



Faculty of Agriculture and Environmental Science

Department of Agricultural Economics, Education and Extension

**AN ANALYSIS OF THE CONTRIBUTION OF TOBACCO CONTRACT FARMING
TO HOUSEHOLD INCOME AND WELFARE AMONG SMALLHOLDER
TOBACCO CONTRACT FARMERS IN WARD 20 MACHEKE, MASHONALAND
EAST PROVINCE, ZIMBABWE.**

Submitted by

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**A Dissertation Submitted in Partial Fulfillment of the Requirements of the Bachelor of
Science Honours Degree in Agricultural Economics and Management**

30 June 2025

RELEASE FORM

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MASHONALAND EAST PROVINCE, ZIMBABWE.

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The undersigned certify that they have supervised and recommended to Bindura University of Science Education for acceptance of the dissertation entitled, an analysis of the contribution of tobacco contract farming on household income and welfare among smallholder tobacco contract farmers in ward 20, Macheke, Mashonaland East province Zimbabwe.

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DECLARATION

I, Matare Lysendah R, declare that this dissertation titled “an analysis of the contribution of tobacco contract farming on household income and welfare among smallholder tobacco contract farmers in ward 20, Macheke, Mashonaland East province Zimbabwe ” is my original work and has not been submitted elsewhere for any degree or qualification. I acknowledge that I have received guidance and support from my supervisor, DR. N.Mafuse, and other academic staff during this research, but the intellectual content and presentation of this dissertation are entirely my own. I have followed the guidelines and regulations of the Bindura University of Science Education regarding plagiarism and academic integrity, and I have properly cited and referenced all sources of information used in this dissertation.

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DEDICATION

This research study is dedicated to my mother, whose unwavering support; sacrifices and encouragements have been the foundation of my academic journey. Your belief in financial support and me has always pushed me forward. Thank you for being my strength and inspiration.

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ABSTRACT

This study looks at how household income and welfare are affected by tobacco contract farming in Macheke, Zimbabwe. The study, which used a mixed-methods approach, finds that cultivation of tobacco accounts for 61.94% of household income, which is a considerable contribution. Due to this level of reliance, farmers are vulnerable to things like market volatility, debt cycles, and high input costs. It also highlights important issues such as gender inequality, unclear pricing, and restricted access to support services. These issues are worsened by climate-related concerns, which result in lower yields and unstable income. The study suggests structural changes to improve climate-resilient processes, fair resource distribution, and contract transparency. The study advances knowledge of the complex interactions that exist in Zimbabwe's agricultural industry between contract farming, household welfare, and environmental sustainability.

Keywords: Tobacco contract farming, household income, welfare impact, smallholder farmers

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LIST OF ACRONYMS

BUSE	Bindura University of Science Education
FAO	Food and Agriculture Organization
GTS	Green Tobacco Sickness
MNC	Multinational Corporation
N/A	Not Applicable
SADC	Southern African Development Community
TCE	Transaction Cost Economics
TSLF	Transformative Sustainable Livelihoods Framework
WHO	World Health Organization
USD	United States Dollar
ZIMSTAT	Zimbabwe National Statistics Agency
ZWL.....	Zimbabwean Dollar

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

Tobacco cultivation is a backbone of agricultural activities that has been available for centuries, sustaining millions of farming households globally. The World Health Organization reports that farmers grow tobacco across more than 120 nations, directly employing 5.7 million individuals in approximation within the industry (WHO, 2019). The market valuation approaches \$ 800 billion, making the importance of tobacco to remain substantial (Statista, 2021). Yet, the sector continues to face major challenges, including severe health implications such as Green Tobacco sickness and elevated cancer risks, alongside environmental issues such as deforestation and soil degradation. These issues catalyzes the adoption of agricultural practices that emphasizes on sustainability and welfare improvements.

Contract farming gained importance as an agricultural model with the ability to increase productivity and household earnings recently, especially in developing economies. This technique creates formal relationships between agricultural producers and purchasing organizations, in which farmers commit to production specifications. In exchange, they receive technical assistance, agricultural inputs and guaranteed markets (Glover and Kusterer, 2016). This agreed arrangement has the potential of reducing market uncertainties, at the same time strengthening farmers' capacity to negotiate, thereby supporting poverty reduction initiatives (Bellemare, 2016). Several researches done by the Food and Agriculture Organization broadcast 30% income boost by farmers participating in contractual agreements compared to independent farmers (FAO, 2020).

