainable development objectives, such as gender equity, poverty reduction, and environmental sustainability, might benefit from women's

engagement. Institutional barriers, cultural expectations, and gender stereotypes can also limit women's participation and affect the results of their involvement in agricultural operations.

2.9 Research gap

Few studies on female participation in agricultural production place as much emphasis on men as they do on men. This strategy ignores the distinctive contributions that women bring to agricultural production, such as their involvement in activities that support household income, food security, and other aspects of agriculture's sustainability.

2.10 Summary of chapter

The chapter examined the literature review. The theoretical framework came first, then the definition of terms. The next part was empirical. Following the empirical framework, methodological concerns and literary understanding were discussed. The conceptual framework brought the chapter to an end.

CHAPTER 3: METHODOLOGY

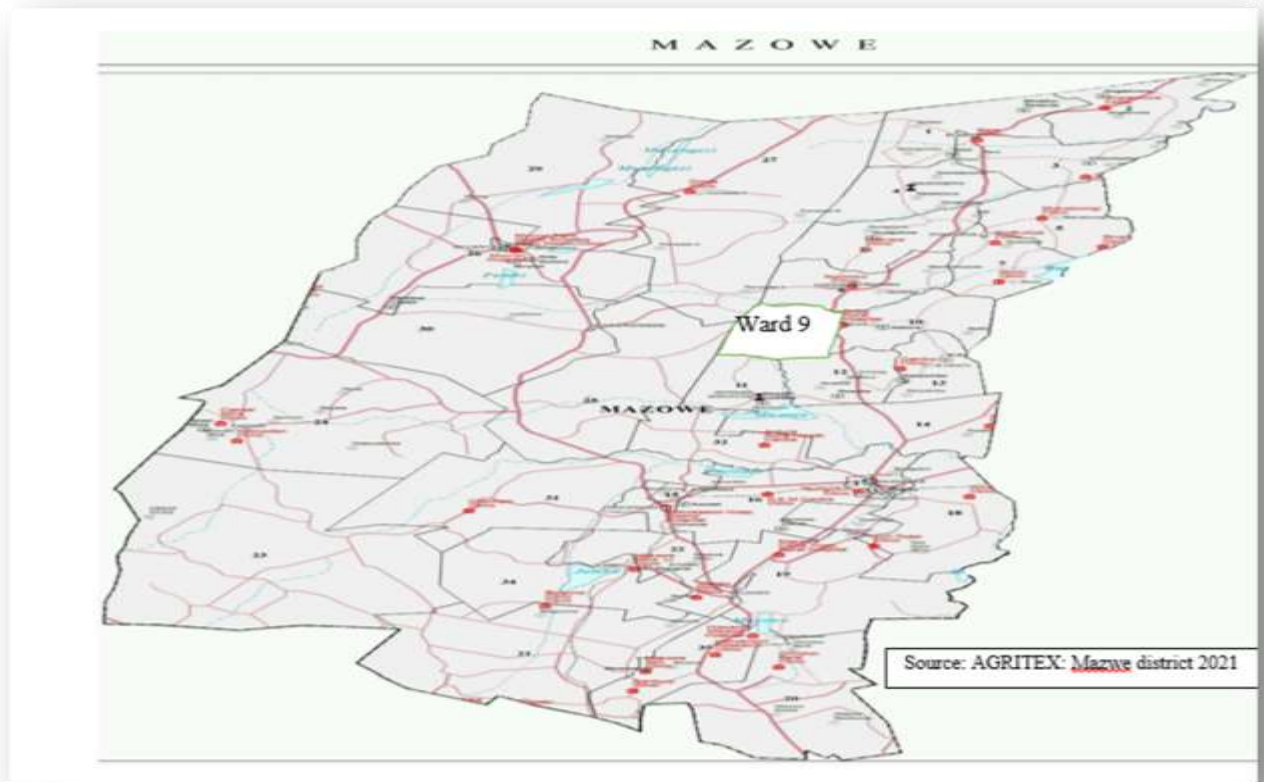
3.0 Introduction

This chapter describes the strategies and tactics applied to accomplish the specified goals. It lists the different data sources, categories, and analysis techniques that were employed. The

first section describes the study area followed by the data collection section, sampling and the model used in data analysis. Other data analysis tools are covered in the final section.

