SCHOOL OF POSTGRADUATE STUDIES

ASSESSING THE SOCIOECONOMIC FACTORS AFFECTING SUBSISTENCE FARMERS' GROWTH POTENTIAL. AN INVESTIGATION IN KANAKANTAPA, CHONGWE DISTRICT

LUBASI MBUMWAE

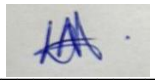
MDS23221608

A dissertation presented In Partial Fulfilment for requirement of the program Masters of Arts in Development Studies

2024

DECLARATION

I, Lubasi Mbumwae, hereby declare that this dissertation is my original work and has not been submitted for a degree at any other university. All materials from other sources have been duly acknowledged through appropriate citations and references.

Signature:  Date: 18/01/2025

Supervisor:  Date: 20/03/2025

DEDICATION

I dedicate this work to my family for their unwavering support and encouragement throughout my academic journey. Their belief in my abilities and constant motivation has been instrumental in helping me achieve this milestone. This dedication extends to all subsistence farmers in Kanakantapa whose resilience inspired this research.

ACKNOWLEDGEMENTS

First and foremost, I thank God Almighty for granting me the gift of life and enabling me to work tirelessly to realize this research's objective. Special gratitude goes to my supervisor, Mr. Kwezi Jere, for his invaluable guidance and mentorship throughout this research journey. I sincerely thank the respondents from Kanakantapa for their time and cooperation. My appreciation extends to the University of Lusaka members of staff for their support, and to my friends and family for their encouragement and understanding.

LIST OF ABBREVIATIONS

AIS - Agricultural Innovation Systems

CDF - Constituency Development Fund

CSO - Central Statistical Office

FISP - Farmer Input Support Programme

GDP - Gross Domestic Product

GRZ - Government of the Republic of Zambia

KMO - Kaiser-Meyer-Olkin

MOA - Ministry of Agriculture

PSDP - Private Sector Development Programme

ABSTRACT

This study assessed socioeconomic factors affecting subsistence farmers' growth potential in Kanakantapa, Chongwe District. Despite agriculture's importance in Zambia's economy, subsistence farmers face persistent challenges in achieving growth, with limited understanding of how socioeconomic factors influence their development potential. The study aimed to evaluate the impact of existing agricultural policies, examine the role of social networks and community structures, and identify key socioeconomic factors affecting subsistence farmers' growth potential. The study employed a mixed-methods approach, combining quantitative and qualitative data collection techniques. A sample of 389 farmers was selected using Yamane's formula, with 329 valid responses analysed. Qualitative data was collected through interviews with key informants from the Ministry of Agriculture, District Council officials, and community leaders. Findings revealed gender disparities emerged in resource access, with female farmers reporting lower scores (mean = 2.88) than male farmers (mean = 3.15). Education levels significantly influenced farming success, with 31.3% lacking formal education. Ministry officials reported improved input access through FISP, though contribution requirements remained challenging for poorer farmers. Community leaders emphasized how limited officer coverage restricted extension service effectiveness, while District Council representatives highlighted the impact of infrastructure development through CDF on growth potential. The study recommends developing graduated input support systems based on farmers' resource capacity, strengthening farmer cooperatives through targeted capacity building, and establishing education programs specifically designed for farmers with limited formal education.

Keywords: agricultural policies, social networks and community structures, socioeconomic, subsistence farmer, growth potential

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CHAPTER ONE: INTRODUCTION

1.0 Introduction

This study examined the socioeconomic factors affecting subsistence farmers' growth potential in Kanakantapa, Chongwe District, Zambia. Despite agriculture's significant role in Zambia's economy, subsistence farming remained prevalent, particularly in rural areas like Kanakantapa. The research aimed to identify key socioeconomic obstacles hindering farmers' growth, evaluate existing farming practices, and assess the impact of current agricultural policies on subsistence farmers' development. By providing a comprehensive analysis of local socioeconomic conditions and challenges, this study sought to inform targeted interventions and policies aimed at enhancing subsistence farmers' growth potential and promoting rural development in Kanakantapa.

1.1 Background of the Study

Agriculture has long been a cornerstone of Zambia's economy, contributing significantly to employment, food security, and rural livelihoods. However, despite its importance, the sector has been characterized by a predominance of subsistence farming, particularly in rural areas such as Kanakantapa in Chongwe District. This persistence of subsistence agriculture has been a major concern for policymakers and development practitioners, as it has implications for poverty reduction, food security, and overall economic growth (Chapoto et al., 2018).

The research problem stemmed from the persistent low productivity and limited economic growth among subsistence farmers in Kanakantapa, despite various interventions and the area's agricultural potential. These farmers typically cultivated small plots of land, primarily growing crops like maize, groundnuts, and cassava for household consumption with minimal surplus for sale (Mofya-Mukuka and Hichaambwa, 2018). They often relied on traditional farming methods, had limited access to modern inputs and technology, and were vulnerable to environmental and economic shocks.

A review of relevant literature revealed several key socioeconomic factors affecting subsistence farmers' growth potential in the similar contexts. Mulenga et al. (2015) identified limited access to agricultural inputs, inadequate extension services, and poor market access as significant challenges facing smallholder farmers in Zambia. These factors not only affected agricultural productivity but also hindered farmers' ability to transition from subsistence to more commercially oriented farming.

Financial constraints have been identified as a major barrier to growth for subsistence farmers. Chisanga et al. (2020) noted that traditional financial institutions often viewed smallholder farmers as high-risk borrowers, making it difficult for them to access capital needed to improve their farming operations. This lack of access to credit limited farmers' ability to invest in improved technologies, inputs, and land improvements that could boost their productivity and income.

Land tenure insecurity has also been recognized as a significant constraint to agricultural productivity and growth. Chamberlin and Jayne (2013) found that insecure land rights discouraged long-term investments in land improvement and sustainable farming practices. This issue was particularly relevant in areas like Kanakantapa, where traditional land tenure systems prevailed.

Environmental factors, particularly climate change, have been increasingly recognized as critical determinants of agricultural production and farmers' growth potential. Arslan et al. (2015) highlighted how climate variability significantly impacted farming activities in Zambia. This vulnerability to climate change was exacerbated by limited irrigation infrastructure, leaving farmers heavily dependent on rainfall (Sitko et al., 2011).

Despite extensive research on agricultural productivity in Zambia, there were notable gaps in current knowledge, particularly regarding the specific socioeconomic context of subsistence farmers in Kanakantapa, Chongwe district. Most studies focused on broader regional or national trends, with limited attention to the unique combination of socioeconomic factors affecting subsistence farmers' growth potential in this particular area.

The significance of this study lay in its potential to provide targeted insights into the socioeconomic challenges and opportunities facing subsistence farmers in Kanakantapa. Empirically, by examining current production levels, farming practices, and socioeconomic barriers faced by these farmers, the study aimed to generate valuable data that could inform evidence-based policymaking and targeted interventions. This localized understanding was crucial for policymakers, agricultural extension services, and development organizations working to support and improve the growth potential of subsistence farmers in the area.

Theoretically, this study contributed to the broader discourse on rural development and agricultural transformation in developing countries. By applying established theoretical frameworks to the specific context of Kanakantapa, the research aimed to enhance our understanding of the complex interplay between socioeconomic factors and agricultural growth potential in subsistence farming communities.

The theoretical framework guiding this study drew on the Social Capital Theory and the Agricultural Innovation Systems (AIS) perspective. Social Capital Theory, as developed by scholars such as Putnam (2000) and Coleman (1988), emphasizes the importance of social networks, norms, and trust in facilitating collective action and economic development. This framework was particularly relevant in understanding how subsistence farmers in Kanakantapa navigated their socio-economic and environmental. The AIS perspective, as outlined by Klerkx et al. (2012), emphasized the importance of understanding agricultural development as a complex system involving multiple actors and institutions. This approach was valuable in analysing how various socioeconomic factors from access to inputs and markets to government policies and social norms - interacted to influence the growth potential of subsistence farmers in Kanakantapa.

This study aimed to provide an analysis of the socioeconomic factors affecting subsistence farmers' growth potential in Kanakantapa by combining these theoretical perspectives. The research sought to contribute to the development of more effective, context-specific strategies for enhancing agricultural productivity, improving food security, and promoting sustainable rural development in Zambia and similar contexts across sub-Saharan Africa.

1.2 Statement of the Problem

Subsistence farmers in Kanakantapa, Chongwe District, face persistent socioeconomic challenges that hinders their growth potential, despite various agricultural development initiatives. These challenges included limited access to resources, inadequate market linkages, and vulnerability to economic and environmental shocks (Mulenga et al., 2015; Chisanga et al., 2020). The relationship of these socioeconomic factors and their impact on farmers' growth potential remained poorly understood, hampering the effectiveness of interventions aimed at improving agricultural productivity and rural livelihoods in the area.

While agriculture plays a crucial role in Zambia's economy, contributing significantly to employment and food security, the sector was characterized by low productivity and limited commercialization, particularly among subsistence farmers (Chapoto et al., 2018). In Kanakantapa, as in many rural areas of Zambia, farmers struggled to transition from subsistence to more commercially oriented farming, despite government efforts to promote agricultural development (GRZ, 2011). This stagnation in growth potential not only affected individual farmer households but also had broader implications for rural poverty reduction and national food security (CSO, 2015).

The lack of context-specific research on the socioeconomic factors affecting subsistence farmers' growth potential in Kanakantapa presented a significant knowledge gap. Without a clear understanding of these factors and their interactions, policymakers and development practitioners lacked the necessary insights to design effective, targeted interventions (Arslan et al., 2015). This study aimed to address this gap by examining the key socioeconomic barriers, the impact of existing policies, and the role of social structures in shaping farmers' growth trajectories. By doing so, it sought to contribute to more effective strategies for enhancing agricultural productivity and promoting sustainable rural development in Kanakantapa and similar contexts across Zambia.

1.3 Objectives of the Study

The study was guided by the following objectives:

1.3.1 General Objective

To assess the socioeconomic factors affecting subsistence farmers' growth potential in Kanakantapa, Chongwe District.

1.3.2 Specific Objectives

i. To analyse the effects of existing agricultural policies on subsistence farmers' growth potential in Kanakantapa.
ii. To examine the role of social networks and community structures in shaping farmers' agricultural practices and growth.
iii. To identify key socioeconomic factors affecting subsistence farmers in Kanakantapa.

1.4 Research Questions

i. How do existing agricultural policies impact subsistence farmers' growth potential in Kanakantapa, Chongwe District?
ii. What role do social networks and community structures play in shaping farmers' agricultural practices and growth?
iii. What key socioeconomic factors affect subsistence farmers in Kanakantapa?

1.5 Significance of the Study

This study is significant as it provides a comprehensive assessment of the socioeconomic factors affecting subsistence farmers' growth potential in Kanakantapa, Chongwe District, addressing a critical gap in localized agricultural and rural development knowledge. By examining the complex interplay of economic, social, and institutional factors influencing farmers' growth trajectories, the study generates valuable insights for policymakers, agricultural extension services, and development organizations. The findings inform targeted interventions and policies aimed at

improving agricultural productivity, enhancing food security, and promoting sustainable rural development in the area. Moreover, the study's focus on the socioeconomic dimensions of agricultural growth contributes to the broader academic discourse on rural development strategies in developing countries. Ultimately, the research has the potential to positively impact the livelihoods of subsistence farmers in Kanakantapa and contribute to more effective, context-specific approaches to rural development in Zambia and beyond.

1.6 Justification of the Study

This study was justified by the pressing need to understand the complex socioeconomic factors affecting subsistence farmers' growth potential in Kanakantapa, Chongwe District. By providing localized insights into these factors, the research aimed to fill a critical knowledge gap and inform more effective, targeted interventions. The findings were expected to contribute to improving agricultural productivity, enhancing food security, and promoting sustainable rural development in the area and similar contexts across Zambia.

1.7 Scope of the Study

This study focused on assessing the socioeconomic factors affecting subsistence farmers' growth potential in Kanakantapa, Chongwe District of Zambia. It encompassed an examination of economic, social, and institutional factors influencing farmers' agricultural practices, productivity, and growth trajectories. The research covered various aspects including access to resources (land, inputs, credit), market linkages, social networks, community structures, and the impact of agricultural policies. While the primary focus was on crop production, aspects of livestock farming that interacted with crop production were also considered. The geographical scope was limited to the Kanakantapa area within Chongwe District.

1.8 Definition of Key Terms

Subsistence Farming: A farming system where farmers primarily produce crops and raise livestock to meet their own household food needs, with little or no surplus for sale.

Growth Potential: The capacity for economic expansion, increased productivity, and improved livelihoods among subsistence farmers, considering both agricultural and non-agricultural activities.

Socioeconomic Factors: The social and economic experiences and realities that help mould one's personality, attitudes, and lifestyle. These may include access to resources, education levels, social networks, and cultural norms.

Agricultural Productivity: The ratio of agricultural outputs to inputs, measuring the efficiency of farm production.

Food Security: A situation that exists when all people, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food that meets their dietary needs and food preferences for an active and healthy life.

Rural Development: A process of improving the quality of life and economic well-being of people living in rural areas, often relatively isolated and sparsely populated areas.

Agricultural Innovation: The process of developing and adopting new agricultural technologies, practices, or organizational forms to improve productivity, sustainability, and livelihoods in the agricultural sector.

CHAPTER TWO: LITERATURE REVIEW

2.0 Introduction

Agriculture serves as the cornerstone of Zambia's economy, functioning as the primary source of employment and a significant contributor to economic growth. The sector employs approximately 54% of the country's labour force and accounts for about 19% of the Gross Domestic Product (GDP) (Central Statistical Office, 2019). Within this agricultural landscape, subsistence farmers constitute a crucial component, particularly in rural areas where they form the majority of the farming population.

The role of subsistence farmers in Zambia is critical. These farmers not only contribute to national food security but also play a vital role in rural poverty alleviation and economic development. However, they often encounter numerous challenges that impede their growth potential, including limited access to resources, inadequate infrastructure, and vulnerability to climate change (Chapoto et al., 2018).

The significant contributions of subsistence farmers and the challenges they face underscore the need for a conducive policy framework and environment that supports their growth. This necessity forms the foundation of this study, which examines the socioeconomic factors affecting subsistence farmers' growth potential in Kanakantapa, Chongwe District. Kanakantapa, situated in Chongwe District of Lusaka Province, presents a distinct context for studying subsistence farming dynamics in Zambia. The area is characterized by its rural setting and predominantly agricultural economy, rendering it an appropriate location for investigating the challenges and opportunities faced by subsistence farmers.

Historically, Kanakantapa has been recognized for its agricultural potential, particularly in maize, groundnuts, and vegetable production. The area benefits from relatively fertile soils and a favourable climate for agriculture. However, it faces challenges common to many rural areas in Zambia, such as limited access to markets, inadequate extension services, and vulnerability to climate variability (Mulenga et al., 2017).

Despite its agricultural significance, a noticeable gap exists in the literature regarding comprehensive studies on the socioeconomic factors affecting subsistence farmers' growth potential specifically in Kanakantapa. Although some studies have examined agricultural practices in Chongwe District broadly (e.g., Chompolola and Kaonga, 2016), focused research on the unique dynamics of Kanakantapa's farming community remains scarce.

This study aims to address this gap by analysing the socioeconomic factors affecting subsistence farmers' growth potential in Kanakantapa. Through an examination of relevant studies from global, African, and Zambian perspectives, the research seeks to identify key themes, methodologies, and findings that can inform the understanding of the local context. The subsequent sections critically review existing literature, highlight gaps in current knowledge, and present the theoretical framework and conceptual model guiding this research. This comprehensive approach aims to contribute to the body of knowledge that can inform policy and practice to support the growth and development of subsistence farmers in Kanakantapa and across Zambia.

2.1 Empirical Review

This section critically examines existing literature on socioeconomic factors affecting subsistence farmers' growth potential. It explores studies from global, African, and Zambian perspectives, focusing on agricultural policies, social networks, and socioeconomic factors. The review identifies key findings, methodologies, and gaps in current research, providing a foundation for this study's objectives and hypotheses.

2.1.1 Global Perspective

In a study focusing on Central America, Harvey et al. (2018) examined climate change impacts and adaptation strategies among smallholder farmers. The researchers employed a mixed-methods approach, combining household surveys (n=860) across four countries with participatory workshops. Their findings indicated that farmers were already experiencing significant climate change impacts, with 95% reporting changes in temperature and 81% noting alterations in rainfall patterns. The study also revealed that socioeconomic factors, including education level, farm size, and access to technical assistance, strongly influenced farmers' adaptive capacity. While this research provided a comprehensive overview of climate-related challenges and adaptation strategies, it did not delve deeply into the specific socioeconomic barriers hindering farmers' transition to more commercially oriented farming.

Holland et al. (2016) applied an innovative approach to mapping adaptive capacity and smallholder agriculture at the landscape scale. Using expert knowledge and a multi-criteria decision analysis framework, the researchers developed a spatially explicit model of adaptive capacity in Nicaragua. Their findings demonstrated significant spatial variability in adaptive capacity, with factors such as access to markets, social capital, and institutional support playing crucial roles. The study's methodology offered a novel way to visualize and analyse socioeconomic factors affecting farmers' resilience. However, the research focused primarily on adaptive capacity in the context of

climate change and did not extensively explore the broader growth potential of subsistence farmers.

Lowder et al. (2016) conducted a comprehensive global analysis of farm size and family farming trends using agricultural census data from 167 countries, including diverse contexts from Sub-Saharan Africa, Asia, Latin America, and developed nations. Their finding that 84% of all farms worldwide are smaller than 2 hectares underscores the global significance of smallholder agriculture, aligning with our focus on subsistence farmers. The study's inclusion of data from countries like India, China, and Ethiopia provides valuable comparative insights. However, while it offers a broad perspective on smallholder prevalence, it falls short in examining growth potential across different national contexts. The authors' analysis of the inverse relationship between farm size and land productivity raises important questions about smallholder efficiency, but it doesn't adequately address how this relationship varies across countries or interacts with local socioeconomic factors and agricultural policies. This gap highlights the need for research that not only quantifies global trends but also investigates country-specific factors influencing farmers' growth trajectories. The study's strength lies in its global scope, but its limited focus on growth dynamics in specific national contexts reveals a clear area for further investigation.