A notable number of studies within the regional context have analyzed how tobacco contract farming affects household income and welfare. For instance, investigations in countries like Malawi and Zimbabwe made revelations on enhanced farmer earnings through tobacco contractual arrangements, leading to improved living standards, healthcare service use and educational access (Chirwa et al., 2016; Manda et al., 2018). Particularly in Zimbabwe, tobacco does not only function as a cash crop but rather as a foreign currency generator, providing with \$1 billion to the economy at large during 2020 (Zimbabwe Tobacco Association, 2021). This economic contribution is vital

mostly in rural communities where tobacco production is the primary source of income for a number of families and households.

The influence of tobacco production goes beyond income generation. The Zimbabwe National Statistics Agency has records on the linkage between tobacco cultivation and improved access to education, with households benefiting from the ability to cater for educational expenses for their children (ZIMSTAT, 2021). Over the past decade, regions with active tobacco production have had a 15% increase in school attendance, thus highlighting the positive effects of growing tobacco on community development. Local economies are strengthened through employment creation opportunities that are created within the tobacco sector that support industries like transportation and processing. According to World Bank analysis, every tobacco farming position creates an increase of 1.5 jobs in sectors that connects to the industry, showing the broader economic impact of the industry (World Bank, 2021). However, the benefits from contract farming are unevenly distributed, raising concerns in issues to do with overdependence on a single crop, price volatility and environmental effects that are linked with tobacco cultivation, which hinders long-term sustainability (Meyer et al ., 2020). Tobacco prices can change frequently, having variations reaching 50% in a single growing season, majorly affecting the earnings of farmers (World Bank, 2021).

1.2 Problem statement

Tobacco contract farming has now emerged as an important livelihood strategy among developing nations, having 5.7 million people employed in the global tobacco sector, including 3.2 million smallholder farmers directly involved in production (WHO, 2019; FAO 2021). The reliance of smallholder farmers on agribusinesses is mainly to attain inputs, credit and market opportunities. While stakeholders favor tobacco contract farming due to its ability to increase household income and welfare (Chirwa et al., 2016), farmers face several production challenges including dependence on rain-fed irrigation and pest infestations that reduces their yields annually by 30% in approximation (Omandi et al., 2023). These challenges links with cyclical debt from input financing, exposure to health hazards like green tobacco sickness, exploitative price systems and increasing gender inequalities, all affecting household welfare. Recently, several investigations points out that 65% of tobacco farmers who are tied to contract agreements across sub-Saharan

Africa report income instability which is as a result of climate-induced crop losses and changing global market demand (Mwambi et al., 2022), while 40% are entranced in debt cycles linked to advance payment structures (Njuki et al., 2023). Land degradation from tobacco cultivation further reduces household welfare, deforestation and soil nutrient depletion (Sinha and Kumar, 2021). Regardless of policy frameworks such as Zimbabwe National Agricultural Policy Framework (2018-2030) intent to protect producers, execution gaps are still persisting, making smallholder farmers more exposed to corporate exploitation and environmental deterioration. However, there is limited localized evidence in relation to how debt burdens, health risks, gender disparities and environmental pressure together molds tobacco contract farming's overall impact on household income and welfare in Macheke. This study focuses on this information gap by evaluating the economic benefits of contact farming and analyzing if they are translated into sustainable welfare improvements or are dissolved by systemic challenges.

1.3 Research Questions

1. How do climate-related risks, such as drought and soil degradation, affect income stability and welfare outcomes among smallholder tobacco farmers engaged in contract farming?
2. What socio-economic and institutional challenges (e.g., debt cycles, gender disparities, market dependency) do households face in tobacco contract farming, and how do these challenges influence their welfare?
3. To what extent do structural inequities in production contracts, such as exploitative pricing and imbalanced loan terms, contribute to disparities in income gains and household welfare?

1.3 Research Objectives

1.4.1 Main Objective

The main objective of this study is to analyze the impact of tobacco contract farming on household income and welfare outcomes in Macheke, Zimbabwe.