3.1 DESCRIPTION OF THE STUDY AREA

Figure 2: Mazowe district map, ward 9



Source: AGRITEX Mazowe District 2021

Mazowe District is approximately 80 kilometres from the capital city Harare. Mazowe falls in natural region 2 which has an average annual precipitation of 800 – 1000mm that falls from November to March. Average temperature range between 15° C to 35° C in the summer season (Moyo 2014). The population density is 63 people per square kilometre. The economic activities of Mazowe District are mainly crop farming and livestock keeping. The district is in a semi-intensive farming area, with major agricultural activities including cultivation of maize, tobacco, cotton, beans and horticultural products. Cattle ranching and small-scale mining also contribute to the economy of the district. The district has fertile agricultural land, especially along the river valleys. Major crops grown include maize, tobacco, cotton, sorghum, millet, sunflower and various horticultural crops. Mazowe area is dominated by *Julbernardia globiflora*, *Brachystegia* spp, *Acacia* spp and *Combretum* spp

3.2 Research design

The researcher measured the estimations, facts, ideas, views and quantifiable data pertaining the role of women in agricultural productivity in Mazowe District. Both qualitative and quantitative methods were used in the study's data collection and analysis processes. The analysis for this descriptive study will be done using numerical values. The study was a survey that was done to gather information using structured questionnaires and interviews with agricultural extension officials and women in agriculture in the district.

3.3 Sampling procedures

The study was based on the role of women in agriculture so purposive sampling was used to choose ward 9. As it was the ward with a well-known irrigation scheme called Negomo irrigation scheme. Negomo irrigation scheme was purposively sampled because of the number of women involved in agriculture, most women in the district benefit from the irrigation as it reduces food insecurity, household income and improve standards of living. A list containing a total of 57 women farmers was attained from AGRITEX. The Slovin's formula was used to calculate the sample size requirement for the study (Susanti, Soemitro et al. 2019). The Slovin's computations revealed that the sample size was 50 smallholder farmers. Purposive sampling was used to come up with 50 farmers from the list from AGRITEX. The women were purposively selected based on their participation in agricultural productivity and their availability.

Equation 1: Slovin's formula for sample size determination

$$n = \frac{57}{1+57(0.05)^2} = 50$$

n = sample size

N = population size

e = confidence level (95%)

The researcher will select the farmers they believe will contribute to the topic under consideration. This sampling method is judgemental in its approach. Following the usage of the purposive sampling method, the convenience sampling method was also utilized to select the respondents. Based on their expertise and experience in the agriculture industry, respondents were chosen. Convenience sampling was utilized because there is a high

likelihood that people chosen will have information that is extremely pertinent to the subject being studied.

3.4 DATA COLLECTION METHODS

The study was a descriptive survey designed to determine how women affect agricultural output. In order to ascertain the current state of that population with regard to one or more variables under inquiry, survey research entails posing questions, collecting, and analyzing data from a sample of ostensibly representative members of the population at a single point in time.

3.4.1 Primary data collection methods

Individual household interviews were used to gather primary data, with questionnaires serving as the primary data collecting tool. Focus groups were also used to get primary data. Structured and open-ended questions were both included in the questionnaires that were created. A professional extension officer from AGRITEX who has more knowledge about farmers helped administer the questionnaire.

3.4.2 Survey questionnaire

Prior to the survey the questionnaire was pretested and questions that were not clear were rephrased. In addition, authorization was requested from the ward chairperson, Councillors, chief and Department of AGRITEX. Door to door interviews were undertaken in March 2023. To gather primary data from respondents, a structured questionnaire with both closed-ended and open-ended questions was used. 50 randomly chosen ladies take part in Negomo irrigation scheme were interviewed at their homestead by the researcher with the assistant of the extension officer from AGRITEX which makes it easier to communicate with farmers.

3.4.3 Passive observation

The research's data collection techniques included both active and passive observations. It was the researcher's subjective assessment of the physical infrastructure present in the study area, with particular attention paid to the road's condition, the type of fields, the accessibility of nearby markets for food, the availability of water sources, the availability of trucks for hire, equipment, and the proximity of agro-based stores that supply farmers with inputs.

3.4.4 Secondary data collection methods

Secondary data is information that has already been obtained and reviewed by another entity (Alio, Angioni et al. 2019) For the most recent information, the researcher looked at

both published and unpublished books, dissertations, theses, journal articles, research papers, and reports. Examining the literature supports the use of various models of data analysis elsewhere and also helps create the foundation for the research endeavour. Its conclusions can be used to discover knowledge gaps(Booth, Sutton et al. 2021)

3.5 Data analysis framework

Qualitative data was analysed using descriptive statistics (frequencies, means, standard deviation, and percentages). Microsoft Excel, Stata, and SPSS were utilized for the study's data processing and analysis. Data consistency and information quality, such as mistakes, were checked as part of the cleaning process.