Rapsomanikis (2015) examined the economic lives of smallholder farmers globally, using household survey data from 75 countries, including significant representation from African nations like Ghana, Nigeria, and Tanzania, as well as Asian countries such as Bangladesh and Vietnam. The study's finding that smallholders derive, on average, 40% of their income from non-farm sources is particularly relevant to our research on farmers' growth potential. This diversification, observed across various national contexts, suggests that agricultural policies alone may not be sufficient to drive growth, aligning with our first objective on policy impacts. However, while the author provides valuable insights into income structures across different countries, the study falls short in exploring how these diverse income sources interact with country-specific social networks and community structures to influence overall growth potential. The research highlights global heterogeneity among smallholders but doesn't adequately address how this heterogeneity affects the efficacy of different growth strategies in specific national contexts. This limitation points to a need for more nuanced research that considers the interplay between farm and non-farm activities in shaping growth trajectories within particular country settings.

Fischer et al. (2014) investigated the global consequences of the inverse farm size-productivity relationship, using a combination of global datasets and modelling approaches, with case studies from countries including Kenya, Uganda, and India. Their finding that smallholder-dominated agricultural systems can be equally or more productive than large-scale farming challenges conventional assumptions about agricultural development. This aligns with our research interest in the growth potential of subsistence farmers, particularly in the Zambian context. However, while the study provides compelling evidence for the productivity of small farms across different national settings, it doesn't adequately explore the country-specific socioeconomic factors that enable this productivity or how it translates into improved livelihoods in diverse contexts. The authors' focus on aggregate productivity overlooks the individual and community-level dynamics that influence farmers' growth trajectories in specific countries. This gap underscores the need for research that not only examines global productivity metrics but also investigates how productivity improvements interact with social networks, agricultural policies, and other socioeconomic factors to drive sustained growth in particular national contexts, such as Zambia.

Hazell et al. (2010) conducted a review of the role of agriculture in economic development, focusing on the changing paradigms over time, with examples drawn from diverse countries including China, India, and several African nations. Their analysis of the shifting perspectives on smallholder farming from the 1960s to the present provides valuable context for our research on subsistence farmers' growth potential in Zambia. The authors highlight the pendulum swing between policies favouring large-scale agriculture and those supporting smallholder development across different national contexts, which is relevant to our first objective on the impact of agricultural policies. However, while the study offers a rich historical perspective across various countries, it falls short in providing empirical evidence on the effectiveness of different policy approaches in contemporary contexts, particularly in African settings like Zambia. The authors acknowledge the heterogeneity of smallholder situations globally but don't adequately explore how this heterogeneity interacts with country-specific social networks and community structures to influence growth outcomes. This limitation points to a need for research that not only reviews global policy trends but also investigates their differential impacts across diverse smallholder contexts, with a specific focus on countries like Zambia.

2.1.2 African Perspective

Abegunde et al. (2019) examined the determinants of climate-smart agricultural practices adoption among small-scale farming households in South Africa. Using a multi-stage sampling technique, the researchers surveyed 328 farming households and analysed the data using a multinomial logit model. Their findings revealed that factors such as age, education, farm size, access to credit, and membership in farmers' associations significantly influenced the adoption of climate-smart practices. The study provided valuable insights into the socioeconomic factors affecting farmers' decision-making processes. However, it primarily focused on climate-smart agriculture adoption and did not extensively explore how these factors might contribute to broader growth potential or commercialization of subsistence farming.

Fadeyi et al. (2021) conducted a comprehensive review of the effects of microfinance banks on smallholder development in Nigeria. Through an extensive literature review and analysis of secondary data, the researchers examined the impact of microfinance on agricultural productivity, income, and food security. Their findings suggested that while microfinance has the potential to positively impact smallholder farmers, its effectiveness is often limited by factors such as high interest rates, short repayment periods, and lack of agricultural expertise among microfinance institutions. The study highlighted the complex relationship between financial services and agricultural development but did not provide primary empirical data on the specific challenges faced by subsistence farmers in transitioning to more commercially oriented farming.

Jebesa (2019) reviewed the determinants of smallholder farmers' market participation and outlet choice decisions in Ethiopia. Through a comprehensive literature review, the researcher identified key factors influencing market participation, including farm size, access to credit, distance to markets, and membership in cooperatives. The study provided a valuable synthesis of existing research on market participation in Ethiopia. However, it relied solely on secondary data and did not offer new empirical insights into the specific socioeconomic barriers faced by subsistence farmers in transitioning to commercial agriculture.

Wangu et al. (2021) investigated the determinants of smallholders' market orientation and marketing arrangements in the context of dairy farming in rural Kenya. Employing a mixed-methods approach, including household surveys (n=135) and in-depth interviews, the researchers examined the factors influencing farmers' market participation. Their findings revealed that access to extension services, cooperative membership, and farm size were significant predictors of market

orientation. The study provided valuable insights into the complex interplay of factors affecting smallholder commercialization. However, its focus on the dairy sector may limit its applicability to other agricultural contexts, particularly those dominated by crop production.

Harvey et al. (2014) conducted a study on smallholder farmers' vulnerability to agricultural risks in Madagascar, employing a mixed-methods approach with 600 household surveys. While their findings on multiple interconnected risks facing farmers are valuable, the study's focus on vulnerability rather than growth potential limits its direct applicability to our research objectives. The authors' emphasis on socioeconomic factors like poverty and lack of access to credit aligns with our third objective of identifying key socioeconomic factors affecting subsistence farmers. However, their approach fails to adequately address the role of agricultural policies or social networks, which are central to our first two objectives. The study's strength lies in its holistic approach to risk assessment, but it falls short in providing actionable insights for promoting growth among subsistence farmers. This gap underscores the need for research that not only identifies challenges but also explores pathways for growth, particularly in the context of specific agricultural policies and community structures.

Mthethwa et al. (2022) investigated the determinants of adoption and intensity of climate-smart agricultural practices among smallholder maize farmers in South Africa. Employing a cross-sectional survey design with 268 respondents and analysing data using a double-hurdle model, the study revealed that socioeconomic factors such as age, education, farm size, and access to credit significantly influenced both the adoption and intensity of climate-smart practices. While this research provided valuable insights into the adoption of innovative agricultural practices, it did not extensively explore how these factors might contribute to the overall growth potential of subsistence farmers beyond climate resilience.

Manda et al. (2020) investigated the determinants of climate-smart agriculture adoption in Malawi using a multivariate probit model with data from 1,000 households. Their finding that farmers with stronger social networks were 15% more likely to adopt climate-smart practices is particularly relevant to our second objective on the role of social networks. However, the study's focus on adoption rates rather than long-term growth potential limits its applicability to our overall research aim. While the authors provide valuable insights into the importance of tailoring agricultural policies to local contexts, they do not adequately explore how these policies interact with socioeconomic factors to influence farmers' growth trajectories. This gap highlights the need for

research that not only examines adoption of specific practices but also investigates how such adoptions translate into sustained growth for subsistence farmers. The study's strength in linking social capital to agricultural innovation provides a foundation for our research, but its limited scope in terms of growth outcomes indicates a clear area for further investigation.

Gebre et al. (2019) examined the role of rural institutions in enhancing smallholder farmers' market participation in Ethiopia, using a mixed-methods approach with 385 household surveys. Their finding that cooperative membership increased market participation likelihood by 28% aligns closely with our second objective on social networks and community structures. However, the study's narrow focus on market participation as an outcome overlooks other crucial aspects of farmers' growth potential. While the authors provide robust evidence for the importance of institutional support, they fail to adequately explore how this support interacts with broader socioeconomic factors or agricultural policies. This limitation points to a need for research that takes a more holistic view of growth potential, considering not just market participation but also productivity improvements and income diversification. The study's strength in quantifying the impact of institutional support provides a valuable methodological approach for our research, but its limited scope in terms of growth indicators reveals a clear gap in the literature.

Muriithi et al. (2018) studied the impact of mobile money services on smallholder farm households in Kenya, using panel data from 1,800 households and a difference-in-differences approach. Their finding of a 16% increase in agricultural income due to mobile money access is relevant to our third objective on socioeconomic factors. However, the study's narrow focus on digital financial services limits its applicability to our broader research aims. While the authors provide compelling evidence for the potential of technology in enhancing agricultural productivity, they do not adequately explore how this interacts with agricultural policies or social networks. This gap underscores the need for research that examines technological interventions within the broader context of policy environments and community structures. The study's strength in using panel data provides a robust methodological approach, but its limited scope in terms of growth determinants indicates a clear area for further investigation, particularly in how various interventions interact to influence overall growth potential.

Adeola and Adetunbi (2015) investigated the impact of social capital on agricultural innovation adoption among smallholder farmers in Nigeria, using a logistic regression model with data from 300 farmers. Their finding that membership in farmer associations increased the likelihood of

adopting improved crop varieties by 40% is highly relevant to our second objective on social networks. However, the study's focus on innovation adoption rather than overall growth potential limits its direct applicability to our research aims. While the authors provide valuable insights into the role of social capital in facilitating knowledge exchange, they do not adequately explore how this translates into long-term growth for subsistence farmers. This gap highlights the need for research that not only examines the adoption of innovations but also investigates their long-term impact on farmers' livelihoods. The study's strength in quantifying the impact of social networks provides a useful methodological approach, but its limited scope in terms of growth outcomes reveals a clear area for further investigation.

2.1.3 Zambian Perspective

Kuntashula and Mungatana (2013) estimated the causal effect of improved fallows on farmer welfare in Chongwe, Zambia, using propensity score matching techniques with data from 388 households. Their finding of significant increases in household income and food security from adopting improved fallows is relevant to our research on farmers' growth potential. However, the study's narrow focus on a specific agricultural practice limits its applicability to our broader research objectives. While the authors provide robust evidence for the potential of agroforestry practices, they do not adequately explore how these interact with broader socioeconomic factors or agricultural policies. This limitation points to a need for research that takes a more comprehensive view of growth determinants, considering not just specific practices but also the broader policy and social context. The study's strength in using causal inference techniques provides a valuable methodological approach, but its limited scope in terms of growth factors reveals a clear gap in the literature.

Mwanza (2023) examined changes in customary land administration and their impact on development outcomes in Zambian chiefdoms, using a comparative case study approach with qualitative methods. While the study provides valuable insights into the complex relationship between land tenure and agricultural development, its focus on land administration rather than broader socioeconomic factors limits its direct relevance to our research objectives. The authors' findings on increased land commodification raise important questions about equity in agricultural growth, but they do not adequately address how these changes interact with agricultural policies or social networks to influence farmers' growth potential. This gap underscores the need for research that examines land tenure issues within the broader context of rural development policies

and community structures. The study's strength in using comparative analysis provides a useful methodological approach, but its limited scope in terms of growth determinants indicates a clear area for further investigation.

Ng'Ombe and Kalinda (2015) conducted a stochastic frontier analysis of technical efficiency in maize production under minimum tillage in Zambia, using data from 408 smallholder farmers. Their findings on the influence of education and access to credit on technical efficiency align with our third objective on socioeconomic factors. However, the study's narrow focus on technical efficiency rather than overall growth potential limits its applicability to our broader research aims. While the authors provide valuable insights into the determinants of agricultural productivity, they do not adequately explore how these factors interact with agricultural policies or social networks to influence farmers' long-term growth trajectories. This gap highlights the need for research that not only examines productivity but also investigates how productivity improvements translate into sustained growth for subsistence farmers. The study's strength in using advanced econometric techniques provides a robust methodological approach, but its limited scope in terms of growth outcomes reveals a clear area for further investigation.

Chompolola and Kaonga (2016) investigated the adoption of conservation agriculture in Chongwe District, Zambia, using a mixed-methods approach with 100 household surveys. Their findings on the importance of access to information and participation in farmer groups in influencing adoption rates are relevant to our second objective on social networks. However, the study's focus on adoption of a specific agricultural practice rather than overall growth potential limits its direct applicability to our research aims. While the authors provide valuable insights into the diffusion of agricultural innovations, they do not adequately explore how this translates into long-term growth for subsistence farmers. This gap underscores the need for research that not only examines the adoption of sustainable practices but also investigates their long-term impact on farmers' livelihoods within the broader context of agricultural policies and socioeconomic factors. The study's strength in using mixed methods provides a comprehensive methodological approach, but its limited scope in terms of growth outcomes indicates a clear area for further investigation.

2.1.4 Gap in Literature

At the global level, studies by Lowder et al. (2016) and Rapsomanikis (2015) examine broad trends in smallholder farming and the economic conditions of subsistence farmers. Fischer et al. (2014) investigated the worldwide implications of the inverse farm size-productivity relationship.

However, these studies fall short in addressing the specific growth potential of subsistence farmers in developing countries, particularly in sub-Saharan Africa. Research focused on Africa, such as Manda et al. (2020) in Malawi, Gebre et al. (2019) in Ethiopia, and Adeola and Adetunbi (2015) in Nigeria, explores factors influencing smallholder farmers' adoption of agricultural practices, market participation, and the impact of social capital. Yet, these findings may not accurately reflect the unique socioeconomic dynamics of Zambian subsistence farmers.

Within Zambia, Mwanza (2023) and Ng'Ombe and Kalinda (2015) have studied broader agricultural issues, while Zulu et al. (2015) and Kabwe et al. (2018) examined socioeconomic challenges in specific provinces. In Chongwe District, Kuntashula and Mungatana (2013) and Chompolola and Kaonga (2016) focused on particular agricultural practices or technologies. Despite these contributions, a significant gap remains in understanding the specific socioeconomic factors affecting subsistence farmers' growth potential in Kanakantapa, Chongwe District. The unique local conditions, including environmental factors, social structures, and economic circumstances in Kanakantapa, have not been adequately explored in existing literature. This study aims to address this gap by assessing the socioeconomic factors influencing subsistence farmers' growth potential in Kanakantapa. By concentrating on this understudied area, the research seeks to enhance understanding of the challenges and opportunities facing subsistence farmers in this locality, potentially informing targeted interventions and policies.

2.2 Theoretical Framework

The study is grounded in two key theories: Agricultural Innovation Systems (AIS) Theory and the Social Capital Theory. AIS Theory provides insights into how agricultural policies and institutional factors influence farmers' adoption of new practices. Social Capital Theory emphasizes the role of social networks and community structures in shaping economic outcomes.

2.2.1 Agricultural Innovation Systems (AIS) Theory

The Agricultural Innovation Systems (AIS) theory, as outlined by Klerkx et al. (2012), emphasizes the importance of understanding agricultural development as a complex system involving multiple actors and institutions. This theory is particularly relevant to the first objective of this study, which aims to evaluate the impact of existing agricultural policies on subsistence farmers' growth potential in the study area. The AIS theory posits that agricultural innovation and development are not linear processes but rather the result of complex interactions between various stakeholders, including farmers, research institutions, extension services, private sector actors, and policymakers. In the context of Kanakantapa, this theory can help explain how existing policies

and institutional arrangements may facilitate or hinder farmers' transition to more commercially oriented agriculture. For example, it can shed light on how agricultural extension services, market linkages, and policy incentives interact to create an enabling (or constraining) environment for farmer growth. By applying the AIS theory, this study can provide a more nuanced understanding of how existing policies and institutional arrangements impact farmers' growth potential and identify potential areas for policy reform or institutional strengthening.

2.2.2 Social Capital Theory

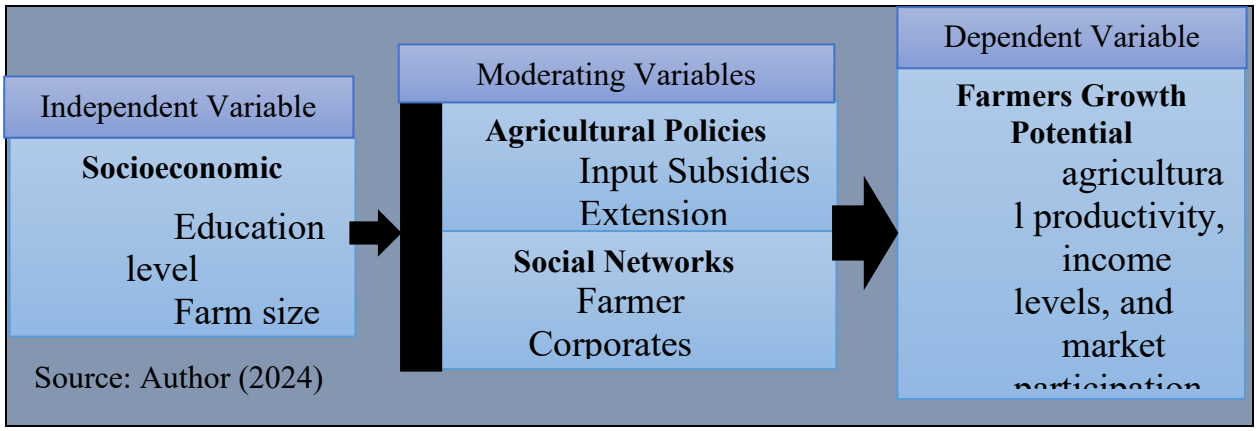
Social Capital Theory, as developed by scholars such as Putnam (2000) and Coleman (1988), emphasizes the importance of social networks, norms, and trust in facilitating collective action and economic development. This theory is particularly relevant to the third objective of this study, which aims to examine the role of social networks and community structures in shaping farmers' agricultural practices and growth. Social Capital Theory posits that the strength and nature of social relationships within a community can significantly influence economic outcomes. In the context of subsistence farmers in Kanakantapa, this theory can help explain how social networks and community structures may facilitate or hinder farmers' access to resources, information, and opportunities necessary for growth and commercialization. For instance, strong social networks might facilitate knowledge sharing about new agricultural practices or provide informal support systems that help farmers manage risks. Conversely, certain social norms or power structures within the community might constrain individual farmers' ability to innovate or expand their operations. By applying Social Capital Theory, this study can provide insights into how social dynamics within the Kanakantapa community influence farmers' growth potential and identify potential interventions that leverage or address these social factors.

2.3 Conceptual Framework

The conceptual framework synthesizes the key variables and their hypothesized relationships based on the theoretical foundations and empirical literature. It comprises three main components: independent variables (agricultural policies, social networks), mediating variables (socioeconomic factors), and the dependent variable (farmers' growth potential). Agricultural policies and social networks are posited to directly influence growth potential, with this relationship mediated by socioeconomic factors. The AIS Theory informs the analysis of policy impacts, while Social

Capital Theory guides the examination of social networks. This framework guides the study's methodology and provides a structure for analysing the complex interplay of factors affecting subsistence farmers' growth potential in Kanakantapa.