1.4.2 Specific Objectives

1. To analyze how climate-related risks (e.g., drought, soil degradation) in rain-fed tobacco production increase vulnerabilities in contracted households' income and welfare in Macheke.
2. To identify socio-economic (e.g., market dependency, input loans, gender disparities) faced by households engaged in tobacco contract farming in Macheke.
3. To examine how structural inequities in tobacco production contracts (e.g., exploitative pricing, imbalanced input-loan terms) limit income gains and increase household welfare disparities in Macheke.

1.5 Hypothesis

1. H0: Climate-related risks (e.g., drought, soil degradation) do not significantly reduce income stability or worsen welfare outcomes among smallholder tobacco households engaged in contract farming.
2. H0: Socio-economic challenges (e.g., debt cycles, gender disparities, market dependency) have no statistically significant association with diminished household welfare in tobacco contract farming systems.
3. H0: Structural inequities in production contracts (e.g., exploitative pricing, imbalanced loan terms) do not contribute to measurable disparities in income gains or welfare outcomes between contracted households and broader farming communities.

1.6 Significance of the study

This research addresses important challenges for different parties involved within Zimbabwe's agricultural sector and policy construction spheres. In relation to smallholder farmers, this research deals with concerns aligning with the ability of tobacco contract farming to deliver sustainable returns or to trap families in debt cycles and environmental vulnerability. Through this study, farmers will be able to make informed decisions as they will have full knowledge on the trade-offs between short-lived economic gains and forever welfare costs. The results from the study will provide evidence-based guidance to policy makers to reconstruct frameworks such as the National Agricultural Policy (2018-2030), making sure they prioritize farmer wellbeing and environmental

sustainability. Development organizations and agribusinesses will have some light in terms of structuring fairer contracts and interventions to reduce health and environmental hazards. This study answers to the urgent need for strategies that can balance economic growth with social and ecological strengths across Zimbabwe's tobacco reliant rural communities.

1.7 Scope of the study

This study investigates smallholder tobacco farmers in Macheke, Mashonaland East Province, Zimbabwe, to understand how CF arrangements can influence household income and welfare. The research, geographically centered on Macheke to understand the interconnections between climate vulnerabilities, socio-economic challenges structural contract biases. The analysis particularly deals with tobacco as the primary cash crop, excluding other agricultural practices, to focus only on its household welfare impacts. A mixed methodology, combining qualitative interviews to capture farmers own experiences and quantitative surveys measuring income changes are be employed in the study. The investigation maintains a local focus at the same time considering broader regional and global tobacco value chain influences.

1.7.1 Limitations of the Study

This study's findings are geographically limited to tobacco smallholder farmers in Macheke, in a way limiting usefulness to regions with different economic, cultural and agro-ecological characteristics. Since the study is going to base on self-reported survey and interview data, there are high chances of recall and social desirability risks as the respondents might overstate income stability or underscore challenges like debt burden. The study leaves out comparative study involving non-contracted tobacco farmers and only focus on those under contractual agreements and this has the potential of narrowing down contractual agreement impacts. The study does not explore broader political-economic forces that mold global tobacco value chains rather it only identifies structural contact biases. Resource limitations caused differences in experience levels to be overlooked, which reduced the sample size and demographic diversity.

1.8 Organization of the Thesis

This thesis provides an understandable analysis of tobacco contact farming's impact on household income and welfare among smallholder tobacco farmers in Macheke. The first chapter gives a

background of what tobacco contract farming is all about and identifies the actual problem that called for the research. Research objectives and questions that are going to guide the study are also included. Chapter 2 shows a review of key concepts and theories that are related or that shapes tobacco contract farming, with an inclusion of smallholder farmer roles. The research examines gender disparities in access, decision making, environmental and health costs that are linked to tobacco cultivation and identifies areas of lack within available literature. The chapter ends with conceptual and theoretical frameworks, putting together Transaction Cost Economic Theory and Sustainable Livelihoods Framework to contextualize the research. Chapter 3 outlines research methodology, detailing the characteristics of the study area, research design approaches, data collection methods and analytical tools, and ethical considerations. Chapter 4 presents research findings, analyzing survey and interview data, and discusses finding implications at the same time connecting them to theoretical frameworks and existing literature. Chapter 5 concludes the thesis and provides relevant recommendations and suggesting future research directions.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviews existing research on tobacco contract farming and its effects on household income and welfare. It explores key themes, including climate risks, debt cycles, gender disparities, and structural inequities in contractual agreements. By integrating socio-economic, environmental, and gendered analyses, the discussion highlights systemic vulnerabilities faced by smallholder farmers. The synthesis contextualizes the study within broader debates on sustainable agriculture and rural development.