The goals and the analytical tool that will be applied to them are listed in the table below. Quantitative data will be analysed using an econometric model, while qualitative data will be analysed using descriptive statistics.

Table 1: Analysis methods by objective

Research	Research Questions	Type of data	Analytical tools
-----------------	---------------------------	---------------------	-------------------------

objectives			
To assess the contribution of women to household income	what measures and strategies can be put in place to improve the contribution of women farmers to the economy of Zimbabwe	Identified the importance of women in livestock production, time spent working on farms, education level, age, and gender	Descriptive statistics
To assess the household food security status of female headed household	Does agriculture helps to improve food security status of the rural young women in Mazowe District	Primary data of type of food consumed, availability of food, output produced be able to feed the family, availability of food consumed.	Binary logistics
To assess the constraints faced by women in agricultural productivity	what are the obstacles that young women farmers have encounter in their contribution to agriculture	To identify the constraints faced.	Likert scale

3.6 Model specification

3.6.1 Objective 1: to access the contribution of women to household income

Descriptive statistics

The contribution of women to household income was determined using descriptive statistics, specifically frequencies and percentages. In order to assess the kinds of tasks carried out by women in the field, the kinds of crops grown, the amount of time spent in the field compared to at home, and the size of the land.

3.6.2: to access the household food security status for female headed households

Binary logistics

This study will utilize binary logistic regression to assess the factors influencing the household food security status of female-headed households. The dependent variable is the household food security status, coded as a binary variable where 1 represents food secure household and 0 represents food insecure household. The independent variables include both socioeconomic and demographic characteristics of the household.

Socioeconomic variables include the age of the household head, number of meals consumed per day, output produced able to feed the family until to the next season, household income, household size, and access to land, engagement in non-farming occupation, higher household income. Lower chance of household food insecurity is correlated with smaller household sizes. The likelihood of food insecurity in the home is shown to be lower among female household heads who are currently married or cohabiting. More young children in the home increase the likelihood of food insecurity. Living in rural locations increases the probability of experiencing food insecurity.

The model specification of the binary logistic regression is as follows:

Equation 2: Binary logistics regression

$$\text{Log (odds of being food secure)} = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n$$

Food security = β_0 + number of meals consumed + access to land + access to credit + food satisfaction + output produced able to feed the family + missed any meal per day

Where X_1 = number of meals of consumed,

X_2 = access to land

X_3 = access to credit

X_4 = food satisfaction

X_5 = output produced able to feed the family

X_6 = missed any meal per day.

3.6.3 Objective 3: to access the constraints faced by women in agriculture

Likert scale

The researcher utilized this scale to evaluate the challenges faced by women in agriculture in Negomo irrigation scheme in Mazowe District 9. Access to credit, supply of labour, technology, educational level, lack of access to extension services, lack of markets, dual role at farming, male dominance, lack of access to information communication and technology were among the challenges that were highlighted.

The constraints faced by women in agriculture were determined using a five-point Likert scale. On a five-point numerical rating scale, one key informant was asked to assess the difficulties the farmers were facing in the interview guide:

1= strongly disagree

2= disagree

3= undecided

4= agree

5= strongly disagree

The key informant was expected to use a ranking numeric according to the scale against each constraint in the given table of the listed constraints.

3.8 Research Ethics

The rights of participants to privacy, secrecy, anonymity, and informed permission, among other rights, were observed as a result of the knowledge gained regarding research ethics. The names of participants were not included in questionnaires or interviews in an effort to protect their right to anonymity; instead, respondents or participants were identified by numbers (e.g., participant or respondent 1). Participants had to provide their consent before any sort of coercion was used to get them to take part in the study; gifts or money were also not used as a form of coercion to get individuals to take part.

3.9 Summary of chapter

The research approaches used for the study were examined in the chapter. The study area's description and sampling-based data collection techniques were covered in the first section. The framework for data analysis was examined in the final section.

CHAPTER 4: DATA PRESENTATION AND DISCUSSION

4.0 Introduction

This chapter examines the presentation and analysis of the research project's findings. It examines the economic and descriptive analysis of analyses. The mean, percentages, bar graphs, and frequency distribution were used to analyse the descriptive data. There is also a section where the outcomes are discussed.

4.1 Presentation of summary respondents characteristics

The distribution of the respondents' demographic and economic traits is presented in the next section.