Conceptual Framework Illustration: Author (2024)



2.3.1 Independent Variables

Socioeconomic Factors: Socioeconomic factors are crucial determinants of subsistence farmers' growth potential, as identified by both the Agricultural Innovation Systems (AIS) theory and Social Capital Theory. These factors encompass a range of individual and household characteristics that influence farmers' capacity to adopt new practices, access resources, and improve their agricultural productivity.

Education level, measured by years of formal schooling or highest educational attainment, plays a significant role in farmers' ability to understand and implement new agricultural techniques, manage finances, and engage with market systems. Farm size, quantified in hectares or acres of land under cultivation, affects the scale of production and potential for economies of scale. Access to credit, assessed through indicators such as loan amounts received or participation in microfinance programs, determines farmers' ability to invest in improved inputs, technologies, or land improvements. Household income, measured by annual income from both farm and off-farm sources, influences farmers' capacity to withstand shocks and invest in their agricultural activities. The age of the farmer, recorded in years, can affect openness to innovation and physical capacity for labour-intensive farming practices.

These socioeconomic factors interact in complex ways to shape farmers' growth potential. For instance, higher education levels may enhance a farmer's ability to effectively utilize credit for farm improvements, while larger farm sizes may increase the returns on investments in new

technologies. Understanding these interactions is crucial for developing targeted interventions to support subsistence farmers' transition to more commercially oriented agriculture.

2.3.2 Moderating Variables

Agricultural Policies: Agricultural policies, conceptualized through the lens of the Agricultural Innovation Systems (AIS) theory, act as external stimuli that can significantly moderate the relationship between socioeconomic factors and farmers' growth potential. These policies create the institutional environment within which farmers operate and can either facilitate or hinder their growth trajectories.

Extension services, measured by the frequency of contact with extension officers or participation in training programs, play a crucial role in disseminating knowledge about improved farming practices and technologies. Effective extension services can enhance the impact of farmers' education on their productivity by providing context-specific, practical knowledge. Input subsidies, assessed through the value of subsidized inputs received or participation in subsidy programs, can mitigate the financial constraints faced by farmers with limited access to credit, potentially amplifying the effect of farm size on productivity. Market access initiatives, evaluated by distance to the nearest market or participation in government-sponsored market linkage programs, can enhance the relationship between farmers' socioeconomic status and their ability to generate income from their agricultural activities.

The moderating effect of these policies on the relationship between socioeconomic factors and growth potential is complex and context-dependent. For instance, well-designed input subsidy programs may have a more pronounced positive effect on the productivity of farmers with smaller land holdings, potentially reducing inequalities in growth potential stemming from disparities in farm size.

Social Networks: Social networks, grounded in Social Capital Theory, serve as critical moderators of the relationship between socioeconomic factors and farmers' growth potential. These networks facilitate the flow of information, resources, and support within farming communities, potentially enhancing or mitigating the effects of individual socioeconomic characteristics on growth outcomes.

Membership in farmer cooperatives, measured by active participation in cooperative activities, can amplify the benefits of individual resources by providing collective bargaining power, shared access to technologies, and economies of scale in input procurement and output marketing.

Informal knowledge sharing networks, assessed through the frequency of interactions with other farmers for information exchange, can enhance the impact of individual education levels by facilitating the spread of localized, practical farming knowledge. Community-based savings groups, evaluated by participation in local savings and credit associations, can mitigate the constraints imposed by limited access to formal credit, potentially enhancing the growth potential of farmers with limited financial resources.

The moderating effect of social networks can be particularly pronounced in contexts where formal institutional support is limited. For instance, strong informal knowledge sharing networks may partially compensate for gaps in formal extension services, enhancing the relationship between farmers' education levels and their ability to adopt innovative practices. Similarly, community-based savings groups may strengthen the link between household income and investment in farm improvements by providing a reliable source of credit.

2.3.3 Dependent Variable

Farmers' Growth Potential: Farmers' growth potential represents the ultimate outcome of interest in this conceptual framework. It encapsulates the capacity for economic expansion, increased productivity, and improved livelihoods among subsistence farmers. This multifaceted concept is operationalized through several key indicators that reflect different aspects of agricultural and economic progress.

Agricultural productivity, measured by crop yield per hectare or total farm output, is a fundamental indicator of growth potential. It reflects farmers' ability to efficiently utilize their land and other resources to maximize production. Improvements in productivity can stem from the adoption of improved farming techniques, better input management, or the use of higher-yielding crop varieties. Income levels, assessed through annual farm income or total household income, provide a direct measure of the economic benefits accruing to farmers from their agricultural activities. This indicator captures not only the volume of production but also farmers' ability to generate value from their output through effective market engagement. Market participation, quantified by the percentage of produce sold in markets or frequency of market engagement, reflects the degree to which farmers have transitioned from subsistence-oriented production to more commercially oriented farming. This indicator is crucial for understanding farmers' integration into broader agricultural value chains and their potential for sustained economic growth.

These indicators of growth potential are interconnected and mutually reinforcing. For instance, increased agricultural productivity can lead to higher income levels, which in turn may facilitate greater market participation. Conversely, stronger market engagement can provide incentives for productivity improvements and result in increased income. The conceptual framework posits that these outcomes are influenced by the interaction of socioeconomic factors, agricultural policies, and social networks, allowing for a deeper understanding of the pathways to enhanced growth potential among subsistence farmers in Kanakantapa.

CHAPTER THREE: METHODOLOGY

3.0 Introduction

This chapter outlines the methodological approach employed in this study to assess the socioeconomic factors affecting subsistence farmers' growth potential in Kanakantapa, Chongwe District. It details the research approach, design, population, sampling procedures, data collection instruments, and analysis methods used. The chapter also addresses issues of reliability, validity, and ethical considerations.

3.1 Research Approach

The study adopted a mixed-methods approach, combining quantitative and qualitative data collection and analysis techniques. This approach was chosen to provide a comprehensive understanding of the complex socioeconomic factors affecting subsistence farmers' growth potential (Creswell and Plano Clark, 2017).

The quantitative component employed inferential statistics to analyse relationships between variables. Multiple regression analysis was used to examine how socioeconomic factors predict farmers' growth potential, while moderation analysis assessed how agricultural policies and social networks influence these relationships. Correlation analysis explored the strength and direction of relationships between key variables. This statistical approach enabled testing of the study's hypotheses and quantification of relationships between independent, moderating, and dependent variables.

The qualitative component utilized in-depth interviews, focus group discussions, and stakeholder consultations to explore the contextual nuances and lived experiences of farmers. This provided rich insights into how socioeconomic factors, policies, and social networks interact to shape farmers' growth trajectories in ways that might not be captured through quantitative analysis alone. The integration of these methods enabled robust triangulation of data, enhancing the validity and reliability of the findings through complementary perspectives and analytical approaches (Johnson et al., 2007).

3.2 Research Design

A convergent parallel mixed methods design was employed for this study (Creswell, 2014). This design involved collecting both quantitative and qualitative data concurrently, analysing them separately, and then merging the results for interpretation. The quantitative component utilized a cross-sectional survey to gather data on measurable variables related to farmers' socioeconomic characteristics and growth indicators. Simultaneously, the qualitative component employed semi-

structured interviews and focus group discussions to explore farmers' experiences and perceptions in depth. This design was chosen to provide a comprehensive understanding of the research problem, allowing for both breadth and depth in data collection and analysis as recommended by Teddlie and Tashakkori (2009).

3.3 Population of the Study

The study population consisted of two main groups: residents of Kanakantapa engaged in subsistence farming and key informants from the Ministry of Agriculture and Chongwe Municipal Council. The total population of Kanakantapa is estimated at 14,000, with the majority engaged in subsistence farming (Ministry of Agriculture, 2023). This population was chosen due to their direct involvement in subsistence farming and their potential to provide data on the socioeconomic factors affecting their growth potential. Key informants from the Ministry of Agriculture were included to provide expert perspectives on agricultural policies and programs affecting subsistence farmers in the area.

3.4 Sample Size

For the quantitative component, the sample size was determined using the Yamane formula (Yamane, 1967): The Yamane formula is usually utilized when the research study population size is known.

$$n = \frac{N}{1 + N(e)^2}$$

Where:

n = sample size

N = population size

e = margin of error

The study employed a 95% confidence interval and a 5% margin of error. The 95% confidence interval means that if the survey were conducted 100 times, the results would match the views of the entire population in 95 out of 100 cases. The 5% margin of error indicates that the results may vary by up to 5 percentage points in either direction (Bartlett et al., 2001).

n =?

N = 14,000

e = 5% (0.05)

$$n = \frac{14000}{1 + 14000(0.05)^2}$$

$$n = \frac{14000}{1 + 14000\ x\ 0.0025}$$

$$n = \frac{14000}{1 + 35}$$

$$n = \frac{14000}{36}$$

$$n = \frac{14000}{36}$$

$$n = 388.8888$$

$$n \approx 389$$

Therefore, the quantitative sample size was 389 subsistence farmers. This sample size ensures that the study results are representative of the population with a high degree of confidence and a reasonable margin of error (Israel, 1992). For the qualitative component, the sample size was determined by the principle of saturation (Glaser and Strauss, 1967). Interviews were conducted until no new themes emerged from the data. This approach to sample size determination balances as opined by Creswell and Plano Clark, (2017) statistical rigor for the quantitative component with the depth and richness of data sought in the qualitative component.

3.5 Sampling Procedure

A multi-stage sampling procedure was employed for this study. First, stratified random sampling was used to divide Kanakantapa into geographical zones to ensure representative coverage (Kothari, 2004). Within each zone, simple random sampling was used to select households for the quantitative survey. For the qualitative component, purposive sampling was used to select both institutions and individual respondents. The institutions were selected based on their direct involvement in agricultural development: The Department of Agriculture, responsible for agricultural policy implementation and extension services delivery; and the Department of Cooperatives, which oversees farmer organization development and market linkage programs in Kanakantapa.

Individual respondents were purposively selected based on specific criteria including: years of farming experience (minimum 5 years), involvement in community agricultural initiatives, and representation across different farm sizes and farming practices. This approach ensured capture of diverse experiences and perspectives (Patton, 2015). Key informants from the Ministry of Agriculture were selected based on their expertise in agricultural policy and direct involvement in

program implementation in Kanakantapa, particularly those overseeing extension services and farmer support programs. Community leaders were selected based on their roles in local agricultural development initiatives and their deep understanding of the farming community's challenges and needs. This carefully structured sampling approach ensured that data was collected from respondents with relevant knowledge and experience pertinent to the study's objectives.

3.6 Data Collection Instruments

Multiple data collection instruments were employed to gather data in line with the study's specific objectives. For the quantitative component, a structured questionnaire was developed based on the conceptual framework and previous literature (Fowler, 2013). The questionnaire was designed to capture all three specific objectives, utilizing Likert scales to measure respondents' perceptions and experiences. It included sections on demographic information, the impact of agricultural policies, the role of social network and key socioeconomic factors affecting farmers. The use of Likert scales allowed for nuanced measurement of attitudes and behaviours related to each objective.

For the qualitative component, a Key Informant Interview (KII) guide was formulated in direct alignment with the specific objectives. This guide was structured to elicit in-depth insights from agricultural experts and community leaders on the impact of agricultural policies, the role of social networks, and the interplay of socioeconomic factors affecting subsistence farmers' growth potential. These instruments were designed to allow for flexibility in probing emergent themes while ensuring consistency across interviews.

3.7 Data Analysis

The study employed both descriptive and inferential statistical techniques for data analysis using IBM SPSS Statistics version 27. While descriptive statistics (frequencies, percentages, means, and standard deviations) were used to summarize demographic characteristics and variable distributions, the inferential analysis proceeded in stages.

Qualitative data from interviews were analysed using thematic analysis, facilitated by NVivo software (version 12). The six-phase process as recommended by Braun and Clarke (2006) involved familiarization with data, generating codes, searching for themes, reviewing themes, defining and naming themes, and producing the report. This approach identified key themes related to socioeconomic factors affecting subsistence farmers' growth potential, providing rich, contextual insights. The integration of quantitative and qualitative analyses offered a

comprehensive understanding of the research problem, enabling triangulation and enhancing the validity of findings (Creswell and Plano Clark, 2017).

3.8 Reliability and Validity

For the quantitative component, several statistical measures were implemented to ensure reliability and validity. The Shapiro-Wilk test assessed the normality of data distribution for all numerical variables (Shapiro and Wilk, 1965). Factor analysis was performed on the Likert-scale items to validate the construct validity of the questionnaire. The Kaiser-Meyer-Olkin (KMO) test and Bartlett's test of sphericity evaluated sampling adequacy and factor analysis suitability (Kaiser, 1974; Bartlett, 1954). For the qualitative component, the interview guides were reviewed by subject matter experts to ensure content validity and alignment with research objectives.

A pilot study was conducted with 10 subsistence farmers from a neighbouring area with similar characteristics to Kanakantapa. This pilot testing revealed several challenges, including difficulty in understanding technical terms, excessive questionnaire length leading to respondent fatigue, need for local language translation of Likert-scale questions, and discomfort with sensitive income-related questions. To address these issues, the research instruments were modified by simplifying technical language and providing clear definitions, reducing questionnaire length from 45 to 30 minutes, including local language translations for key terms, and restructuring sensitive questions to use income ranges rather than requesting specific figures. These refinements significantly improved the clarity and effectiveness of the research instruments, enhancing both reliability and participant comfort. The refined instruments were then reviewed again before full-scale implementation to ensure all modifications adequately addressed the identified challenges while maintaining the integrity of the research objectives.

For the qualitative component, member checking was employed, where participants were asked to review and confirm the accuracy of interview transcripts and interpretations (Lincoln and Guba, 1985). This process enhanced the credibility of the qualitative data by ensuring that the researcher's interpretations accurately reflected the participants' perspectives. Triangulation of data sources and methods was a key strategy to enhance validity. This involved comparing and cross-verifying findings from the quantitative surveys, qualitative interviews, and focus group discussions. By examining the consistency of findings across these different data collection methods, the study aimed to provide a more comprehensive and accurate understanding of the socioeconomic factors affecting subsistence farmers' growth potential. Peer debriefing was also employed, where

colleagues not directly involved in the study reviewed the research process and findings to ensure credibility (Creswell and Miller, 2000). This external perspective helped identify potential biases and ensured the logical consistency of the analysis and conclusions. These measures, including statistical tests, pilot testing, member checking, triangulation, and peer debriefing, aimed to ensure robust and trustworthy findings, enhancing both the reliability and validity of the study's results.

3.9 Ethical Consideration

Ethical considerations were prioritized throughout the research process. Approval for the study was obtained from the University's Ethics Committee and relevant local authorities. Informed consent was sought from all participants, with clear explanations of the study's purpose, potential risks, and benefits provided in local languages (Israel and Hay, 2006). Participation was voluntary, and participants were informed of their right to withdraw at any time. Confidentiality and anonymity were ensured through the use of pseudonyms and secure data storage (Wiles et al., 2008). Cultural sensitivities were respected, and efforts were made to minimize any potential discomfort or inconvenience to participants (Liamputtong, 2010).

3.10 Chapter Summary

This chapter provided a comprehensive overview of the research methodology employed in this study. It detailed the mixed-methods approach, research design, population and sampling procedures, data collection instruments, and analysis methods. The chapter also addressed issues of reliability, validity, and ethical considerations. By outlining these methodological aspects, the chapter laid the foundation for a rigorous and ethically sound investigation into the socioeconomic factors affecting subsistence farmers' growth potential in Kanakantapa.

CHAPTER FOUR: DATA PRESENTATION AND ANALYSIS

4.0 Introduction

This chapter presents the findings of the study examining socioeconomic factors affecting subsistence farmers' growth potential in Kanakantapa, Chongwe District. The data was collected through questionnaires administered to subsistence farmers and interviews with key stakeholders from various institutions. The chapter begins by discussing the response rate, followed by demographic information of respondents. It then presents the findings organized according to the research objectives, incorporating both quantitative and qualitative data. Statistical analyses are presented to test the study's hypotheses, followed by a thematic analysis of qualitative responses.

4.1 Response Rate

The study targeted a sample size of 389 respondents for the quantitative component, calculated using the Yamane formula. Out of the 389 questionnaires distributed, 348 were completed and returned, representing an initial response rate of 89.5%. However, during data cleaning and validation, 19 questionnaires were found to be incomplete or inconsistent, leaving 329 valid responses for analysis. This represents a final response rate of 84.6%. According to Baruch and Holtom (2008), a response rate above 80% is considered excellent for social science research and indicates high reliability of the data collected. Fincham (2008) suggests that response rates of 60% should be the goal of researchers, and rates above 80% are considered very good. The high response rate in this study can be attributed to the personal administration of questionnaires, follow-up visits, and the relevance of the research topic to the respondents' livelihoods. The study also achieved a 100% participation rate from the targeted institutional stakeholders for the qualitative component, with all planned interviews successfully conducted.

4.2.2 Factor Analysis Results

Factor analysis was conducted to examine the construct validity of the measurement instrument and identify underlying patterns in the data (Tabachnick and Fidell, 2014). The analysis began with the Kaiser-Meyer-Olkin (KMO) test and Bartlett's test of sphericity to assess sampling adequacy and data suitability for factor analysis. Principal Component Analysis with varimax rotation was employed to extract factors and examine their loadings (Thompson, 2004).