2.2 Review of Key Concepts, Theories and Issues

2.2.1 Overview of Tobacco Contract Farming

Contract farming has become a key part of how tobacco is grown and sold around the world, especially in developing areas like Macheke, Zimbabwe. Small farmers depend on big companies to buy their crops. Globally, more than 80% of tobacco comes from contract farming, with major companies like Philip Morris International and British American Tobacco controlling the market (Prowse, 2019). These big companies often provide seeds, fertilizers and chemicals on credit, which can trap farmers in debt through high input costs and fixed low prices (Scoones et al., 2018; Moyo, 2020).

On a global scale, tobacco production and sales now heavily rely on contract farming, particularly in emerging nations like Zimbabwe. Major businesses purchase the food grown by smallholder farmers. Over 80% of tobacco produced worldwide is grown under contract and the industry is dominated by big businesses like British American Tobacco and Philip Morris International (Prowse, 2019). Given their fixed low prices and high input costs, these large corporations frequently offer seeds, fertilizers and chemicals on loan, which can leave farmers in debt (Scoones et al., 2018; Moyo, 2020). About 3.2 million smallholder farmers grow tobacco worldwide, with many of them in Africa, according to Maravanyika (2018). Production increased from 48 million

kg in 2008 to 256 million kg in 2020 in Zimbabwe as a result to contract farming after land reforms in 2000 but this growth covers up issues because 60% of contracted farmers earn less than \$1,000 annually after repaying loans, keeping them in poverty (Moyo and Ncube, 2021).

In Malawi, 90% of tobacco farmers' work under contracts, but 60% live on less than \$1.90 per day due to strict loan recovery methods (Jayne and Amankwah, 2021). Similarly, in Zimbabwe, companies like Tian Ze use strict grading schemes, requiring farmers to repay input loans with up to 50% of their income (Scoones, 2020). Due to traditional land ownership structures that prevent them from directly holding contracts, women who comprise 70% of farm workers, face additional difficulties (Mutopo, 2019). Many scholars argue that contract farming produces an "unfair system" where farmers bear market and climatic risks while large corporations retain the majority of earnings, despite the fact that it offers crucial inputs and technical assistance (Moyo, 2019). According to recent studies, Zimbabwe's tobacco industry has monopolistic policies that restrict farmers' capacity to bargain for lower prices, which keeps households in debt (Ncube, 2020; Moyo and Ncube, 2021).

Zimbabwe's tobacco output has increased by 43% since 2008, according to Ncube (2022) data, yet actual farmer incomes have not increased, indicating a systematic undervaluation of their labor. Critics point out how contract farming fosters dependency through input credit systems (Scoones, 2019), while supporters claim, it provides important market links in areas with inadequate infrastructure (Jayne et al., 2018). Contract farming continues to be both beneficial and detrimental for smallholder farmers; while it guarantees that they may sell their produce, it also increases the economic divide and restricts advancements in their standards of living.

2.2.2 Smallholder Farmers

Smallholder farmers are those that practice agricultural productions on small areas of land, mainly using family members to work the fields and practices traditional farming techniques. According to Jayne et al. (2019), small farmers are those who manage less than 2 hectares of land and play an important role in rural livelihoods and food production, mostly in developing countries. Moyo (2018) made an addition that smallholder farmers makes a great contribution towards job creation and increased agricultural output despite being faced with drawbacks like limited access to

resources, technology and markets. Scoones (2020) acknowledge the vulnerability to economic shocks and environmental changes which smallholder farmers are prone to affect their productivity and livelihoods and this.

The available literature shows the importance of smallholder farmers as a key player in understanding tobacco contract farming. The farmers who work with small portions of land and resources are usually the main beneficiaries of contract farming arrangements as they receive inputs, technical support and guaranteed markets. The lived experiences of smallholder tobacco farmers can assist research to show how contract farming can improve their income and welfare in the region.