4.1.1 Distribution of demographic characteristics

Table 2: Summary of demographic characteristics

Demographic Characteristics	Percent
Gender	
Female	100
Position in the household	
Mother	100
Marital status	
Single	10
currently married	70
separated/divorced	10
Widowed	10
Level of education	
No formal education	6
Primary	10
Secondary	70
Tertiary	14

Source: survey results 2023

All the respondents are females and mothers. This indicates the data is focused on an important on the role of women in agriculture- mothers, who play a key role in families, generating income and society. 100% of the sample population is categorized as "Mother," indicating that the data is specifically focused on the perspectives and experiences of mothers. The majority (70%) of the mothers are currently married. There is a sizable percentage (10%) of single, separated/divorced or widowed mothers. The data may reveal the unique challenges these subgroups face and how to provide targeted support. The majority of respondents have completed secondary education (70%), while smaller percentages have completed tertiary education (14%), primary education (10%), or have no formal education (6%).

Table 3: Descriptive summary of demographic information

Factor	Minimum	Maximum	Mean
Age	1	4	2,60
Hours worked at home	1	6	3.34
Hours in the farm	1	7	3.44

Source: survey results 2023

The age range for the minimum value 1, is from 18 to 29 years old. The greatest number, 4, corresponds to a range of ages greater than 50 years. The average age of the population under study is between 30 and 39 years old, according to the mean value of this factor, 2.60. The lowest value for the element Hours worked at home is 1, which equates to working two hours from home. The maximum value, 6, equates to eight hours of at-home work. The median value of this factor is 3.34, which indicates that 3 to 4 hours are typically spent working from home each day. The minimum number of hours in the farm is 1, which equals two hours of work. The maximum value is 7, representing eight hours of effort on the farm. The average value of this element is 3.44, which indicates that 3 to 4 hours are typically spent working on the farm each day.

4.1.2. Distribution of institutional factors

The institutional features of the respondents in the study region are summarized and described in Table 4.

Table 4: Land size

Factor	Minimum	Maximum	Mean
Land size	1	6	3.58

Source: survey results 2023

This element must have a minimum value of 1, or 0.2 hectares, to be considered. The maximum value is 6, which equals 2.5 hectares of land. The average value of this element is 3.58, which is equivalent to a plot of land measuring roughly 1 hectare.

4.1.3 Description of the economic factors

Table 5: Description of the economic factors

Factor	Percent
Type of activities done	
Weeding	88
chemical application	50
Harvesting	82
Post harvesting	80
Types of crops grown	
Maize	100
Groundnuts	72
Beans	78
Potatoes	18
Vegetables	60
Sweet potatoes	58
cattle's	28
Goats	14
Chickens	24

Source: survey results 2023

According to the data kind of activities element, a significant portion of participants (88%), harvesting (82%), and post-harvesting activities (80%) were reported. 50% of participants

mentioned using chemicals. This data indicates that these tasks are typical and significant components of agricultural activity. Types of crops grown component, maize (100% of all crops grown) is the most typical crop, followed by beans (78%), groundnuts (72%), and vegetables (60%). Participants produce potatoes, but only 18% also grow sweet potatoes. Few participants (less than 30% for each animal group) cultivate livestock, which includes cattle, goats, and chickens. With the help of this knowledge, residents at the Negomo irrigation project can better understand the agricultural methods and prospective food sources used by their community.

4.1.4 Distribution of household food security status.

Table 6: Types of food consumed during the last 4 weeks

Factor	Percent
Types of food consumed	
Sadza	100
Vegetables	72
Sweet potatoes	52
Beans	38
Meat	44
Bread	30

Source: survey results 2023

The information shows the proportion of various food items a group of people consumed. Sadza is the food that is consumed at the greatest rate (100%) and may be a staple in this population's diet. vegetables was second with a rate of 72%, which shows how vital vegetable are to their diet. A sizable majority of the group also eats beef (44%) and sweet potatoes (52%) regularly. Conversely, a smaller proportion of the population consumes bread (30%) and beans (38%) despite the fact that they still account for a sizable amount of their diet. e

4.1.5 Household food security status

Table 7: Binary logistic (model summary)

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square
1	16.703 ^a	.651

Source: survey 2023

Table 6 presented the summary of a Cox regression model. The "-2 Loglikelihood" is a measure of the goodness of fit of the model. In this case, the value is 16.703 which indicate a good fit. The "Cox & Snell R Square" is another measure of goodness of fit, which ranges from 0 to 1. A value of 1 indicates a perfect fit, and a value of 0 indicates no fit at all. In this case, the value is 0.651, which indicates that the model explains about 65.1% of the variance in the data.