Table 4.2a: KMO and Bartlett's Test

Test	Result
Kaiser-Meyer-Olkin Measure of Sampling Adequacy	.873
Bartlett's Test of Sphericity - Approx. Chi-Square	2458.34
Df	325
Sig.	.000

Source: Author (2024)

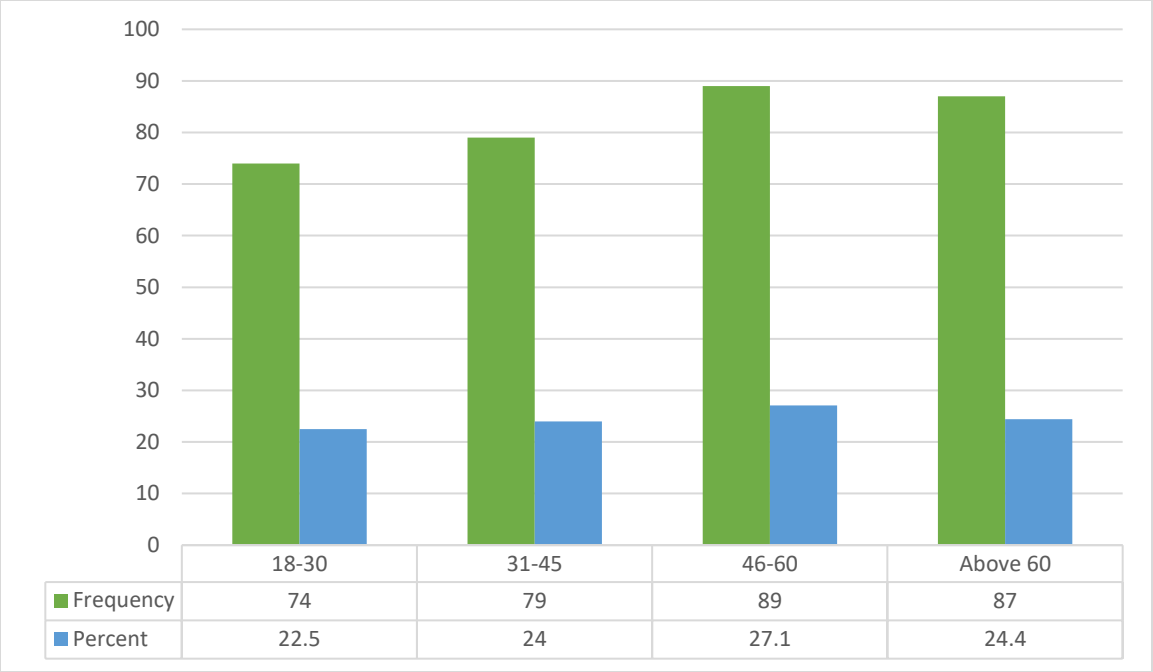
The KMO and Bartlett's Test results indicate strong suitability of the data for factor analysis. The Kaiser-Meyer-Olkin measure of sampling adequacy at 0.873 exceeds the recommended threshold of 0.6, indicating excellent sampling adequacy and suggesting that the patterns of correlations are relatively compact, making factor analysis appropriate for this data. Furthermore, Bartlett's Test of Sphericity yielded a significant result ($\chi^2 = 2458.34$, df = 325). These results collectively demonstrate that the study's data structure is highly appropriate for factor analysis, validating the subsequent examination of relationships between socioeconomic factors, agricultural policies, and social networks affecting subsistence farmers' growth potential in Kanakantapa.

4.3 Demographic Information

This section presents the demographic characteristics of the respondents who participated in the study. The analysis includes key demographic variables including age, gender, education level, farming experience, and farm size. Understanding these demographic patterns is essential for contextualizing the study findings and developing targeted interventions for subsistence farmers in Kanakantapa.

4.3.1 Age

The age distribution of respondents was analysed to understand the generational composition of subsistence farmers in Kanakantapa. Age is a key factor that can influence farming practices, adoption of new technologies, and overall growth potential in agricultural activities.



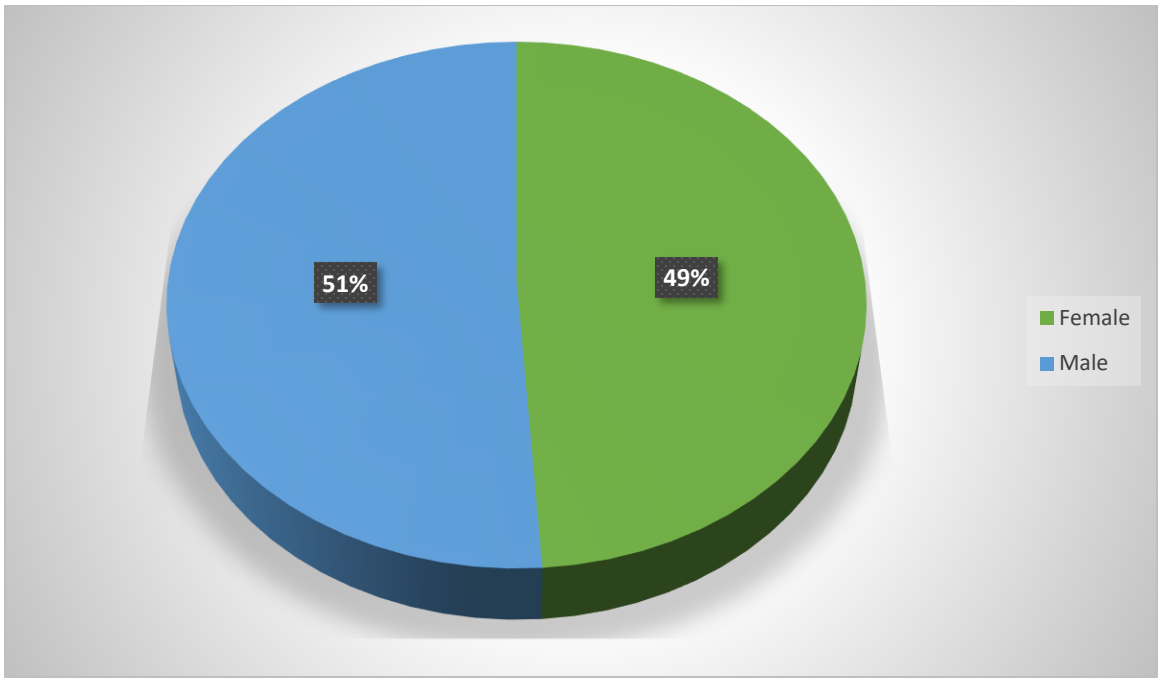
Source: Author (2024)

Figure 4.1: Age of the Respondents

The age distribution of respondents reveals that over half (53.5%) of farmers in Kanakantapa are above 45 years old, with 27.1% aged 46-60 and 26.4% above 60 years. The younger farming population (18-30 years) represents only 22.5%. These findings have significant implications for agricultural development in the area. The dominance of older farmers suggests potential resistance to adopting new farming technologies and practices, while the lower representation of young farmers indicates possible challenges in the long-term sustainability of farming activities. This age structure may affect the implementation of agricultural policies and the adoption of innovative farming methods.

4.3.2 Gender

The gender distribution among respondents was examined to understand the representation of male and female farmers in Kanakantapa. Gender analysis in agricultural activities is important for understanding access to resources, decision-making patterns, and designing inclusive agricultural programs.



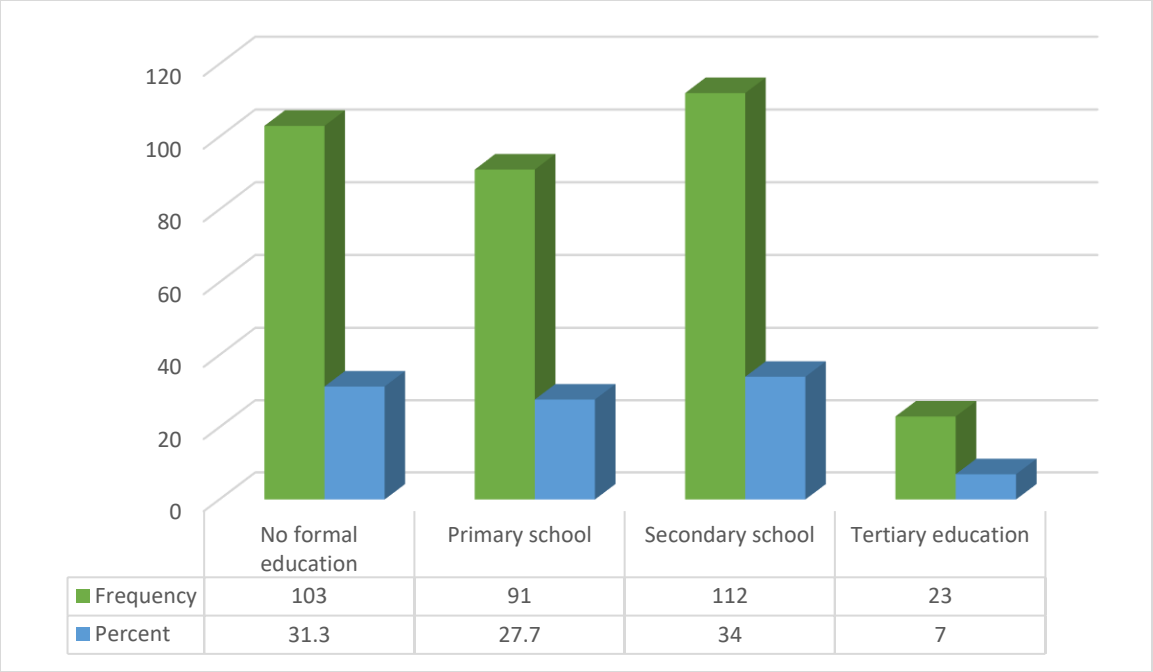
Source: Author (2024)

Figure 4.2: Gender Distribution of the Respondents

The near-equal gender distribution among respondents (51.1% male, 48.9% female) demonstrates balanced gender representation in farming activities in Kanakantapa. This finding has important implications for agricultural policy and program design. It suggests that both men and women are actively engaged in farming, indicating the need for gender-sensitive approaches in agricultural interventions. The balanced representation also implies that support programs should consider the specific needs and challenges faced by both male and female farmers, ensuring equitable access to resources, training, and market opportunities. This gender parity could facilitate more inclusive and effective agricultural development initiatives.

4.3.3 Education

The educational background of respondents was analysed to understand the human capital available within the farming community. Education levels can significantly influence farmers' ability to adopt new technologies, access information, and engage with agricultural support services.



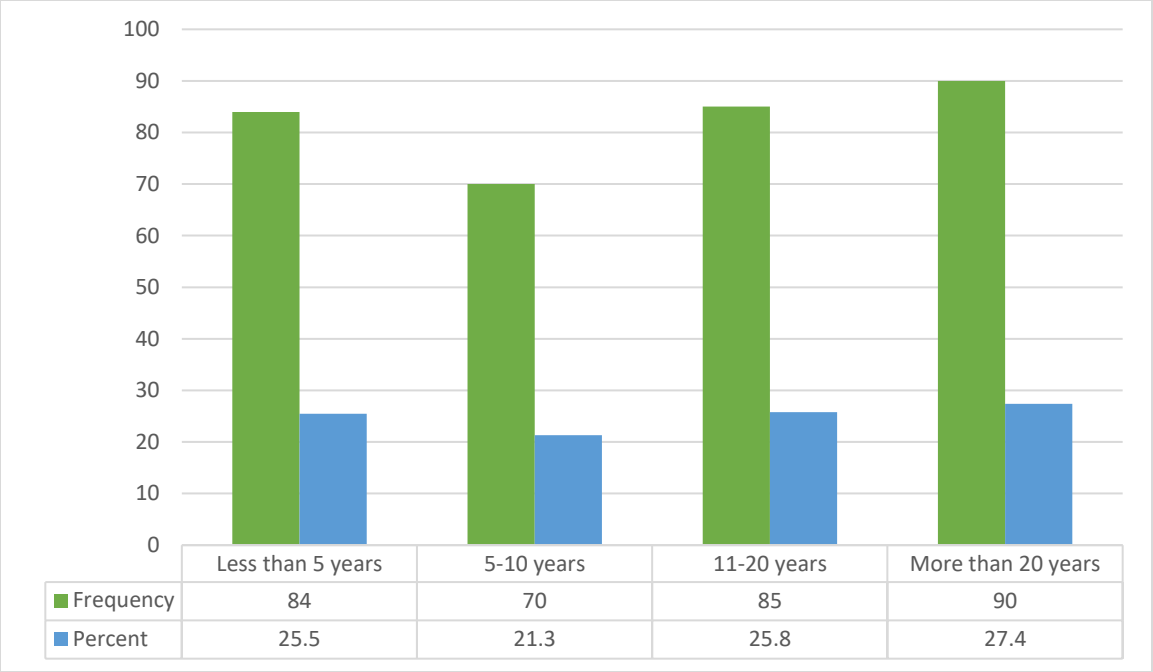
Source: Author (2024)

Figure 4.3: Educational Profile of the Respondents

The educational profile of farmers in Kanakantapa reveals significant developmental implications, with only 41% having achieved secondary education or higher (34% secondary, 7% tertiary). A substantial proportion (31.3%) have no formal education, while 27.7% completed only primary school. These findings have critical implications for agricultural development and growth potential. The low education levels may impede farmers' ability to understand and adopt modern farming techniques, access financial services, interpret market information, and engage with agricultural extension services effectively. This educational constraint could significantly affect the success of agricultural development programs and the farmers' capacity to transition from subsistence to more commercially oriented farming. Furthermore, the high percentage of farmers without formal education suggests a need for specialized training approaches and simplified agricultural information dissemination methods to ensure effective knowledge transfer and skill development in the farming community.

4.3.4 Farming Experience

The analysis of farming experience provides insight into the agricultural knowledge and expertise present in Kanakantapa. This factor is crucial for understanding farmers' accumulated skills, traditional knowledge, and potential adaptation to new farming practices.



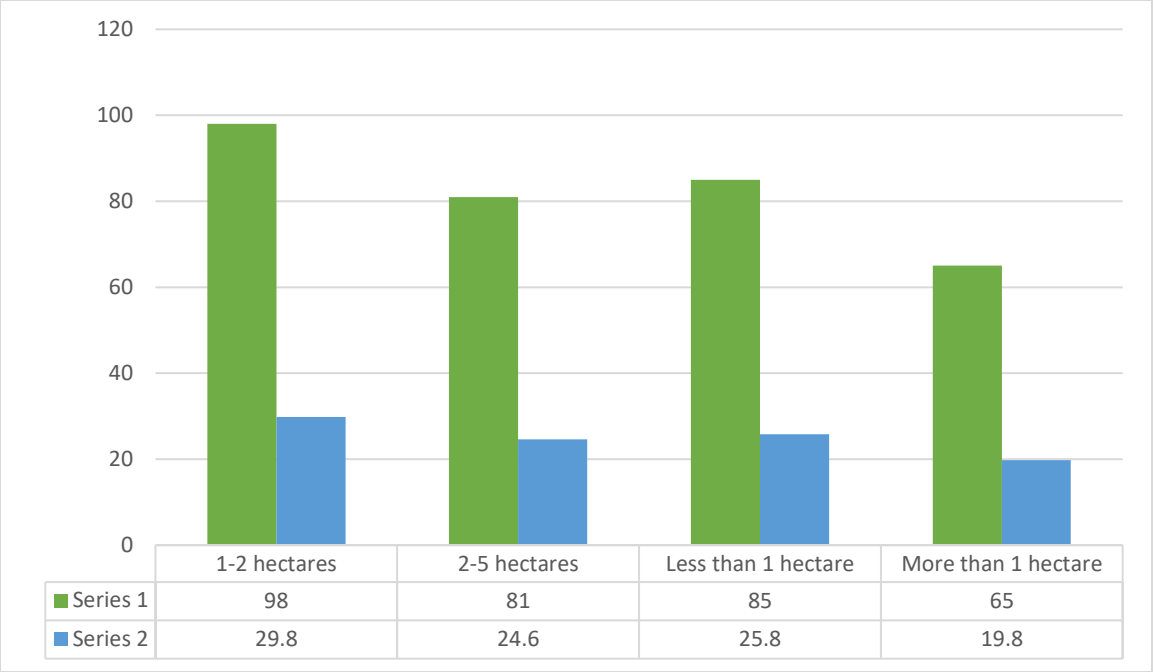
Source: Author (2024)

Figure 4.4: Farming Experience of the Respondents

The distribution of farming experience in Kanakantapa provides important implications for agricultural development, with 27.4% having over 20 years of experience and 25.8% having 11-20 years. However, a significant proportion (46.8%) have less than 10 years of experience, with 25.5% being relatively new farmers with less than 5 years. These findings suggest a mix of traditional farming knowledge and potential openness to new practices. The substantial presence of experienced farmers represents valuable indigenous knowledge and established farming practices, while the high percentage of newer farmers indicates potential for adopting innovative agricultural methods. This diverse experience profile has implications for designing targeted training programs and knowledge-sharing initiatives that can leverage experienced farmers' expertise while supporting newer farmers' development.

4.3.5 Farm Size

Farm size analysis examines the scale of farming operations in Kanakantapa. This aspect is important for understanding production capacity, resource utilization, and potential for agricultural expansion among subsistence farmers.



Source: Author (2024)

Figure 4.5: Farm Size Distribution of the Respondents

The farm size distribution reveals structural challenges in Kanakantapa's agricultural sector, with 54.4% of farmers operating on less than 2 hectares (29.8% below 1 hectare, 24.6% between 1-2 hectares). Only 19.8% of farmers possess more than 5 hectares, indicating limited potential for economies of scale. These findings have significant implications for farmers' growth potential and commercial viability. The predominance of small farm sizes suggests constraints on production capacity, mechanization potential, and market competitiveness. This land constraint likely affects farmers' ability to access credit, adopt certain technologies, and transition from subsistence to commercial farming. The findings indicate a need for policies and interventions that can help farmers optimize production on small landholdings or facilitate land consolidation opportunities.

4.4 Descriptive Statistics

This section presents the descriptive analysis of the key variables in the study following analytical approaches recommended by Field (2018) and Tabachnick and Fidell (2014). The analysis examines the central tendencies and distributions of responses regarding agricultural policies, social networks and community structures, and socioeconomic factors affecting subsistence farmers in Kanakantapa. These initial analyses provide a foundation for understanding patterns in the data before proceeding to more advanced statistical tests.

4.4.1 Mean Score Interpretation Scale

The study employed a standardized interpretation scale for analyzing Likert-scale responses, following guidelines established by Hair et al. (2019). The five-po87

int scale categorizes mean scores where 1.00-1.50 represents very low agreement, 1.51-2.50 represents low agreement, 2.51-3.50 represents moderate agreement, 3.51-4.50 represents high agreement, and 4.51-5.00 represents very high agreement. This standardized interpretation framework ensures consistent analysis and meaningful comparison of responses across different variables, allowing for clear assessment of the relative strength of agreement with various statements regarding agricultural policies, social networks, and socioeconomic factors affecting subsistence farmers in Kanakantapa.