2.2.3 Household Income

Total money earned by all members of a home from a variety of sources, such as government assistance, business income, investments, and wages and salaries, is referred to as household income. It is an important indicator for measuring economic well-being and is necessary to evaluate families' financial security and standard of living. In addition to being a measure of financial resources, researchers stress that household income also affects access to basic services like food, healthcare, and education.

Household income has an important effect on family living standards, especially in developing nations where a large portion of the population depends on farming for a living (Jayne and Amankwah, 2021). Household welfare in rural areas can be greatly impacted by income from agricultural pursuits, especially contract farming. For example, households engaged in tobacco contract farming reported greater income levels than those who relied only on subsistence farming, according to a study by Moyo and Ncube (2021). The report did point out, though, that these income increases frequently accompany higher debt levels, which raises questions about how sustainable these revenue streams are. Scoones' (2020) research highlights the intricacies of household income in contract farming. According to the author, contract farming might increase income stability by ensuring access to markets and inputs, but it can also result in financial instabilities because of reliance on loans to cover production costs. This dual nature emphasizes

the importance of understanding not only income levels but also the underlying mechanisms that influence the financial security of households.

Likewise, gender dynamics and social fairness directly relate to household income. According to Mutopo (2019), women typically work in agriculture and make an important contribution to household income, but they usually have little influence over the money made. Their capacity to make decisions about household expenditures is restricted by this inequality, which could have an impact on the welfare of the entire household. According to Jayne et al. (2019), supporting gender parity in revenue-generating activities can raise household income and, as a result, improve everyone in the family's health and educational outcomes.

2.2.4 Household Welfare

Household welfare refers to the overall well-being and quality of life that families experience in their daily lives. This concept goes beyond just measuring money and income to include access to basic needs like food, clean water, healthcare, education and adequate housing. Researchers use household welfare as a key indicator to understand how well families can meet their essential needs and maintain a decent standard of living (World Bank, 2020). Many factors influence household welfare, particularly in rural areas where smallholder farmers live. Access to reliable income sources, social services and community support systems all play crucial roles in determining how well families can thrive. For smallholder tobacco farmers, household welfare depends heavily on their ability to generate stable income from their farming activities and convert this income into improved living conditions for their families (Chirwa and Dorward, 2013).

Contract farming arrangements can considerably affect household welfare outcomes for smallholder farmers. When farmers participate in tobacco contract farming, they often experience changes in their access to inputs, technical support and guaranteed markets, which can translate into improved welfare outcomes. Barrett et al. (2016) found that contract farming participants typically show better food security, improved housing conditions and increased access to healthcare services compared to non-participating farmers. However, these welfare improvements often come with trade-offs, as farmers may face increased dependency on contracting companies and reduced autonomy in their farming decisions.

The relationship between tobacco contract farming and household welfare shows complex patterns across different contexts. Some studies demonstrate positive welfare outcomes, where participating families report better nutrition, improved children's education and enhanced living standards (Oya, 2012). These improvements often result from higher and more predictable incomes that allow families to invest in better food, healthcare and education for their children. Contract farmers frequently gain access to extension services and modern farming techniques that can improve their overall productivity and income stability.

However, other research reveals mixed or negative welfare effects from contract farming participation. Key and Runsten (1999) highlight how contract farming can create cycles of debt and dependency that may actually reduce household welfare over time. Farmers often must take loans to meet production requirements and when harvests fail or prices drop, families can experience severe financial stress that negatively affects their overall well-being. This debt burden can force families to reduce spending on essential items like food, healthcare and children's education.

Gender dynamics within households also shape how contract farming affects overall family welfare. Women often contribute significantly to tobacco production activities but may have limited control over the income generated from these activities (Prowse, 2012). This unequal control over resources can affect how families allocate spending across different welfare priorities. When women have greater influence over household income decisions, families typically invest more in children's education, healthcare and nutritious food, leading to better overall welfare outcomes.

The sustainability of welfare improvements from tobacco contract farming remains an important consideration for smallholder farmers. Short-term income gains may not translate into long-term welfare improvements if farmers cannot build assets or develop alternative income sources. Climate change, market volatility and health concerns related to tobacco production can all threaten the sustainability of welfare gains from contract farming participation (Makoka et al., 2017).