Table 8: Binary Logistics (variables in the equation)

Variables in the Equation

	B	S.E.	Wald	Df	Sig.	Exp(B)	95% C.I.for EXP(B)	
							Lower	Upper
Access to land	3.718	2.275	2.671	1	.012	41.171	.477	3556.485
Access to credit	2.256	2.402	.881	1	.048	9.540	.086	1057.984
Number of meals consumed	2.940	1.539	3.652	1	.046	18.919	.927	385.922
missed any meal	3.390	11.322	.090	1	.765	29.678	.000	128870774441.964
food satisfaction	-5.624	2.678	4.411	1	.036	.004	.000	.687
output produced able to feed the family	-5.454	2.463	4.905	1	.027	.004	.000	.534
Constant	-5.309	23.413	.051	1	.821	.005		

Binary logistics regression

Food Security = constant +access to land +access to credit +number of meals consumed food satisfaction produced

$$\text{food security} = -5.309+3.718+2.256+2.940+3.390-5.624-5.454$$

Source: survey 2023

Table shows results of the analysis, the dependent variable's food security are positively correlated with access to land, credit, the quantity of meals eaten, and missed any meal. This relationship is indicated by the positive coefficients for these variables. An increase on this independent variables will lead to increase in the dependent variables. Missed meals, on the other hand, and output sufficient to feed the family and food satisfaction have negative coefficients, demonstrating a relationship between a rise in and a fall in the food security

(dependent variable.). From the table, several variables are statistically significant in predicting the outcome. Specifically, access to land, access to credit, and number of meals consumed, food satisfaction, and output produced able to feed the family all have significant coefficients ($p < .05$). The variable "missed any meal" is not statistically significant ($p > .05$).

4.1.6 Distribution of the constraints faced by women in agriculture

Table 9: Likert scale

Variable	Strongly disagree(1)	Disagree(2)	undecided(3)	Agree(4)	Strongly agree(5)
Constraints					
Access to credit	3	0	2	9	30
Supply of labour	3	1	3	20	23
Technology	29	1	8	6	6
Educational level	5	4	8	8	25
Lack of access to extension services	33	3	2	3	9
Lack of markets	1	0	4	8	27
Dual role of farming	5	0	2	13	30
Male dominance	15	2	4	13	16
Lack of access to information ,communication and technology	5	0	3	9	33

Source: survey results 2023

The majority of respondents strongly agree (rating of 5) that access to credit and a lack of markets are the two main obstacles. This shows that some respondents (ratings of 4 and 5) also seem to regard technology and educational attainment as moderate limitations, though not as strongly as access to credit and markets. More ambiguous or disagreeable replies indicate that the availability of labor, the absence of extension services, and the lack of ICT access are perceived as lesser restraints. The availability of labor, the lack of extension services, and the lack of access to ICT are viewed as smaller constraints, according to more equivocal or unfavourable responses. The majority of respondents believe that their options

are limited, and the most frequently cited limitations are those related to access: financing, markets, technology, and education. There are a lot of conflicted answers for these factors. Comparatively speaking, the accessibility of labor and other resources appears to be seen as a smaller impediment. Significant obstacles include lack of markets and access to credit.

4.2 DISCUSSION OF RESULTS

4.2.0 Discussion of the characteristics of the respondents

4.2.1 Demographic characteristics

Table 1 shows all respondents were female, the role of the household's mother, and were 70% married at the time of the survey's completion, 10% separated or divorced, and 10% widowed. 70 % of them had secondary education, while 14% had tertiary education. These results are in line with those of other research that have looked at the contributions of women to agricultural income. The high number of women with secondary education suggests that there is a need to promote and provide access to tertiary education for women to enable them to take up leadership positions and make informed decisions about agriculture productivity. The International Fund for Agricultural Development (Rahman, Palash et al. 2020), women play a significant role in agriculture; accounting for 43% of the agricultural workforce worldwide, and in some countries, over 50% of the agricultural workforce is female. However, they are often marginalized, have limited access to resources, and are burdened with multiple responsibilities, including raising children, taking care of the household, and working in the fields.

Table 2 shows the summary of the demographic characteristics, the mean age of 2.60 indicates that the majority of women involved in agricultural activities in Mazowe district are relatively young, in their productive ages. Studies show that younger farmers, especially women, tend to adopt new agricultural technologies and practices more readily, which enhances productivity (Mwangi and Kariuki 2015). The mean of 3.34 hours indicates that women in the district spend a significant amount of time on domestic chores and responsibilities at home in addition to working on farms. Several studies have found that women's time burdens from household responsibilities constrain their participation and productivity in agriculture (Lyon, Mutersbaugh et al. 2017). Reducing these burdens through improved technologies and infrastructure could significantly improve women's contributions to farm productivity. The mean of 3.44 hours shows that women dedicate a reasonable portion of their time to working on family farms in the Mazowe district.