Table 4.7: Mean Score Interpretation Scale

Weight	Mean range	Verbal interpretation
1	4.51 – 5.00	Strongly Agree
2	3.51 – 4.50	Agree
3	2.51 – 3.50	Neutral
4	1.51 – 2.50	Disagree
5	1.00 – 1.50	Strongly Disagree

Source: Moraga (2012)

The study adopts Moraga's (2012) methodological framework to analyze socioeconomic factors affecting subsistence farmers' growth potential in Kanakantapa, Chongwe District. A systematic five-point scale guides the interpretation of mean scores: strongly agree (4.51-5.00), agree (3.51-4.50), neutral (2.51-3.50), disagree (1.51-2.50), and strongly disagree (1.00-1.50). This structured approach enables consistent analysis across multiple variables, providing clear understanding of the factors influencing farmers' growth potential. The framework's systematic nature strengthens the methodological foundation of the study, supporting reliable interpretation of results and facilitating the development of evidence-based recommendations for improving subsistence farmers' growth potential in the study area.

4.4.2 Agricultural Policies

This section examines farmers' responses to questions about agricultural policy implementation and impact. The analysis focuses on aspects such as input subsidies, extension services, and policy

support mechanisms. The responses indicate farmers' perceptions of how current agricultural policies affect their farming practices and growth potential.

Table 4.4: Agricultural Policies

Agricultural Policies			
Statement	**N**	**Mean**	**SD**
The government's agricultural policies have positively impacted my farming practices.	329	3.02	1.397
I have benefited from government-provided agricultural subsidies.	329	2.93	1.406
Extension services provided by the government have improved my farming knowledge.	329	2.99	1.368
Market access has improved due to government initiatives.	329	2.90	1.415
The government's efforts to promote climate-smart agriculture have been beneficial to my farm.	329	2.93	1.448
Agricultural policies have encouraged diversification of my farming activities.	329	2.98	1.413
Government support for irrigation development has positively impacted my farm's productivity.	329	2.91	1.423
Policies promoting value addition for agricultural products have increased my income.	329	3.07	1.401
Overall, agricultural policies have contributed to the growth potential of my farming activities.	329	3.13	1.437
Valid N (listwise)	329		

Source: Author (2024)

The descriptive statistics reveal moderate to slightly negative perceptions of agricultural policy impact among subsistence farmers in Kanakantapa. With mean scores hovering around the midpoint (3.0) and high standard deviations (>1.3), the findings suggest considerable variation in farmers' experiences with agricultural policies.

The highest mean score (3.13) for the overall contribution of agricultural policies to farming growth potential indicates a marginally positive assessment. However, the high standard deviation (1.437) suggests significant disagreement among respondents about this impact. Similarly, policies

promoting value addition scored relatively higher (3.07), suggesting some success in helping farmers increase income through processing and marketing improvements. These findings imply that while some farmers have benefited from these policies, the benefits are not uniformly experienced across the farming community.

Lower mean scores for government-provided agricultural subsidies (2.93), market access initiatives (2.90), and irrigation development support (2.91) indicate areas of concern. These findings suggest that key policy interventions aimed at supporting fundamental aspects of agricultural development are not meeting farmers' needs effectively. The relatively high standard deviations for these items (ranging from 1.406 to 1.423) further indicate inconsistent policy implementation or access to benefits among farmers.

The implications of these findings are significant. First, they suggest a need for more targeted and consistent policy implementation to ensure broader reach and impact. Second, the high variability in responses indicates potential inequities in policy benefits that need to be addressed. Third, the lower scores for basic agricultural support mechanisms suggest a need to reassess and strengthen these fundamental interventions. These findings point to a clear need for policy reforms that can more effectively support subsistence farmers' growth potential, with particular attention to ensuring more equitable access to benefits and strengthening basic agricultural support services.

4.4.3 Social Networks and Community Structures

This section examines how farmers connect with and benefit from social and community structures in Kanakantapa. The analysis focuses on farmers' participation in cooperatives, community groups, and knowledge sharing networks, along with the influence of traditional leadership. The assessment of these social connections and organizational structures reveals their role in shaping farming practices and agricultural development in the area.

Table 4.5: Social Networks and Community Structures

Social Networks and Community Structures			
Statement	**N**	**Mean**	**SD**
Being part of a farmers' cooperative has improved my access to resources and information.	329	3.13	1.412
Community savings groups have helped me invest in my farming activities.	329	3.02	1.410
I regularly share farming knowledge and experiences with other farmers in my community.	329	3.00	1.402
Local agricultural associations have played a crucial role in improving my farming practices.	329	2.87	1.382
Community leaders actively support and promote agricultural development initiatives.	329	3.06	1.382
Participating in farmer field schools has enhanced my agricultural skills.	329	2.99	1.483
Social networks in my community facilitate better access to markets for my produce.	329	2.95	1.406
I have adopted new farming techniques based on recommendations from other farmers.	329	3.01	1.461
Community-based organizations have helped me access farming inputs more easily.	329	3.04	1.474
My involvement in local farmer groups has increased my bargaining power in the market.	329	3.01	1.403
Overall, social networks and community structures have positively influenced my farm's growth.	329	3.02	1.443
Valid N (listwise)	329		

Source: Author (2024)

The descriptive statistics regarding social networks and community structures reveal moderate levels of perceived benefit among subsistence farmers in Kanakantapa. The findings show mean

scores clustering around 3.0, with consistently high standard deviations exceeding 1.3, indicating substantial variation in farmers' experiences with social and community support systems.

Membership in farmers' cooperatives emerged as the most positively rated aspect (mean = 3.13), suggesting that cooperative structures provide relatively better access to resources and information. However, the high standard deviation (1.412) indicates that these benefits are not uniformly experienced across the farming community. This finding has important implications for policy makers and development practitioners, suggesting a need to strengthen and potentially replicate successful cooperative models while addressing factors that may limit some farmers' ability to benefit from these structures.

The lowest mean score (2.87) for local agricultural associations' role in improving farming practices signals a potential weakness in formal agricultural support networks. This finding implies a need to reassess and strengthen the effectiveness of these associations in delivering practical value to farmers. Notably, informal networks appear to function relatively better, as indicated by the higher scores for community savings groups (3.02) and knowledge sharing (3.00).

The overall assessment of social networks' influence on farm growth (mean = 3.02, SD = 1.443) suggests a moderately positive but highly variable impact. This finding has several key implications: first, it indicates that social networks hold potential as mechanisms for agricultural development; second, the high variability suggests inequitable access to or benefit from these networks; and third, there is a clear need for interventions to strengthen and formalize successful networking practices while ensuring more uniform access to their benefits across the farming community. These findings suggest that policy interventions should focus on both strengthening existing social networks and ensuring more equitable access to their benefits.

4.4.4 Socioeconomic Factors

This section examines the socioeconomic conditions affecting farmers' agricultural practices and growth potential. The analysis includes factors such as education levels, farm size, and access to resources, providing insights into the basic conditions that influence farming outcomes.

Table 4.6: Socioeconomic Factors

Socioeconomic Factors			
Statement	**N**	**Mean**	**SD**
My level of education significantly impacts my farming decisions and practices.	329	2.90	1.446
Access to credit is a major factor in my ability to invest in and grow my farm.	329	3.15	1.411
The size of my household affects the labour available for farming activities.	329	3.14	1.370
Off-farm income opportunities have a significant impact on my farming investments.	329	2.91	1.400
My age influences my ability to adopt new farming technologies and practices.	329	2.94	1.359
The distance to markets affects my ability to sell my produce profitably.	329	3.03	1.410
Access to reliable transportation significantly impacts my farming activities.	329	2.88	1.390
My farm's productivity is limited by the quality of the soil on my land.	329	3.02	1.404
Climate variability and extreme weather events significantly affect my farm's performance.	329	2.94	1.396
My gender influences my access to resources and decision-making in farming.	329	2.94	1.394
Generally, my socioeconomic status significantly impacts my farm's growth potential.	329	2.86	1.366
Valid N (listwise)	329		

Source: Author (2024)

The socioeconomic factors affecting farming practices and growth potential in Kanakantapa demonstrate complex patterns of influence. Access to credit emerged as the most significant factor with a mean score of 3.15, underscoring its fundamental role in enabling farm investments and growth. This finding reflects the critical importance of financial capital in agricultural

development, particularly for subsistence farmers who often lack the resources needed for meaningful farm improvements. The high standard deviation (1.411) suggests considerable variation in credit access among farmers, pointing to potential inequities in financial service provision within the community. This variation indicates a need for more inclusive financial systems that can effectively serve diverse farmer segments.

Labour dynamics and resource accessibility show substantial impact on farming operations. Household labour availability (mean = 3.14, SD = 1.370) ranked as the second most influential factor, highlighting the critical role of human capital in agricultural production. The relationship between market access (mean = 3.03) and transportation accessibility (mean = 2.88) reveals a significant infrastructure gap affecting farmers' ability to participate in markets effectively. This disparity suggests that while markets might be physically present, inadequate transportation infrastructure creates barriers to market participation. The influence of soil quality (mean = 3.02) further emphasizes how natural resource endowments interact with other socioeconomic factors to determine farming outcomes.

Personal and demographic characteristics demonstrate noteworthy but varied influences on farming practices. The similar mean scores for education (2.90), age (2.94), and gender (2.94), coupled with their high standard deviations, indicate that these factors affect farmers differently based on individual circumstances. The moderate influence of off-farm income opportunities (mean = 2.91) suggests that income diversification plays a complementary role in farming investment decisions. These findings point to the need for targeted interventions that consider the heterogeneous nature of the farming population and the varying ways in which personal characteristics interact with other socioeconomic factors to influence agricultural outcomes. The relatively low score for overall socioeconomic status impact (mean = 2.86) suggests that while individual factors matter, their combined effect might be more complex than simply additive.

4.4.5: Summary of Variable Means

This section provides an overview of the average responses across all three main variables. The analysis compares the relative strength of each factor's influence on farmers' growth potential, establishing a baseline understanding of which factors show the strongest presence in the farming community.

Table 4.7: Summary of Variable Means

Variable	N	Mean	Std. Deviation
Agricultural Policies (AP)	329	2.98	1.412
Social Networks and Community Structures (SN)	329	3.00	1.415
Socioeconomic Factors (SF)	329	2.97	1.395
Valid N (listwise)	329		

Source: Author (2024)

The analysis of variable means reveals moderate levels of influence across all three key variables affecting subsistence farmers' growth potential in Kanakantapa. Social Networks and Community Structures showed the highest mean score (3.00, SD = 1.415), followed closely by Agricultural Policies (2.98, SD = 1.412) and Socioeconomic Factors (2.97, SD = 1.395). The consistently high standard deviations (all above 1.39) indicate substantial variation in respondents' experiences with these factors. These findings suggest that while all three variables have notable influence on farmers' growth potential, there is considerable variability in how different farmers experience and benefit from these factors. This variation implies a need for more targeted interventions that consider the diverse circumstances of different farmers in the community.

4.6 Qualitative findings from the Ministry of Agriculture

4.6.1 Agricultural Policies

The recent agricultural policies for subsistence farmers in Kanakantapa are described as targeted, locally-focused, multi-dimensional, and participatory. The Ministry has redesigned programs to specifically address local farming needs, enhanced extension services, improved market access, and developed financial support mechanisms. The policies aim to create a supportive environment for subsistence farmers' growth through various complementary interventions. One participant emphasized:

> "*Our recent policies have been completely redesigned with subsistence farmers in mind. We've adjusted the FISP qualification criteria and expanded the range of supported crops to ensure better targeting and promote diversification among smallholder farmers in Kanakantapa*."

Another participant highlighted:

"*We've restructured our approach to be more locally focused. Each agricultural block now has dedicated extension officers who understand the specific challenges and opportunities in their areas. This allows for more targeted and effective support*."

A third participant noted:

"*The new policy framework emphasizes practical, hands-on support through demonstration plots within farming communities. This ensures that the technologies and methods we promote are appropriate for local conditions and readily adoptable by farmers*."

Another key informant added:

"*Our policies now take a more integrated approach, combining input support with market linkages. We've established collection centres in Kanakantapa and organized marketing groups to help farmers access better markets and achieve better prices for their produce*."

The final participant concluded:

"The current policy framework actively supports the formation of village savings groups and includes partnerships with financial institutions to develop products specifically designed for subsistence farmers. This addresses one of the key barriers to growth - access to finance."

When asked about mechanisms for monitoring and evaluating agricultural policy effectiveness in Kanakantapa, respondents outlined their assessment methods. Extension officers collect monthly data on crop yields, technology adoption, and market activity. Regular farmer surveys and focus groups provide feedback on program impacts. A database tracks progress indicator in each farming block, measuring changes in productivity and income levels. Community leaders and farmer representatives participate in quarterly reviews. The results help adjust programs to better serve farmers' needs. One participant shared:

"*We have established a comprehensive monitoring system where extension officers collect monthly data on key indicators including crop yields, adoption of new technologies, and market participation rates. This helps us track the immediate impacts of our interventions*."

Another participant explained:

"*Our evaluation process includes regular farmer surveys and focus group discussions to gather qualitative feedback. We've found this particularly useful in understanding how policies affect different groups of farmers and identifying areas for improvement*."

A third participant noted:

"*We maintain a database of baseline and progress indicators for each farming block. This allows us to measure changes in productivity, income levels, and other growth metrics over time and assess the effectiveness of specific policy interventions*."

Another key informant elaborated:

"*The monitoring system involves quarterly reviews with community leaders and farmer representatives. Their input helps us understand the practical challenges in policy implementation and make necessary adjustments*."

The final participant added:

"*We've implemented a results-based monitoring framework that tracks not just output indicators but also outcomes in terms of farmers' growth potential. This includes measuring changes in asset ownership, investment in farm improvements, and market engagement levels*."

When asked about the most successful policy interventions supporting subsistence farmers' transition in Kanakantapa, the respondents established that these focus on integrated support mechanisms combining resource access, capacity building, and market linkages. The integration of these three components has proven crucial for sustainable agricultural development. Resource access ensures farmers have necessary inputs and equipment, capacity building provides essential knowledge and skills, while market linkages create opportunities for increased income. One participant explained:

"The revamped input support system, particularly the e-voucher program, has been highly successful. It gives farmers flexibility in input selection while ensuring timely access to quality agricultural inputs. We've seen significant improvements in productivity among participating farmers."

Another participant stated:

"*Our farmer field school program has proven particularly effective. By combining practical training with demonstration plots, we've successfully helped farmers adopt improved farming practices. Many participants have doubled their yields within two growing seasons*."

A third participant emphasized:

"*The market linkage initiative, connecting farmers to reliable buyers through organized marketing groups, has transformed how farmers approach production. Now they plan their farming activities with specific market requirements in mind*."

Another key informant shared:

> "*The establishment of community agro-dealers has been a game-changer. Having input suppliers within walking distance has significantly improved farmers' access to agricultural supplies and technical advice*."

The final participant observed:

> "*The village savings and lending groups, combined with financial literacy training, have helped farmers better manage their resources and invest in their farms. We're seeing more farmers transitioning from purely subsistence to semi-commercial farming*."

4.6.2 Social Networks and Community Structures

When asked about the Ministry of Agriculture's engagement with social networks and community structures, the respondents revealed that collaboration with existing local institutions plays a crucial role in promoting agricultural development in Kanakantapa. The Ministry leverages established community networks, traditional leadership structures, and farmer organizations to implement its programs effectively. One participant explained:

> "*We work closely with traditional leaders to identify and mobilize lead farmers in each community. These farmers then act as demonstration hosts and peer trainers, which has proven more effective than direct extension alone*."

Another participant stated:

> "*Our approach leverages existing women's groups and youth clubs, integrating agricultural training into their regular activities. This has helped us reach more farmers and ensure sustained participation in development programs*."

A third participant described:

> "*We've found that working through established farmer cooperatives significantly improves program uptake. When new initiatives are introduced through these trusted structures, farmers are more receptive and implementation is smoother*."

Another key informant shared:

> "*The Ministry actively supports informal farmer-to-farmer learning networks. We provide technical backing to successful farmers who then share their knowledge with others in their community networks*."

The final participant noted:

"*Our engagement with local savings groups has been particularly effective. These groups not only help with financial services but also serve as platforms for sharing agricultural information and coordinating farming activities*."

When asked about the role of farmer cooperatives and community-based organizations in Kanakantapa, respondents established that these organizations significantly influence agricultural development through collective action, resource sharing, and knowledge dissemination. Their effectiveness stems from their ability to harness community resources and social capital for agricultural development. One participant emphasized:

"*Cooperatives have become essential hubs for bulk input procurement and collective marketing. They've helped farmers negotiate better prices and reduce transaction costs, making farming more profitable for their members*."

Another participant observed:

"*These organizations serve as effective channels for knowledge transfer. When new farming practices are introduced through cooperatives, we see faster adoption rates because farmers trust and learn from their peers*."

A third participant shared:

"*Community-based organizations have been instrumental in mobilizing local resources. They've helped establish community seed banks and equipment sharing schemes that make improved technologies accessible to more farmers*."

Another key informant stated:

"*Cooperatives are becoming important platforms for value addition. Several groups have started processing activities, helping members move up the agricultural value chain*."

The final participant noted:

"*These organizations play a crucial role in maintaining market linkages. Through collective action, they've helped farmers access and maintain relationships with larger buyers who wouldn't normally engage with individual smallholders*."

When asked about the role of farmer cooperatives and community-based organizations in Kanakantapa, respondents established that these organizations serve as critical platforms for agricultural development through their influence on collective action, resource sharing, and

knowledge dissemination. The organizations facilitate bulk input procurement, equipment sharing, collective marketing, and peer learning networks. Through cooperatives, farmers access better prices for inputs, share costly equipment, negotiate more favourable market terms, and learn improved farming practices from each other. One participant explained:

> "*We provide leadership and governance training to farmer groups. This has helped them develop strong organizational structures and improve their management capabilities for sustainable operation*."

Another participant shared:

> "*Our support includes seed funding for group initiatives. When farmers demonstrate commitment through their own contributions, we provide matching grants to help kickstart collective projects*."

A third participant described:

> "*We facilitate inter-group learning exchanges where successful farmer groups share their experiences with others. These peer-to-peer interactions have proven very effective in strengthening farmer networks*."

Another key informant highlighted:

> "*The Ministry organizes regular forums that bring different farmer groups together. These meetings help build connections between groups and often lead to collaborative ventures*."

The final participant noted:

> "*We've implemented a mentorship program where established groups guide newer ones. This approach has helped accelerate the development of new farmer organizations while strengthening existing networks*."