2.2.4 Climate Risks and Agricultural Vulnerability in Tobacco Production

In Africa, tobacco production is primarily driven by rain-dependent agriculture, with over 90 percent of cultivation relying on seasonal rainfall (Moyo, 2020). However, climate change has caused long droughts and unpredictable growing seasons, resulting in a 25 percent reduction in tobacco yields in Zimbabwe's Macheke region (Maravanyika et al., 2021). These climate issues directly threaten household incomes. A 2022 study of 300 contracted farmers in Zimbabwe found that 65 percent lost more than \$500 annually due to crop failures (Ncube and Moyo, 2022). These losses are made worse by strict contract terms, which constantly penalize farmers for low yields regardless of weather conditions. For instance, large corporations such as Philip Morris International and British American Tobacco usually impose set output limitations, making farmers accountable for climate-related deficits (Scoones et al., 2022). Income unpredictability leaves households caught in cycles of debt and food poverty.

The cultivation of tobacco solely which is promoted by contract farming methods, does considerable harm to ecosystems. Over time, continuous cultivation lowers farm output by reducing soil nutrients. According to a study conducted in Zimbabwe, after five years of tobacco production, the amount of organic matter in the soil decreased by 35 percent, requiring the use of more chemical fertilizer and increasing input prices by 20-25 percent (Moyo and Scoones, 2021). Deforestation is also a result of tobacco curing, which uses a lot of fuel. Deforestation is also a result of tobacco curing, which uses a lot of fuel. Zimbabwe's annual deforestation rate is 1.5 percent, with farmers clearing about 0.4 hectares of forest for every hectare of tobacco planted (Ncube, 2020). With 1.5 million hectares lost yearly, tobacco growing is responsible for 5 percent of deforestation worldwide in low-income nations (Maravanyika, 2019). Environmental harm weakens long-term resilience because less tree cover and depleted soils make people more vulnerable to erosion and climate shocks.

Adaptive measures are rarely given priority in contract-farming systems, despite growing evidence of climate hazards. Large corporations rarely make investments in climate-resilient policies, but they frequently supply hybrid seeds and pesticides. For instance, according to Jayne et al. (2019), less than 15 percent of tobacco contracts in Africa include terms relating to training on soil

conservation or drought-resistant crops. Despite 80 percent of contracted farmers in Malawi reporting crop damage from droughts, only 10 percent of them have insurance against climate-related losses (Moyo and Jayne, 2022). Alternative farming practices have the potential to lessen these difficulties, such as combining crops with legumes that fix nitrogen. Crop diversification increased yields by 15 percent and decreased fertilizer expenditures, according to East African trial programs (Scoones et al., 2021). Companies like Tian Ze, however, oppose such tactics by enforcing stringent single-crop limitations in contracts (Scoones, 2021). Farmers are poorly prepared to adjust to climate change because of this corporate firmness, which limits innovation. This corporate rigidity hinders innovation and makes it difficult to adjust to climate change.

The inability of contract farming to address climate vulnerability reflects wider structural imbalances. The evidence through findings that states that 90 percent of the financial losses caused by climate change are borne by farmers, while large corporations continue to dominate pricing and the supply of inputs (Ncube and Moyo, 2022). According to a 2023 study, 58 percent of Zimbabwean tobacco farmers could not afford irrigation systems, and 72 percent lacked access to climate information services, which allowed them to continue relying on unpredictable rainfall (Mutopo and Moyo, 2022). Only 5 percent of tobacco contracts worldwide include money for climate adaptation, indicating a systemic disregard for the wellbeing of small farmers (Jayne et al., 2021). Tobacco production will continue to be a dangerous livelihood strategy in the absence of reforms to include climate resilience into contractual arrangements, such as insurance plans, incentives for diversification and farmer-led decision-making.

2.2.5 Debt Cycles and Financial challenges in Contract Farming

In Zimbabwe, input loan schemes, a key component of tobacco contract farming, tie farmers to large companies through advance payments for seeds, fertilizer, and pesticides, but these loans often have interest rates of 25-40 percent and create overwhelming debt burdens (Moyo, 2022). In this regard, 70 percent of contracted farmers in Macheke reported spending over 50 percent of their annual income repaying input loans, with 40 percent defaulting due to climate-related yield losses (Mutopo and Ncube, 2023). Firms such as Tian Ze and British American Tobacco enforce strict repayment terms, taking debts directly from crop sales and leaving farmers with minimal profits (Scoones, 2022). Contract farming for tobacco has debt cycles that are similar to those of

other cash crop industries. Due to input loans, 75 percent of contracted tobacco farmers in Malawi are stuck in a never-ending debt cycle and 55 percent require further loans to cover their basic expenses (Jayne et al., 2021).