4.2.2 Institutional factor

Table 3 shows the land size minimum land size is 0.2 hectares, the maximum land size is 2.5 hectares, and the mean land size is 3.58. As noted by response, women in Mazowe district face challenges in accessing land, which limits their productivity. Therefore, it is important to examine the gendered distribution of land ownership and access in the district to better understand the role of women in agricultural productivity. A study by (Mkodzongi and Lawrence 2019) examined the impact of land reform on gender relations in Zimbabwe. The study found that while there have been improvements in women's access to land, women still face challenges in securing land rights due to cultural and legal barriers. The study recommends policy interventions that address gender disparities in land allocation and improve women's access to credit and extension services. (Mujeyi and Mutambara 2023) examined the impact of land reform on rural livelihoods in Zimbabwe. The study found that women have limited access to land, which constrains their ability to engage in agricultural activities and generate income.

4.2.3 Economic factor

The results show that women are heavily involved in agricultural activities, especially labor-intensive activities like weeding (88%), harvesting (82%) and post-harvesting (80%). This is consistent with findings from other studies that show women provide most of the labor in small-scale subsistence farming in Africa (Scoones 2015). The high participation of women in weeding and harvesting is not surprising given that these activities are traditionally viewed as an extension of women's household roles (Belay and Oljira). Moreover, the high engagement rates in weeding, harvesting, and post-harvesting activities suggest that women are involved in the most labor-intensive tasks in agriculture (Subathra, Krishnakumari et al. 2020). Overall, the data provides strong evidence that women are the driving force behind agricultural productivity and food security in smallholder farming in Mazowe district.

The table also includes the livestock sector, with the most popular animals raised by women being chickens, goats, and cattle. The care of small livestock like cattle, goats and chickens is also often the responsibility of women in rural households (Kristjanson, Waters-Bayer et al. 2014). The percentages for these activities, however, are not very high. A research by (Husen, Loos et al. 2017) discovered that women in rural Ethiopia generate up to 90% of the food consumed by households and are for up to 70% of the agricultural labor there. Similar to this, 2014 study by (Sraboni, Malapit et al. 2014) discovered that women

farmers in Bangladesh are essential to maintaining food security and eradicating poverty. Goats and poultry are raised by 14% and 24% of respondents, respectively, whereas just 28% of respondents grow cattle. This can mean that raising cattle is less common or lucrative than growing crops.

4.2.4 Food security status

Table 5 shows type of food consumed is heavily based on staple foods like sadza which is consumed by all households (100%). This is consistent with findings that sadza is the staple food in Zimbabwe and provides the bulk of calories for most rural household's. Vegetables (72%) and sweet potatoes (52%) are other major sources of nutrition, especially for the poorest households. The reliance on staple crops like maize, vegetables and tubers points to the importance of women's agricultural work in ensuring food security. Consumption of other foods like beans (38%), meat (44%) and bread (30%) is lower, indicating their limited availability and affordability. The predominant consumption of staple carbohydrate-based foods and the limited consumption of protein sources are typical of poorer rural households and can lead to malnutrition (Ochieng, Afari-Sefa et al. 2017). Although the diet lacks diversity, it ensures basic food security which is primarily the result of women's efforts in growing staple crops for household consumption. The food consumption trends are consistent with those of past studies conducted in Zimbabwe and sub-Saharan Africa, which found that poor rural households tended to consume a lot of staple foods and little in the way of other nutrient-dense foods.

Tables 6 and 7 display the findings of food security. The findings show that household food security is significantly positively impacted by access to land, credit, and the number of meals eaten, but negatively impacted by missing meals and food satisfaction. Food security was positively correlated with access to land. Those women with access to land are food secure as compared with women with no access to land. (Kansanga, Konkor et al. 2022) who found that access to agricultural land was a key determinant of food security for farmers in Zimbabwe. Devereux et al. (2017) also found land access critical for food security in Malawi, Tanzania and Ethiopia (Subramanyam, Roberts et al. 2017). Women with access to credit are mostly food secured as they have support to invest in inputs, hire labour, and adopt new technology. (Mutungi, Manda et al. 2023) that access to credit improves food security by enabling investment in farm inputs and technologies (Mutungi, Manda et al. 2023). The negative association with food security is as expected, though the

effect was not statistically significant. Missing meals is a clear sign of food insecurity. Producing less food naturally leads to high food security for women. Households that were less satisfied with the food they had been less likely to be food secure. While food security and food satisfaction are related, they are not interchangeable concepts.