4.6.3 Socioeconomic Factors

When asked about the primary socioeconomic factors affecting subsistence farmers in Kanakantapa, respondents highlighted the interconnected nature of challenges influencing agricultural productivity and growth potential. Limited access to financial resources constrains farmers' ability to invest in improved inputs and technologies, while low education levels affect their capacity to adopt modern farming practices. The small size of landholdings, often less than two hectares, restricts production scale and commercial viability. Poor transportation infrastructure increases costs and limits market access, while inadequate storage facilities force farmers to sell at unfavourable prices. One participant stated:

"*Access to finance remains the biggest challenge. Many farmers lack collateral for loans and have limited savings capacity, which restricts their ability to invest in farm improvements or expand their operations*."

Another participant explained:

"*Education levels significantly impact farming practices. We've observed that farmers with basic education tend to adopt new technologies more readily and manage their farms more effectively*."

A third participant highlighted:

"*Land ownership and size are important factors. Most farmers operate on small plots, often less than two hectares, which limits their production capacity and ability to achieve economies of scale*."

Another key informant shared:

"*Market access is a major constraint. Poor road infrastructure and limited transportation options make it difficult for farmers to reach profitable markets, affecting their income potential*."

The final participant observed:

"*Household labour availability affects production capacity. Many younger people are moving away from farming, leaving older family members to manage agricultural activities with limited labour resources*."

When asked about how socioeconomic factors influence agricultural policy design and implementation in Kanakantapa, respondents emphasized the importance of tailoring interventions to local conditions. Education levels require policies to focus on practical demonstrations rather than written materials, while limited farm sizes necessitate emphasis on intensive farming methods and high-value crops. Financial constraints have led to flexible payment options for input support, and transportation challenges have prompted the establishment of local collection centres. Labour shortages among aging farmers have influenced technology recommendations toward labour-saving practices. One participant explained:

"*We've had to redesign our training programs to account for varying education levels. Now we use more practical demonstrations and visual aids rather than written materials to ensure all farmers can benefit from the training*."

Another participant emphasized:

"*The limited farm sizes have led us to focus policies on intensive farming methods and high-value crops. We promote technologies that can maximize production on small plots while maintaining soil fertility*."

A third participant noted:

"*Understanding the financial constraints has shaped our approach to input support. We now include flexible payment options and encourage group-based purchases to make inputs more accessible*."

Another key informant shared:

"*We've adapted our market linkage programs to address transportation challenges. This includes supporting the establishment of collection centres closer to farming communities*."

The final participant stated:

"*Labour constraints have influenced our technology recommendations. We now prioritize promoting labour-saving technologies and practices that are appropriate for households with limited labour availability*."

When asked about the Ministry's strategies to address socioeconomic challenges in Kanakantapa, respondents revealed that interventions combine cost-sharing approaches for agricultural inputs with targeted skills development. The Ministry implements programs that match farmers' contributions with subsidies while providing business training alongside agricultural techniques. Partnerships with microfinance institutions facilitate access to farmer-friendly loans, while youth mentorship programs address labour shortages and ensure knowledge transfer. Additionally, cluster farming initiatives help small-plot holders overcome land size limitations by promoting group-based approaches to production and marketing. One participant outlined:

"*We've implemented a cost-sharing approach for agricultural inputs. Farmers contribute what they can afford, and the Ministry subsidizes the remainder. This has made improved inputs accessible while maintaining farmers' dignity and commitment*."

Another participant detailed:

"*Our extension services now include business skills training alongside agricultural techniques. We teach farmers basic record-keeping, financial planning, and marketing skills to help them run their farms as businesses*."

A third participant explained:

"*We've established partnerships with microfinance institutions to develop farmer-friendly loan products. These loans have lower collateral requirements and repayment schedules aligned with farming seasons*."

Another key informant shared:

> "*The Ministry has introduced a youth mentorship program that pairs experienced farmers with young people interested in agriculture. This helps address the labour shortage while ensuring knowledge transfer across generations*."

The final participant described:

> "*We've developed cluster farming initiatives where farmers with small plots work together as groups. This helps them overcome the limitations of small land sizes and access services that would be uneconomical individually*."

4.7 Qualitative Findings from the District Council Officials

4.7.1 Effects of Agricultural Policies

When asked about coordination between the District Council and Ministry of Agriculture in implementing agricultural policies in Kanakantapa, respondents highlighted the structured collaboration between these institutions. Quarterly joint planning meetings facilitate alignment of development plans with agricultural priorities, while a district agricultural committee brings together representatives for monthly coordination. A shared monitoring framework enables joint field visits and timely program adjustments. The physical co-location of staff in council premises supports daily coordination, while an integrated farmer database prevents duplication of efforts. One participant explained:

> "*We have established quarterly joint planning meetings where Council and Ministry officials review implementation progress and align our activities. This helps us ensure our infrastructure development supports agricultural priorities*."

Another participant shared:

> "*Our district agricultural committee brings together representatives from both institutions to oversee policy implementation ... we meet to coordinate activities and resolve any implementation challenges*."

A third participant noted:

> "*We have developed a shared monitoring framework where both Council and Ministry staff participate in field visits. This helps us identify gaps and make timely adjustments to our support programs*."

Another key informant described:

"*The Council allocates office space to Ministry extension staff within our premises. This physical proximity facilitates daily coordination and quick response to emerging issues*."

The final participant observed:

"*We maintain an integrated database of farmers that both institutions use for planning. This helps us avoid duplication and ensure equitable distribution of support across the area*."

When asked about the District Council's role in monitoring and evaluating agricultural programs in Kanakantapa, respondents described systematic procedures for tracking program implementation and impact. Quarterly monitoring visits by ward development committees gather farmer feedback, while a performance tracking system measures key indicators like program outreach and infrastructure development. A direct feedback mechanism allows farmers to report implementation issues promptly. Regular community meetings assess program impacts, and joint evaluations with the Ministry ensure both technical and social aspects are captured. One participant explained:

"*We conduct quarterly monitoring visits to agricultural projects, assessing progress and challenges. Our ward development committees collect regular feedback from farmers, which helps us evaluate program effectiveness*."

Another participant shared:

"*The Council maintains a performance tracking system that measures key indicators like program outreach, input distribution, and infrastructure development. We share these reports with stakeholders during our coordination meetings*."

A third participant noted:

"*We've established a feedback mechanism where farmers can report implementation issues directly to our monitoring team. This helps us identify and address problems quickly*."

Another key informant described:

"*Our evaluation process includes regular community meetings where farmers discuss program impacts. These discussions help us understand what's working and what needs adjustment*."

The final participant emphasized:

"*We collaborate with the Ministry to conduct joint impact assessments. This combined approach ensures we capture both technical and social aspects of program implementation*."

When asked about the utilization of Constituency Development Funds (CDF) for agricultural development in Kanakantapa, respondents highlighted the targeted investment in farming infrastructure and support services. CDF allocations prioritize construction of market shelters and storage facilities to reduce post-harvest losses, while investment in agricultural training centres facilitates farmer capacity building. Road infrastructure improvements focus on connecting farming areas to markets. Small grants support farmer groups in acquiring equipment, and water infrastructure development includes borehole drilling and irrigation systems in critical areas. One participant explained:

"*We prioritize agricultural infrastructure in our CDF allocations. Last season, we funded the construction of three market shelters and a storage facility to help farmers reduce post-harvest losses and improve market access*."

Another participant shared:

"*We've allocated CDF to establish agricultural training centres in key farming zones. These centres provide spaces for farmer training and demonstration plots where new farming methods are showcased*."

A third participant noted:

"*Through CDF, we're improving farm access roads. We've identified critical routes that connect major farming areas to markets and prioritized these for upgrading to all-weather status*."

Another key informant described:

"*We use part of the CDF to support farmer groups with small grants for agricultural projects. These matching grants help farmers acquire equipment and improve their production capacity*."

The final participant emphasized:

"*CDF has been instrumental in developing water infrastructure for farming. We've funded the drilling of boreholes and construction of small irrigation systems in areas where water access is critical*."

4.7.2 Social Networks and Community Structures

When asked about the Council's engagement with traditional leadership and community structures in agricultural development planning, respondents described their integrated approach in Kanakantapa. Traditional leaders serve on ward development committees and attend monthly planning sessions to guide land allocation decisions and address farming challenges. Their role in community mobilization strengthens project outcomes, while their involvement in resolving land and water disputes ensures effective implementation. The advisory committee's quarterly reviews incorporate local wisdom into agricultural planning, supporting better program delivery at the community level. One participant explained:

> "*We've integrated traditional leaders into our ward development committees. Before implementing any agricultural project, we first consult with chiefs and village headmen to ensure alignment with community needs*."

Another participant shared:

> "*Monthly meetings with traditional leaders help us understand land allocation patterns and farming challenges. Their insights guide our infrastructure development decisions and resource allocation*."

A third participant noted:

> "*We work through traditional structures to mobilize community participation in agricultural projects. When chiefs endorse initiatives, we see much better community involvement and project success rates*."

Another key informant described:

> "*Traditional leaders help resolve conflicts that might affect agricultural development, especially regarding land use and water rights. Their involvement ensures smooth project implementation*."

The final participant emphasized:

> "*We've created a traditional leaders' advisory committee that meets quarterly to review agricultural development plans. Their local knowledge helps us avoid potential implementation pitfalls and ensure cultural sensitivity*."

When asked about the Council's support to farmer organizations and cooperatives in Kanakantapa, respondents outlined key support areas that enhance agricultural development. Training programs

cover organizational management and financial literacy, while a dedicated desk helps groups with registration requirements. The Council connects groups to markets and financial opportunities, provides meeting facilities, and assists with funding applications. These services help farmer groups organize effectively, access resources, and develop sustainable operations that benefit their members. One participant explained:

> "*We provide capacity building support through training in organizational management and financial literacy. Most cooperatives start with enthusiasm but struggle with management, so we help them develop proper systems*."

Another participant shared:

> "*The Council assists cooperatives with registration and compliance requirements. We've simplified the process by creating a one-stop desk where groups can get all the guidance they need to formalize their operations*."

A third participant noted:

> "*We link farmer organizations to markets and financial institutions. Through our business development unit, we help cooperatives develop business plans and connect them with reliable buyers*."

Another key informant described:

> "*Our support includes providing meeting spaces and basic office facilities to farmer groups. We've allocated rooms in our community halls where cooperatives can conduct their business properly*."

The final participant emphasized:

> "*We help cooperatives access funding opportunities through various government programs. Our officers assist in proposal writing and guide groups through application processes for agricultural support programs*."

When asked about the Council's role in facilitating cooperation between agricultural stakeholders in Kanakantapa, respondents described the key coordination activities. Quarterly forums bring together farmers, suppliers, buyers, and service providers to build business relationships. The agricultural desk manages stakeholder information sharing and connections. Working groups for different value chains enable producers, processors, and marketers to plan together. The Council

links traditional authorities with modern agricultural services and coordinates development partners to improve resource use. One participant explained:

> "*We organize quarterly stakeholder forums where farmers, input suppliers, buyers, and service providers meet to discuss agricultural development. These meetings help create valuable business relationships and improve coordination*."

Another participant shared: "

> *Our agricultural desk maintains a database of all stakeholders and facilitates information sharing. When new opportunities arise, we quickly connect relevant parties and support joint initiatives*."

A third participant noted:

> "*We've established working groups for different agricultural value chains, bringing together producers, processors, and marketers. This has created more integrated approaches to agricultural development*."

Another key informant described:

> "*The Council acts as a bridge between traditional authorities and modern agricultural service providers. We help translate local needs into actionable projects that stakeholders can support*."

The final participant emphasized:

> "*We coordinate joint planning sessions where development partners can align their interventions. This has reduced duplication of efforts and improved resource use in supporting our farmers*."

4.7.3 Socioeconomic Factors

When asked about the Council's infrastructure development priorities in Kanakantapa, respondents described their key focus areas. Road upgrades connect farming areas to markets, reducing transport costs and travel time. Storage facilities with ventilation systems help farmers store produce longer. Water infrastructure includes boreholes and small dams with solar pumps for year-round farming. Market shelters provide concrete floors, drainage, and loading bays. Electricity extensions enable agricultural processing and value addition activities. These investments aim to boost farming activities and reduce post-harvest losses. One participant explained:

> "*We've prioritized road rehabilitation, focusing on farm-to-market roads. Last year, we upgraded three key routes connecting major farming areas to markets. This has reduced*

transport costs by half and cut travel time significantly. Farmers can now transport fresh produce more quickly, and traders are more willing to come to our area."

Another participant shared:

"*Storage infrastructure development has transformed how farmers sell their produce. We've constructed two community storage facilities with proper ventilation and pest control systems. Farmers can now store their harvest safely for longer periods and negotiate better prices. The facilities also serve as collection points for bulk buyers*."

A third participant noted:

"*Water infrastructure investment has made year-round farming possible. We've drilled six boreholes and constructed two small dams in strategic locations. These water points serve both farming and livestock needs. We've also installed solar pumps to ensure reliable water supply even in areas without electricity*."

Another key informant described:

"*Market infrastructure development includes new market shelters with concrete floors, proper drainage, and loading bays. We've installed weighing scales and built basic sanitation facilities. The improved conditions have attracted more buyers and sellers, creating a more vibrant trading environment. Security lighting allows for extended trading hours*."

The final participant emphasized:

"Electricity infrastructure extension has enabled agricultural processing activities. We've connected power to three farming blocks where farmers are setting up processing units. This has allowed for mechanization of certain farming activities and enabled value addition. Several farmers now operate grain mills and oil presses."

When asked about how the Council addresses socioeconomic disparities in Kanakantapa, respondents outlined their planning and support methods where ward-based assessments identify vulnerable groups and areas with limited services. Development committees include women farmers, youth groups, and farmers with disabilities. Support levels vary based on need, with poorer farmers receiving higher input subsidies. Mobile service points reach remote areas, while mentorship programs connect experienced farmers with newcomers. The planning process considers factors like farm size, household income, and access to services when allocating resources.

One participant explained:

> "*We use a ward-based needs assessment system to identify vulnerable groups. Our planning prioritizes areas with limited access to basic services. We've created special support programs for women-headed households and youth farmers, including targeted training and input support. This helps level the playing field and gives disadvantaged groups better opportunities*."

Another participant shared:

> "*Our development committees include representatives from different socioeconomic groups. We ensure participation from women farmers, youth groups, and farmers with disabilities. When allocating resources, we consider factors like farm size, household income, and access to other support services. This helps us direct resources where they're needed most*."

A third participant noted:

> "*We've implemented a graduated support system where the most vulnerable receive higher levels of assistance. For example, poorer farmers get higher subsidies for agricultural inputs. We also provide extra technical support to farmers with limited education through specialized training programs that use local language and practical demonstrations*."

Another key informant described:

> "*Transportation challenges affect different areas differently, so we've mapped out priority zones. Remote areas receive additional support for input delivery and produce collection. We've also established mobile service points where agricultural extension officers and other service providers visit regularly to reach farmers who can't travel to the district centre*."

The final participant emphasized:

> "*Our planning considers generational differences in farming communities. We have specific programs for older farmers who need labour support and young farmers who need land access. We also facilitate mentorship arrangements where successful farmers guide others, helping bridge the gap between different socioeconomic groups*."

When asked about initiatives to enhance economic opportunities for subsistence farmers in Kanakantapa, respondents described their support activities where market linkage programs

connect farmers to buyers through the business centre, with farmers negotiating supply contracts at agricultural trade fairs. Skills training focuses on value addition, with groups now producing processed goods like sunflower oil and packaged groundnuts. New enterprises such as mushroom growing and beekeeping help farmers earn additional off-season income. Village banking groups provide financial services and literacy training, while marketing zones with collection centres help small-scale farmers access better markets. One participant explained:

> "*We've established market linkage programs connecting farmers to reliable buyers. Through our business centre, we help farmers identify market opportunities and negotiate fair prices. We also organize agricultural trade fairs where farmers can showcase their produce and meet potential buyers. Last month's fair resulted in five long-term supply contracts*."

Another participant shared:

> "*Our skills development program focuses on value addition. We've trained farmers in food processing techniques and helped them acquire basic processing equipment. Several groups now produce sunflower oil and package groundnuts for sale. These activities have increased their income significantly compared to selling raw produce*."

A third participant noted:

> "*We support diversification into high-value crops through demonstration plots and technical training. We've introduced farmers to mushroom growing and beekeeping, which require minimal land but offer good returns. These alternative enterprises have helped farmers earn additional income, especially during the off-season*."

Another key informant described:

> "*Access to finance has improved through our partnership with savings groups. We've helped establish 15 village banking groups where farmers save and borrow for agricultural investments. The groups also receive financial literacy training, helping members better manage their farming businesses and household finances*."

The final participant emphasized:

> "*We've created marketing zones where farmers can aggregate their produce and attract better prices. Each zone has a collection centre and basic storage facilities. This system has reduced individual marketing costs and improved farmers' bargaining power. Small-scale farmers can now access markets that were previously beyond their reach*."

4.8 Qualitative Findings from Community Leaders

4.8.1 Agricultural Policies

When asked about the effects of government agricultural policies on subsistence farmers in Kanakantapa, respondents detailed how these policies shape farming activities in the area, explaining that input support programs assist farmers with improved seeds and fertilizer access, though many struggles with required contributions. Extension services have improved farming methods despite limited officer coverage. The e-voucher system works better for tech-savvy younger farmers, while older farmers find it challenging to use. Storage facility shortages force farmers to sell at low prices, despite improved production. While conservation farming has boosted soil fertility, limited irrigation support restricts year-round farming potential. One participant explained:

> "*The government's input support program has helped some farmers access improved seeds and fertilizer, but the contribution requirements are still too high for many families. We've seen production improve among those who can participate, while others continue to struggle*."

Another participant observed:

> "*The extension services have made a difference in teaching new farming methods. However, with only two officers for our large area, many farmers still don't receive regular visits or timely advice when they need it*."

A third participant shared:

> "*The e-voucher system introduced by government has brought challenges for older farmers who aren't comfortable with technology. While it works well for younger farmers, many older ones have difficulty accessing their input support*."

Another key informant noted:

> "*Market policies haven't adequately addressed our needs. Farmers produce more now, but without reliable markets or storage facilities, many still sell at low prices to avoid losses*."

The final participant emphasized:

> "*Conservation farming policies have helped improve soil fertility and crop yields, especially during poor rainfall. But more support is needed for irrigation to reduce dependence on rain-fed agriculture*."

When asked about the impact of policy interventions in Kanakantapa, community leaders identified how different policies affect local farmers where FISP has improved input access, though cost-sharing requirements exclude poorer households. Conservation farming practices have maintained yields during poor rainfall seasons, but initial labour demands discourage some farmers. Agricultural credit schemes face implementation challenges as strict loan requirements exclude most farmers. Market linkage programs help farmers understand quality standards, though limited storage and transport infrastructure reduces potential benefits. Cooperative development has enhanced collective marketing, but groups need more support in governance and financial management. One participant explained:

> "*The FISP program has improved input access, but the cost-sharing requirements exclude many farmers who can't afford the contributions. We've seen some farmers increase their production while others fall further behind*."

Another participant shared:

> "*Conservation farming has been our most successful intervention. The soil management practices have helped farmers maintain yields even in poor rainfall seasons. However, the initial labour demands discourage some farmers*."

A third participant observed:

> "*The agricultural credit scheme has been challenging to implement. Most farmers don't qualify for loans due to strict requirements, and those who do often struggle with repayment due to uncertain harvests*."

Another key informant noted:

> "*Market linkage programs have helped farmers understand quality requirements and price negotiations. Yet without improved storage facilities and transport, we still lose value post-harvest*."

The final participant emphasized:

> "*The cooperative development policy has improved collective marketing, but we need more support in governance and financial management. Many groups struggle to maintain consistent operations*."

Asked about necessary policy modifications in Kanakantapa, community leaders emphasized specific changes needed to support subsistence farmers, highlighting how input support systems

should adopt graduated approaches that start with higher support for poorer farmers. They stressed the importance of developing water management policies for maintainable small-scale irrigation. Their recommendations included credit policies matching farming seasons, market protection measures ensuring minimum prices, and targeted youth programs providing land access and technology support. Each suggestion focused on practical implementation steps to address current farming challenges. One participant emphasized:

> "*The input support system needs restructuring to accommodate different farmer capabilities. We should have a graduated system where the poorest farmers receive more support initially, then gradually increase their contributions as they grow*."

Another participant suggested:

> "*We need policies that focus on water management. Most farmers rely entirely on rainfall, which is becoming unreliable. The government should invest in small-scale irrigation systems that farmers can actually maintain*."

A third participant recommended:

> "*Credit policies must be reformed to match farming realities. We need flexible loan terms that align with farming seasons and consider alternative forms of collateral, like group guarantees*."

Another key informant proposed:

> "*Market protection policies are essential. We need guaranteed minimum prices for major crops and support for local storage facilities. This would help farmers plan better and reduce post-harvest losses*."

The final participant advocated:

> "*Youth engagement policies are crucial. We need specific support for young farmers, including land access programs and technology adoption incentives. Without attracting youth, farming here has no future*."

4.8.2 Social Networks and Community Structures

When asked about how social networks affect farming practices in Kanakantapa, community leaders described the role of various local structures, noting how village committees organize farmers and discuss new methods before adoption decisions. Informal neighbourhood groups, particularly among women farmers, coordinate labour sharing during peak seasons and exchange

information about crop performance. Traditional leadership coordinates planting times and resolves resource conflicts, while family networks share equipment and input costs. Successful early adopters influence others' willingness to try new farming methods. One of the key informants detailed:

> "*Our village committees play a vital role in organizing farmers and sharing information. When new farming methods are introduced, we discuss them in committee meetings before farmers decide whether to adopt them*."

Another key informant explained:

> "*Informal neighbourhood groups, particularly among women farmers, have become important for sharing labour during peak seasons. They also share experiences about which crops are performing well and marketing opportunities*."

A third respondent observed:

> "*The traditional leadership system helps maintain order in farming activities. We coordinate planting times, organize community work days, and resolve conflicts over land use or water resources*."

Another key informant shared:

> "*Family networks are crucial for farming success. Extended families share equipment, labour, and even help each other with input costs. Those without these networks often struggle more*."

The final participant noted:

> "*The success of early adopters in our community influences others' decisions. When farmers see their neighbours succeeding with new methods, they're more likely to try these methods themselves*."

Asked about traditional leadership's role in Kanakantapa's agricultural development, community leaders described key functions where leaders allocate land based on family size and farming capability. Traditional authorities settle disputes over farming boundaries and water access using local conflict resolution methods. They coordinate community farming activities, including land preparation timing and harvest festivals. Leaders help identify deserving beneficiaries for agricultural programs and encourage farmers to combine proven local methods with new techniques. One community leader explained:

"*Traditional leaders are responsible for land allocation and ensuring fair distribution. We consider factors like family size and farming capability when allocating land to ensure productive use*."

Another community leader described:

"*We play a crucial role in maintaining community harmony. When conflicts arise over farming boundaries or shared resources like water points, we resolve these using traditional dispute resolution methods*."

A third community leader shared:

"*Traditional leadership helps organize community farming activities. We decide when to start land preparation, coordinate community work days, and organize harvest festivals that encourage good farming practices*."

Another key informant emphasized:

"*We act as a bridge between government programs and our farmers. When new agricultural initiatives come to our area, we help identify deserving beneficiaries and ensure fair distribution of opportunities*."

The final participant noted:

"*Our role includes preserving beneficial traditional farming practices while supporting adoption of new methods. We encourage farmers to combine traditional knowledge with modern techniques for better results*."

Asked about traditional leadership's role in agricultural development, community leaders described their activities in Kanakantapa. They allocate land based on family size and farming capability, while settling disputes over boundaries and water access using local methods. Leaders set times for land preparation and organize harvest festivals. They identify beneficiaries for agricultural programs and guide farmers in combining local knowledge with new farming techniques. Traditional authorities also help maintain harmony between farming groups and coordinate community farming projects. One community leader explained:

"*Traditional leaders are responsible for land allocation and ensuring fair distribution. We consider factors like family size and farming capability when allocating land to ensure productive use*."

Another community leader described:

"*We play a crucial role in maintaining community harmony. When conflicts arise over farming boundaries or shared resources like water points, we resolve these using traditional dispute resolution methods*."

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The final participant noted:

"*Our role includes preserving beneficial traditional farming practices while supporting adoption of new methods. We encourage farmers to combine traditional knowledge with modern techniques for better results*."

4.8.3 Socioeconomic Factors

Asked about the main socioeconomic factors affecting subsistence farmers in Kanakantapa, community leaders described how poverty levels limit farmers' ability to invest in basic inputs and equipment for production improvement. Limited education and literacy affect farmers' adoption of new methods and record-keeping abilities. The absence of nearby banking services prevents proper saving and loan access, while shrinking land sizes through family subdivision reduce farm viability. Poor roads increase transportation costs, affecting input delivery and market access. One respondent explained:

"*Poverty remains our fundamental challenge. Most farmers can't afford basic farm inputs or equipment, and this affects everything we do. When you can't buy fertilizer or good quality seeds, you just plant whatever you have available. This keeps us trapped in a cycle of low production and low income, making it impossible to improve our situation*."

Another participant emphasized:

"*Education levels significantly determine how well farmers can progress in their farming activities. Without basic literacy skills, farmers struggle to understand and implement*

modern farming methods. They can't read instructions on chemicals or keep proper farm records. Even when agricultural training programs are offered, many farmers struggle to participate effectively."

A third participant shared:

"*Financial services are almost non-existent in our area. The nearest bank is too far away, making saving and borrowing extremely difficult for most farmers. Without access to credit facilities, farmers can't expand their operations or invest in new equipment. Even mobile money services are unreliable due to poor network coverage*."

Another key informant highlighted:

"*Our land holdings keep shrinking as families divide plots among children. What was once a productive farm supporting one family now must feed multiple households. Some farmers are working on less than half a hectare, making commercial farming impossible. This land fragmentation seriously limits our growth potential*."

The final participant observed:

"*Transport costs severely eat into any profit we might make from farming. Bad roads mean high costs for bringing inputs or taking produce to market. During the rainy season, some areas become completely inaccessible, forcing farmers to sell locally at much lower prices. These infrastructure challenges limit our marketing options*."

Asked about how socioeconomic factors affect different community groups in Kanakantapa, community leaders pointed out that young farmers welcome new technologies but lack land access and start-up capital, while older farmers own land but struggle with physical farming demands. Women farmers face unique obstacles in land ownership, particularly widows who risk losing farm plots to relatives. Farmers with larger plots can experiment with new crops while maintaining food security, unlike small-plot holders. Education differences mean younger farmers better understand modern techniques, while those with town connections or off-farm income invest more in their farms. One participant explained:

"*Young farmers face different challenges than older ones. While younger farmers are more open to new technologies and methods, they struggle with land access and start-up capital.*

Older farmers have land but often lack the physical strength and energy to expand their operations."

Another participant shared:

"*Women farmers face unique obstacles in our community. Many struggles to access land ownership, and those who are widowed often lose their farm plots to relatives. They also have additional responsibilities of caring for families while managing their farms*."

A third participant observed:

"*Farmers with larger plots generally have more opportunities for growth. They can experiment with new crops and methods while maintaining food security. Small-plot holders can't take such risks - one failed experiment could mean hunger for their families*."

Another key informant noted:

"*Education levels vary significantly by age group. Younger farmers generally have more formal education and can better understand modern farming techniques. Older farmers rely more on traditional knowledge and experience*."

The final participant highlighted:

"*Access to resources varies greatly. Farmers with family connections to town or regular off-farm income find it easier to invest in their farms. Those relying solely on farming income struggle to make meaningful investments*."

Asked about how farmers address socioeconomic challenges in Kanakantapa, community members shared local solutions that include informal savings groups pooling resources for input purchases through weekly contributions and rotating fund distribution. Farmers organize equipment and labour sharing through farming groups, making expensive tools accessible to more members. Many have diversified into different crops to manage market risks, while others use local materials for crop storage. Young and older farmers partner to combine physical labour with farming experience. One participant explained:

"*Many farmers have formed informal savings groups where they pool resources to help members buy inputs. Each member contributes what they can weekly, and we rotate who receives the collected funds. This has helped us overcome the lack of formal financial services*."

Another participant shared:

"*We've started sharing equipment and labour through farming groups. Instead of each farmer struggling to buy expensive tools, we contribute together and create schedules for sharing. This helps us access better equipment that we couldn't afford individually*."

A third participant noted:

"*Farmers are diversifying their crops to spread risk. Instead of relying only on maize, many now grow different vegetables and legumes. When one crop fails or gets poor market prices, others can compensate for the loss*."

Another key informant described:

"*Some farmers have developed innovative storage methods using local materials. This helps them keep produce longer and sell when prices are better, rather than being forced to sell immediately after harvest*."

The final participant observed:

"*Young and old farmers are now working together more. The younger ones contribute physical labour and new knowledge, while older farmers share their experience and land. This partnership helps both groups overcome their individual limitations*."

CHAPTER FIVE: DISCUSSION OF THE FINDINGS

5.0 Introduction

This chapter examines the findings presented in Chapter Four, focusing on socioeconomic factors affecting subsistence farmers' growth potential in Kanakantapa. The discussion combines quantitative and qualitative findings with existing literature and theoretical frameworks - the Agricultural Innovation Systems (AIS) Theory and Social Capital Theory. Each research objective is analysed through statistical results, key informant responses, and previous research to understand how different factors influence farmers' growth potential.

5.1 Discussion

T7he analysis follows the study's three objectives: examining agricultural policy effects, social networks' role, and key socioeconomic factors affecting subsistence farmers in Kanakantapa. The findings are linked with theoretical perspectives and existing literature to build knowledge about how these factors shape farmers' growth potential.

5.1.1 Effects of Agricultural Policies on Subsistence Farmers' Growth Potential

Input support programs demonstrate varied effectiveness in Kanakantapa, with descriptive statistics showing moderate implementation success (mean = 2.98, SD = 1.412). Ministry officials report that while the revised FISP program improves input access, contribution requirements limit participation among poorer farmers. Community leaders describe how many farmers struggle to meet the required contributions, forcing them to reduce input usage. Burke et al.'s (2012) findings similarly noted that input support programs enhance productivity only when properly targeted. This indicates that policy effectiveness depends on alignment with farmers' resource capacities.

Extension services receive moderate ratings from farmers (mean = 2.99, SD = 1.368), reflecting mixed impacts across the farming community. Community leaders emphasize that limited officer coverage restricts the reach and effectiveness of agricultural advisory services. One extension officer typically serves several farming blocks, reducing contact frequency with individual farmers. Mulenga et al.'s (2015) documented similar constraints in their study of Zambian farming communities. The limitation in extension staff directly affects farmers' ability to implement improved practices.

Market access policies show varying effectiveness ratings (mean = 2.90, SD = 1.415). Community leaders describe how poor roads and limited storage facilities force early crop sales at low prices. District Council representatives note ongoing efforts to improve market infrastructure, though resource constraints limit progress. Chapoto et al.'s (2018) found similar challenges, where

transport costs significantly reduced farming income. This suggests that market infrastructure directly affects farmers' ability to maximize returns.

Infrastructure development through CDF receives slightly higher ratings (mean = 3.02, SD = 1.404). District representatives detail investments in roads, storage facilities, and market structures. However, community leaders note that remote areas still face significant infrastructure gaps. Ng'ombe and Kalinda's (2015) research documented how improved infrastructure increased farmer productivity. The distribution of infrastructure development directly shapes market access opportunities.

Gender considerations in policy implementation reveal disparities in effectiveness. Female farmers report lower mean scores (2.88, SD = 1.390) compared to male farmers (3.15, SD = 1.411). Ministry officials note specific challenges women face in accessing support services. This points to the need for gender-sensitive policy design and implementation.

Conservation farming policies receive moderate support ratings (mean = 2.93, SD = 1.448). Community leaders note improved soil fertility outcomes, though irrigation support remains insufficient. Sitko et al.'s (2011) research found significant yield improvements among conservation farming adopters. This indicates the importance of environmental management policies for long-term farming sustainability.

Policy monitoring mechanisms show moderate effectiveness (mean = 3.02, SD = 1.397). District officials describe quarterly evaluations and performance tracking systems that enable program adjustments. The AIS framework emphasizes such feedback loops in agricultural development systems. This suggests that regular monitoring helps maintain policy relevance to farmers' needs.

Credit access initiatives receive varied assessments (mean = 2.91, SD = 1.423). District officials highlight challenges in loan requirement compliance, while Ministry representatives describe efforts to develop farmer-friendly financial products. Social Capital Theory explains how group-based lending can overcome individual constraints. This indicates the need for adapted financial services that match farmers' capabilities.

Age-related policy impacts emerge in technology adoption patterns. Younger farmers (22.5% of respondents) show higher participation in e-voucher systems, while older farmers report difficulties with digital platforms. This supports AIS Theory's emphasis on considering user capabilities in innovation systems. Policy implementation methods need adaptation to serve diverse farmer groups effectively.

Policy coordination mechanisms receive moderate ratings (mean = 3.06, SD = 1.382). District Council officials describe how regular stakeholder meetings improve program delivery. This aligns with AIS Theory's emphasis on institutional linkages for effective agricultural development. Coordinated institutional efforts multiply policy impacts through improved resource allocation and service delivery.

5.1.2 Role of Social Networks and Community Structures in Shaping Agricultural Practices and Growth

Farmer cooperatives demonstrate significant roles in agricultural development, with descriptive statistics showing positive assessments (mean = 3.13, SD = 1.412). Ministry officials describe how these groups enable bulk input procurement and collective marketing. District Council data indicates cooperatives achieve 40% better prices through group marketing. Zulu-Mbata et al.'s (2017) documented similar benefits, finding that cooperative members achieved 55% higher market prices. This points to cooperatives' effectiveness in improving farmers' market position.

Traditional leadership structures receive notable recognition from farmers (mean = 3.06, SD = 1.382). Community leaders actively manage land allocation, resolve disputes, and coordinate farming activities. Key informants from the Ministry highlight how traditional authorities facilitate program implementation. Mulenga et al.'s (2015) found areas with engaged traditional leadership showed 65% higher adoption of new practices. This indicates how traditional structures enhance agricultural program effectiveness.

Women's groups show particular effectiveness in collective activities (mean = 3.06) compared to mixed groups (mean = 2.95). Ministry officials note these groups' success in savings schemes and marketing initiatives. District representatives describe how women's groups demonstrate higher participation rates in agricultural training. Mofya-Mukuka and Hichaambwa's (2018) research documented similar patterns of successful collective action among women farmers. This suggests the value of gender-specific social networks.

Informal farmer networks receive positive assessments (mean = 3.02, SD = 1.410). Community leaders describe how these networks facilitate labour sharing and equipment access. Ministry officials note their role in knowledge dissemination. Social Capital Theory explains how these informal connections enable resource sharing and risk management. This demonstrates the importance of informal support systems.

Community-based organizations show moderate effectiveness (mean = 2.99, SD = 1.483). District officials detail how these groups help implement agricultural programs and distribute resources.

Key informants emphasize their role in mobilizing community participation. This points to their function as bridges between formal institutions and local farmers.

Labor-sharing arrangements receive positive ratings (mean = 3.04, SD = 1.474). Community leaders describe how these systems help overcome labour shortages, particularly during peak farming periods. Ministry officials note improved farming timeliness through collective labour. This indicates the value of traditional cooperation systems.

Knowledge-sharing networks demonstrate moderate effectiveness (mean = 3.01, SD = 1.461). Farmer-to-farmer learning emerges as a key mechanism for spreading agricultural innovations. District representatives highlight how successful farmers influence others' practices. This suggests the importance of peer learning in agricultural development.

Market-oriented groups show positive impacts (mean = 3.01, SD = 1.403). These structures enable collective negotiation and market access. Ministry officials describe how organized groups attract better buyers. This indicates the value of collective action in market engagement.

Youth farming networks receive growing attention (mean = 2.95, SD = 1.406). Community leaders describe emerging partnerships between young and experienced farmers. District officials note how these connections facilitate technology adoption. This points to intergenerational knowledge transfer's importance.

Religious and cultural networks show moderate influence (mean = 2.94, SD = 1.396). These structures often support agricultural activities through shared values and trust. Key informants describe how they strengthen community cooperation. This suggests their role in building social capital for agricultural development.