4.2.5 Constraints faced by women in agriculture

Access to credit

Out of 30 responders, this restriction got the greatest agreement rate. Women's ability to buy inputs like seeds, fertilizer, and equipment is impacted by credit access, which lowers their output. A study by (Osoro and Areba 2013) found that due to their poor social position and lack of collateral, women's economic activities in agriculture are severely hampered by their inability to obtain loans. Women's ability to negotiate in agricultural markets is weakened by this restriction on finance access, which therefore lowers their economic gains. (Isaga 2018) found that only 10% of women farmers could access credit from commercial banks in Kenya compared to 60% of men. This hinders their ability to adopt modern technologies that can boost agricultural output.

Supply of labour

Most of the respondents weren't sure how they felt about this restriction. Women frequently have to balance home duties like childcare with agricultural work, which reduces the amount of time they have for farming tasks. This constraint can limit their ability to take advantage of new technologies or invest in new crops that require more labour. In spite of having additional domestic obligations like cooking and child care, women in agriculture are marginalized and have restricted access to hired labor, to a research by (Malhotra and Ling 2020). Lack of labor is another factor impeding women's ability to produce, especially when it comes to harvesting and land preparation. Research studies have shown that women are often responsible for unpaid care work and household chores, which can limit their availability for farm work.

Technology

There was a high rate of disagreement (29 respondents) on the role of technology as a constraint. Women farmers are often unfamiliar with emerging technologies or have limited access to technological information, which decreases their efficiency. This constraint can limit their ability to adopt new farming techniques, access to market information, or

communicate with potential buyers. A study by (Peterman, Behrman et al. 2014) on small-scale farmers in Zambia noted that women faced challenges in accessing and utilizing technologies for farming due to gender disparities in education and extension services, but also that women were at a disadvantage due to fewer land and machinery assets. Research studies have shown that women in agriculture often have limited access to technology, particularly in developing countries.

Educational level

There was a high level of agreement among the respondents (25) on the impact of education on women's productivity. Lack of education results in low levels of literacy and numeracy, which limits women's ability to access information, negotiate market prices, and manage their crops effectively. Low levels of education also contribute to social barriers, including lack of mobility, and weakened participation in decision-making forums (Kaaria, Osorio et al. 2016). Education plays a critical role in empowering women in agriculture, by providing them with knowledge and skills that can improve productivity and increase their income

Lack of access to extension services

The majority of respondents (33) believed this to be a barrier for female farmers. Extension programs offer advice to farmers on agronomic procedures, pest control methods, and market information. Women frequently interact with agricultural extension agents less frequently and have less access to technical expertise. However, it has been noted that insufficient access to these services restricts access to knowledge on new technologies and extension techniques. (Ogutu, Okello et al. 2014)

Lack of markets

The respondents were mostly in agreement (27) on the issue of limited market access. Difficulty accessing markets to sell produce and limited participation in value chains has been noted as a key barrier for women farmers. Women farmers are disadvantaged as middlemen often control markets, and women are unable to travel long distances to sell their produce, which limits their profits (Kushitor, Badu et al. 2022). The relative marginalization of women in agriculture exacerbates the difficulty in accessing markets.

Dual role of farming

The majority of respondents (30) agreed that women have limitations due to their combined responsibilities as housewives and farmers. Women are responsible for a variety of tasks, including farming, childcare, and cooking. Their productivity is impacted by this, particularly

when farm and domestic tasks must be completed simultaneously. Women's access to resources and decision-making authority might be constrained by gender inequality and male dominance in agriculture, according to research studies (Chaudhary, Janjhua et al. 2019). Their capacity to invest in their farming operations and boost output may be constrained by this restriction.

Male dominance

There were a lot of disputes among the respondents (16 respondents) regarding how male dominance reduces the productivity of women farmers. Women's access to resources, land, and the market is typically hampered by male domination, which raises inefficiency and reduces production. A study by (Manyungwa, Hara et al. 2019) Women's income levels and participation in agriculture have been negatively impacted by gender-based discrimination and recently established social norms. Women's access has been impacted by gender inequity and male dominance in agriculture, according to research to resources and decision-making authority (Valverde, Mesías et al. 2022). Their capacity to increase production and invest in their farming operations may be constrained by this restriction.

Lack of access to information, communication, and technology

The majority of respondents (33) pointed to the limitations faced by women farmers as the absence of information, communication, and technology. Since they frequently aren't included in information networks, women farmers are at a competitive disadvantage in the market (Klugman, Hanmer et al. 2014) gender-based discrimination and newly emerging social norms have continued to have a negative impact on women's income levels and agricultural engagement. Providing access to information and technology that can enhance productivity is also crucial.