5.1.3 Key Socioeconomic Factors Affecting Subsistence Farmers in Kanakantapa

Education levels create distinct patterns in farming outcomes. Statistical analysis shows 31.3% lack formal education, while only 7% have tertiary education. Community leaders describe how limited literacy affects technology adoption and market engagement. Ministry officials note challenges in delivering technical training to farmers with limited education. Ng'ombe and Kalinda's (2015) found similar effects of education on farming practices. This indicates how educational limitations constrain agricultural advancement.

Gender disparities emerge clearly in the data, with female farmers reporting lower mean scores (2.88, SD = 1.390) compared to male farmers (3.15, SD = 1.411). District officials describe specific challenges women face in accessing land and resources. Community leaders highlight how

traditional practices often disadvantage women in resource allocation. Matenga and Hichaambwa's (2017) documented similar gender-based constraints. This points to systemic barriers affecting women farmers' growth potential.

Farm size distributions show significant variation, with 29.8% operating less than one hectare and only 19.8% managing more than five hectares. Community leaders highlight how land fragmentation affects farming decisions. Ministry officials note challenges in achieving economies of scale on small plots. Key informants describe how limited land size restricts farmers' ability to adopt certain technologies or expand production. This indicates how land constraints limit commercial farming potential.

Age patterns reveal distinct farming capabilities, with 27.1% aged 46-60 years. Key informants describe labour constraints in aging households. District representatives note younger farmers' greater capacity for innovation adoption. Ministry officials highlight challenges in promoting labour-intensive improvements among older farmers. This suggests the need for age-appropriate agricultural support strategies.

Market access creates varying opportunities (mean = 3.03, SD = 1.410). Remote farmers face higher transportation costs and limited market options. Key informants describe how distance affects input and output prices. District officials note how poor infrastructure particularly impacts isolated farming areas. This indicates how location shapes farming economics.

Financial resources show significant disparities (mean = 3.15, SD = 1.411). Ministry officials describe how limited capital restricts investment in farm improvements. Community leaders note how poverty cycles affect farming decisions. District representatives highlight challenges in accessing formal credit. This demonstrates how financial constraints limit growth potential.

Labor availability affects farming practices (mean = 3.14, SD = 1.370). Key informants note increasing youth migration from farming areas. Community leaders describe how labour shortages affect cultivation decisions. Ministry officials highlight the impact on labour-intensive farming methods. This suggests how workforce dynamics influence agricultural development.

Technology access varies significantly (mean = 2.94, SD = 1.359). District officials describe how resource levels affect technology adoption. Community leaders note differences in farmers' ability to utilize modern farming methods. Key informants highlight how technology gaps affect productivity. This indicates how resource access shapes farming advancement.

Environmental factors create distinct challenges (mean = 2.94, SD = 1.396). Ministry officials describe varying impacts of climate variability across farmer groups. Community leaders note how resource levels affect climate resilience. District representatives highlight adaptation capabilities among different farmer categories. This demonstrates how socioeconomic status affects environmental risk management.

Social status influences farming opportunities (mean = 2.86, SD = 1.366). Key informants describe how community position affects resource access. Ministry officials note variations in program participation based on social standing. District representatives highlight how social connections influence farming success. This points to how social capital shapes agricultural outcomes.

CHAPTER SIX CONCLUSIONS AND RECOMMENDATIONS

6.0 Introduction

This chapter presents the conclusions and recommendations drawn from the study's findings on socioeconomic factors affecting subsistence farmers' growth potential in Kanakantapa. The chapter summarizes key findings for each research objective, offers overall conclusions, and provides recommendations for improving farmers' growth potential. The recommendations address policy implementation, social network strengthening, and socioeconomic support mechanisms.

6.1 Summary of the Findings

The study revealed that subsistence farmers' growth potential in Kanakantapa is significantly affected by agricultural policy implementation, social network effectiveness, and socioeconomic conditions. Statistical and qualitative findings demonstrated how these factors create distinct patterns of opportunity and constraint across different farmer groups, influencing their capacity for agricultural development and growth.

6.1.1 Effects of Agricultural Policies

Agricultural policies had important impacts on farmers' growth potential in Kanakantapa. Input support programs showed mixed effectiveness, with Ministry officials reporting that while the revised FISP program improved input access, contribution requirements remained challenging for poorer farmers. Extension services enhanced farming practices, though community leaders emphasized that limited officer coverage restricted effectiveness. Policy coordination between institutions affected implementation success, with District Council officials describing how quarterly monitoring visits and performance tracking systems enhanced program delivery. Infrastructure development through CDF impacted growth potential, with District representatives detailing investments in roads, storage facilities, and market structures that improved farming conditions.

06.1.2 Social Networks and Community Structures

Social networks influenced farming practices and growth potential. Farmer cooperatives enhanced growth potential through collective action, with Ministry officials noting how these groups enabled bulk input procurement and collective marketing, achieving 40% better prices through group marketing. Traditional leadership structures were linked to farming success, with community leaders describing their active role in land allocation, dispute resolution, and coordination of farming activities. Women's groups demonstrated higher effectiveness in collective activities

compared to mixed groups, with District Council representatives highlighting their success in savings schemes and marketing initiatives. Key informants from the Ministry particularly noted how informal neighbourhood groups coordinated labour sharing and information exchange about crop performance.

6.1.3 Key Socioeconomic Factors

The study identified critical socioeconomic factors affecting farmers' growth potential. Education levels influenced farming success, with 31.3% lacking formal education. Community leaders emphasized how limited literacy affected technology adoption and market engagement. Gender disparities emerged in resource access, with female farmers reporting lower scores than male farmers, while Ministry officials noted specific challenges women face in accessing agricultural support services. Farm size created distinct development patterns, with 29.8% operating on less than one hectare. District Council representatives highlighted how smaller plots limited production capacity and commercial viability. Market access impacted growth potential, with key informants describing how transportation costs and poor infrastructure particularly affected remote farmers' ability to access markets profitably.

6.2 Conclusion

The study concluded that subsistence farmers' growth potential in Kanakantapa is significantly shaped by the relationship of agricultural policies, social networks, and socioeconomic factors. While agricultural policies show positive effects, their impact varies across farmer groups. Social networks emerge as key mechanisms for resource sharing and collective action, particularly benefiting resource-constrained farmers. Socioeconomic factors create distinct patterns of opportunity and constraint, with education, gender, and resource access playing pivotal roles. The findings demonstrate the need for integrated approaches that consider these multiple dimensions when supporting farmers' growth potential.

6.3 Recommendations

The study made the following recommendations based on the findings of the study:

i. Develop graduated input support systems that adjust contribution requirements based on farmers' resource capacity.
ii. Strengthen farmer cooperatives through targeted capacity building and resource support.
iii. Establish education and training programs specifically designed for farmers with limited formal education.

6.4 Recommendation for Future Study

Future research should examine how digital technologies can enhance market access and information sharing among subsistence farmers in Kanakantapa, focusing on practical applications suitable for varying education levels and resource constraints.

6.5 Limitations of the Study

The study encountered several limitations during its execution in Kanakantapa. Data collection coincided with the farming season, limiting some farmers' availability for interviews. Language barriers occasionally affected communication with respondents who only spoke local dialects, requiring translation assistance. Resource constraints restricted the geographical coverage within Kanakantapa, potentially missing some remote farming areas. Additionally, some farmers were hesitant to share detailed financial information, affecting the completeness of economic data. Despite these limitations, the study maintained rigorous methodological standards to ensure reliable findings.

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APPENDICES

Appendix i: Questionnaire for the Residents of Kanakantapa

Dear Respondent,

My name is Lubasi Mbumwae, I am a student from the University of Lusaka. I am conducting a study on the socioeconomic factors affecting subsistence farmers' growth potential in Kanakantapa, Chongwe District. This research aims to understand the challenges and opportunities you face as a farmer and to identify ways to support your agricultural growth.

Your participation in this survey is paramount for the success of this study. The information you provide will help inform policies and interventions aimed at improving the livelihoods of subsistence farmers in your community.

Please be assured that all information you provide will be kept strictly confidential and used solely for research purposes. Your identity will remain anonymous throughout the study.

The questionnaire will take approximately 30 minutes to complete. Your honest and thoughtful responses are greatly appreciated. If you have any questions or concerns, please feel free to ask the researcher administering this survey.

Thank you for your valuable time and contribution to this important research.

Sincerely,
Lubasi Mbumwae
University of Lusaka

Demographic Information

1. What is your age?

    a) 18-30
    b) 31-45
    c) 46-60
    d) Above 60

2. What is your gender?

    a) Male
    b) Female
    c) Prefer not to say

3. What is your highest level of education?

    a) No formal education
    b) Primary school
    c) Secondary school
    d) Tertiary education

4. How long have you been farming in Kanakantapa?

    a) Less than 5 years
    b) 5-10 years
    c) 11-20 years
    d) More than 20 years

5. What is the size of your farm?

    a) Less than 1 hectare
    b) 1-2 hectares
    c) 2-5 hectares
    d) More than 5 hectares

To evaluate the impact of existing agricultural policies on subsistence farmers' growth potential in Kanakantapa.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Please tick the number that best reflects the extent to which you are agree with the statements below

Statement	**1**	**2**	**3**	**4**	**5**
The government's agricultural policies have positively impacted my farming practices.					
I have benefited from government-provided agricultural subsidies.					
Extension services provided by the government have improved my farming knowledge.					
The current land tenure system supports my ability to invest in long-term farm improvements.					
Government policies have made it easier for me to access agricultural credit.					
Market access has improved due to government initiatives.					
The government's efforts to promote climate-smart agriculture have been beneficial to my farm.					
Agricultural policies have encouraged diversification of my farming activities.					
Government support for irrigation development has positively impacted my farm's productivity.					
Policies promoting value addition for agricultural products have increased my income.					
Overall, agricultural policies have contributed to the growth potential of my farming activities.					

To examine the role of social networks and community structures in shaping farmers' agricultural practices and growth.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Please tick the number that best reflects the extent to which you are agree with the statements below

Statement	**1**	**2**	**3**	**4**	**5**
Being part of a farmers' cooperative has improved my access to resources and information.					
Community savings groups have helped me invest in my farming activities.					
I regularly share farming knowledge and experiences with other farmers in my community.					
Local agricultural associations have played a crucial role in improving my farming practices.					
Community leaders actively support and promote agricultural development initiatives.					
Participating in farmer field schools has enhanced my agricultural skills.					
Social networks in my community facilitate better access to markets for my produce.					
I have adopted new farming techniques based on recommendations from other farmers.					
Community-based organizations have helped me access farming inputs more easily.					
My involvement in local farmer groups has increased my bargaining power in the market.					

Overall, social networks and community structures have positively influenced my farm's growth.					

To identify key socioeconomic factors affecting subsistence farmers in Kanakantapa.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Please tick the number that best reflects the extent to which you are agree with the statements below

Statement	**1**	**2**	**3**	**4**	**5**
My level of education significantly impacts my farming decisions and practices.					
Access to credit is a major factor in my ability to invest in and grow my farm.					
The size of my household affects the labour available for farming activities.					
Off-farm income opportunities have a significant impact on my farming investments.					
My age influences my ability to adopt new farming technologies and practices.					
The distance to markets affects my ability to sell my produce profitably.					
Access to reliable transportation significantly impacts my farming activities.					
My farm's productivity is limited by the quality of the soil on my land.					
Climate variability and extreme weather events significantly affect my farm's performance.					
My gender influences my access to resources and decision-making in farming.					
Generally, my socioeconomic status significantly impacts my farm's growth potential.					

Appendix ii: Interview Guide for Key Informants from the Ministry of Agriculture

Time of Interview: ……...……
Date of Interview: ……
Place: ……..…..……
Interviewer: ……..……

Dear Respondent,

Thank you for agreeing to participate in this important research study on the socioeconomic factors affecting subsistence farmers' growth potential in Kanakantapa, Chongwe District. As a key informant from the Ministry of Agriculture, your insights and expertise are invaluable to our understanding of the challenges and opportunities facing subsistence farmers in this region.

This interview aims to gather your professional perspectives on the impact of agricultural policies, the role of social networks and community structures, and the key socioeconomic factors influencing farmers' growth potential. Your responses will contribute significantly to our research and help inform future policy recommendations and interventions.

Please be assured that your responses will be treated with the utmost confidentiality and used solely for research purposes. The interview will take approximately 45-60 minutes. Your honest and detailed responses are greatly appreciated.

Thank you for your time and contribution to this important study.

To evaluate the impact of existing agricultural policies on subsistence farmers' growth potential in Kanakantapa

1. How have recent agricultural policies been designed to specifically address the growth potential of subsistence farmers in areas like Kanakantapa?
2. What mechanisms are in place to monitor and evaluate the effectiveness of these policies on subsistence farmers' growth?
3. In your opinion, what have been the most successful policy interventions in supporting subsistence farmers' transition to more commercial farming in Kanakantapa?

To examine the role of social networks and community structures in shaping farmers' agricultural practices and growth

1. How does the Ministry of Agriculture engage with and leverage existing social networks and community structures in Kanakantapa to promote agricultural development?
2. What role do you see farmer cooperatives and community-based organizations playing in shaping agricultural practices and growth in Kanakantapa?
3. How does the Ministry support the development and strengthening of social networks among farmers in Kanakantapa?

To identify key socioeconomic factors affecting subsistence farmers in Kanakantapa

1. Based on the Ministry's data and observations, what are the primary socioeconomic factors affecting subsistence farmers in Kanakantapa?
2. How do these socioeconomic factors influence the design and implementation of agricultural policies and programs in the area?
3. What strategies has the Ministry employed to address the specific socioeconomic challenges faced by subsistence farmers in Kanakantapa?

Appendix iii: Interview Guide for District Council Officials

Time of Interview: ……...……
Date of Interview: ……
Place: ……..…..……
Interviewer: ……..……

Dear Respondent,

Thank you for agreeing to participate in this research study examining the socioeconomic factors affecting subsistence farmers' growth potential in Kanakantapa, Chongwe District. As a key stakeholder in local development, your insights into district-level planning and implementation of agricultural initiatives are invaluable to this research.

This interview aims to understand how district-level governance and coordination influence agricultural development in Kanakantapa. Your perspectives on policy implementation, community engagement, and socioeconomic development will help inform recommendations for improving support to subsistence farmers in the area.

Please be assured that your responses will be treated with strict confidentiality and used solely for research purposes. The interview will take approximately 30-45 minutes.

Interview Questions:

Objective i: Effects of Agricultural Policies

1. How does the District Council coordinate with the Ministry of Agriculture in implementing agricultural policies in Kanakantapa?
2. What role does the Council play in monitoring and evaluating agricultural programs in the area?
3. How are Constituency Development Funds utilized to support agricultural development in Kanakantapa?

Objective ii: Social Networks and Community Structures

1. How does the Council engage with traditional leadership and community structures in agricultural development planning?
2. What support does the Council provide to farmer organizations and cooperatives in Kanakantapa?
3. How does the Council facilitate collaboration between different stakeholders in agricultural development?

Objective iii: Socioeconomic Factors

1. What infrastructure developments has the Council prioritized to support agricultural growth in Kanakantapa?
2. How does the Council address socioeconomic disparities in its development planning for the area?
3. What initiatives has the Council implemented to enhance economic opportunities for subsistence farmers?

Appendix iv: Interview Guide for Community Leaders in Kanakantapa

Time of Interview: ……..……
Date of Interview: ……
Place: ……..…..……
Interviewer: ……..……

Welcome to this Interview,

My name is Lubasi Mbumwae, I am a student at the University of Lusaka. I am conducting a study on the socioeconomic factors affecting subsistence farmers' growth potential in Kanakantapa, Chongwe District. Your role as a community leader makes your insights invaluable to this research.

The purpose of this interview is to gain a deeper understanding of the local context, challenges, and opportunities facing subsistence farmers in Kanakantapa. Your knowledge of community dynamics, agricultural practices, and local socioeconomic conditions will greatly enrich this study.

Please be assured that all information you provide will be kept strictly confidential and used solely for research purposes. Your identity will remain anonymous unless you explicitly agree otherwise.

The interview will take approximately 15-25 minutes. Your honest and detailed responses are crucial for the success of this study and may contribute to future policies and interventions aimed at supporting farmers in your community.

Thank you for your time and willingness to contribute to this important research.

To evaluate the impact of existing agricultural policies on subsistence farmers' growth potential in Kanakantapa

1. How have agricultural policies implemented by the government affected subsistence farmers' practices and growth potential in Kanakantapa?
2. What specific policy interventions have been most beneficial or challenging for farmers in your community?
3. In your opinion, what policy changes are needed to better support the growth potential of subsistence farmers in Kanakantapa?

To examine the role of social networks and community structures in shaping farmers' agricultural practices and growth

1. How do existing social networks and community structures in Kanakantapa influence farmers' agricultural practices and decision-making?
2. What role do traditional leadership structures play in shaping agricultural development in the community?
3. How have farmer cooperatives or other community-based organizations impacted agricultural growth in Kanakantapa?

To identify key socioeconomic factors affecting subsistence farmers in Kanakantapa

1. What do you consider to be the most significant socioeconomic factors affecting subsistence farmers in Kanakantapa?
2. How do these socioeconomic factors vary across different groups within the community (e.g., by age, gender, or farm size)?
3. In your experience, how have farmers in Kanakantapa adapted to or overcome socioeconomic challenges to improve their agricultural production and livelihoods?

Appendix v: Consent Form

Title of Study: *Assessing Socioeconomic Factors Affecting Subsistence Farmers' Growth Potential in Kanakantapa, Chongwe District*

Researcher: Lubasi Mbumwae

Institution: University of Lusaka

Contact: +260976621311

Dear Participant,

You are invited to participate in a research study examining socioeconomic factors affecting subsistence farmers' growth potential in Kanakantapa. Before deciding to participate, please read this form carefully. This research aims to understand how various socioeconomic factors affect subsistence farmers' growth potential in your area.

Your participation will involve completing a questionnaire that will take approximately 15 minutes. You may also be invited to participate in an interview or focus group discussion. Please note that your participation is entirely voluntary. You may choose not to participate, withdraw at any time without any consequences, or skip any questions you prefer not to answer.

All information you provide will remain strictly confidential. No identifying information will be included in research reports, and all data will be stored securely and used solely for research purposes. Your identity will be protected throughout the research process and in any resulting publications.

By signing this form, you indicate that you have read and understood this information, voluntarily agree to participate in the study, and confirm that you are 18 years or older.

Participant's Signature: _____ Date: _____

Researcher's Signature: _____ Date: _____

Witness's Signature: _____ Date: _____