CHAPTER FIVE: CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

The main goal of the study was to assess the role of women in agricultural productivity in Mazowe District ward 9 under (Negomo irrigation scheme). The results showed that most women are the driving force behind agricultural productivity and food security. Women are actively involved in labour-intensive activities like weeding, harvesting, and post-harvest handling, which contribute to farm productivity and income. Even though women make a considerable contribution to agriculture, they still face obstacles such as limited access to markets, loans, land, extension services, and markets, in addition to social and cultural hurdles. Additionally, because of the constraints imposed by male domination in agriculture and the dual roles of farming and household duties, women's output is reduced. Access to resources and decision-making authority.

5.2.0 Recommendation

5.2.1 Recommendation to the farmers

There is a need to promote and provide access to tertiary education for women to enable them to take up leadership positions and make informed decisions about agriculture productivity. Reducing women's time burdens from household responsibilities through improved technologies and infrastructure could significantly improve women's contributions to farm productivity. Providing women with information and skills can improve productivity and increase their income. Hence there is a need to increase women's access to extension services. Gender disparities in land allocation and access should be addressed through policy interventions to improve women's access to credit and extension services.

5.2.2 Recommendation to the policy makers and stakeholders

Gender equity is prioritized in the agricultural sector in all facets of agriculture, including land distribution, financing availability, and extension services. Giving women farmers access to contemporary tools and networks of knowledge can also increase their output and market involvement.

5.2.3 Recommendation to the government

The government should implement policies and programs that improve women's access to key resources like land, credit, technology, and agricultural inputs. This can significantly enhance their productivity and income. Women farmers need better access to agricultural extension services to obtain information on new technologies and farming methods. The government should ensure that extension programs reach more women farmers. Education and skills training for women are essential to improving agricultural productivity. The government should promote access to both formal and informal education for women farmers. Improving infrastructure like roads, transportation, water, and energy can help reduce the time burdens on women and allow them to allocate more time to farming. The government should invest in infrastructure and technologies that can alleviate women's labour burdens. The government should implement programs that link women farmers to markets and enable their participation in agricultural value chains. There is a need to address the social barriers that disadvantage and marginalize women in agriculture such as male dominance and cultural norms that limit women's decision making power. Government policies and programs should specifically target these social barriers.

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APPENDICES: QUESTIONNAIRE.

Introduction

My name is Natasha Charity Mufanawejingo and I am an Agriculture student at Bindura University of Science Education. I am carrying out a research project on the assessment of roles of women in agricultural productivity, for the partial fulfilment of the requirements of my degree program. May you kindly assist by faithfully responding to the below questions. The data collected is for academic purposes only and will be treated with strict confidence.

Section A

To determine the contribution of women to household income

Tick the appropriate response or fill in the space provided.

1. **Gender of respondent:** Female []
2. **Age:** 18 -29 years [] 30 -39 years [] 40 -49 years [] Above 50 years []
3. **Position of respondent in the household:** Mother [] Other female adult []
4. **Marital status of respondent:** Single [] Currently married [] Separated/Divorced [] Widowed []
5. **Highest level of education reached by respondent:** No formal education [] Primary [] secondary [] Tertiary []
6. **Hours/day worked in farming**
Female.....
Male.....
7. **Hours /day worked in household**
Female
Male.....
8. **Land size:**
9. **Major types of crops grown and livestock kept**.....
10. **Type of activities done in the field**
11. **Main occupation of female towards farm work** :Farming (crop) [] Farming (livestock) [] Post harvesting activities [] Pre-harvesting activities []

SECTION B

To assess the household food security status of female headed household

1. Do you have access to agricultural land (arable land for cultivation)? NO [] Yes []
2. What are types of food consumed during the last 4 weeks:
3. Did you have access to credit: NO [] Yes []?
4. How many meals do you have per day 1 [] 2 [] 3 []?
6. Have you ever missed any number of meals per day: NO [] Yes []?
7. Are you happy with the type of food are you consuming NO [] Yes []
8. Is your farming output able to feed the whole family NO [] Yes []?

SECTION C

To assess the constraints faced by women in agriculture

Tick the appropriate response or fill in the space provided.

For each of the questions in the table below with the scores in brackets, please check the box next to the most appropriate response by clicking here. Strongly agree (SA): 5, agree (A): 4, uncertain (U): 3, and disagree (D): 2. strongly agree (SD) = 1

		SA	A	U	D	SD
	Constraints faced by women in agriculture					
1	Access to credit					
2	Supply of labor					
3	Technology					
4	Educational level					
5	Lack of access to extension services					
6	Lack of markets					
7	Dual role at farming					
8	Male dominance					

9	Lack of access to information ,communication and technology					
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