Similarly, borrowing rates on genetically modified seeds range from 30 to 45 percent for Indian cotton farmers who have contracts with big seed firms, which adds to the high rates of financial distress (Moyo and Scoones, 2023). Despite the fact that coffee prices have doubled globally since 2015, Ethiopian coffee farmers who work for large coffee firms spend 60 percent of their income paying back input loans (Jayne, 2022). These situations illustrate a global pattern in which contract farming systems place corporate profit ahead of the financial security of farmers, with large corporations employing monopolistic control to maintain low prices and drive up input costs (Scoones, 2020).

Comparative research demonstrates that contracted and independent farmers experience quite different debt results. Despite generating 25 percent more harvests, contractual tobacco growers in Zimbabwe have 40 percent more debt than their contemporaries who are not under contract (Moyo and Jayne, 2022). The monopolistic actions of large corporations are the source of this conflict. Tobacco is sold at \$2.50 per kg to contracted farmers and \$3.80 per kg to third-party suppliers (Ncube, 2022). In order to lower risks, non-contracted farmers diversify into maize and legumes, displaying greater resilience. For instance, 65 percent of independent farmers in Macheke cultivate food crops on 30 percent of their land, which lessens their dependency on tobacco revenue (Mutopo, 2021). Contract farming agreements, on the other hand, frequently restrict diversification and compel farmers to cultivate a single crop. In Zimbabwe, 80 percent of contracted households reported food shortages during drought years, compared to 50 percent of non-contracted households, according to a 2023 study (Mutopo and Ncube, 2023). These differences can be explained by the financialization of contract farming, in which large corporations make money from interest on input loans rather than crop sales.

Input credit systems account for 20-30 percent of British American Tobacco and Philip Morris International's African revenue, a percentage that increased by 15 percent between 2018 and 2022 (Jayne et al., 2023). Farmers, on the other hand, are responsible for production risks; in Macheke,

households suffer 90 percent of climate-related losses (such as pests and drought), while businesses modify contracts to reduce their obligation (Ncube and Moyo, 2022). Smallholder farmers lack the negotiating ability to demand fair terms, which is a reflection of larger imbalances of power in global value chains (Scoones et al., 2020).

2.2.6 Gender Disparities in Tobacco Contract Farming

Women, indicating a highly male-dominated land ownership structure (ZIMSTAT, 2019) own only 20 percent of Zimbabwe's agricultural land. In Macheke, this results in significant disparities in tobacco contract distribution, with men holding 85 percent of contracts even while women perform the majority of the actual farm work roughly 70 percent, according to recent studies (Mutopo, 2020). Large corporations like Tian Ze still require a man to guarantee any debts, even when women run the farm, keeping women reliant on male family members. . According to a 2020 World Bank report, unjust lending practices cause women farmers to pay interest rates that are almost 30 percent higher than those of men are. In Macheke, 90 percent of women claim they have no say in contract talks, but men control almost 80 percent of tobacco sales revenue, demonstrating the extreme inequality of decision-making authority (FAO, 2019). Similar circumstances exist in Malawi, where women control 10 percent of the contracts but perform 60 percent of the labor in tobacco production (Chirwa, 2018).

Additionally, tobacco growing causes more health issues for women. Compared to just 25 percent of men, 45 percent of Zimbabwe's female farmers have green tobacco sickness (GTS) because of absorbing nicotine through their skin while handling tobacco leaves (WHO, 2019). Because it is too costly, women frequently handle pesticides without the appropriate safety gear, which has resulted in 40 percent higher respiratory issues among women than males (ILO, 2020). The situation is worsened by the fact that women bear the dual responsibilities of farming and raising a family; during harvest, 65 percent of them work incredibly long 14-hour days, which causes chronic health problems (Nyathi et al., 2020). Another issue is healthcare, where 70 percent of Macheke women use traditional medicines for ailments related to farming because they cannot afford to visit clinics (ZIMSTAT, 2019).

Scholars such as O'Laughlin (2016) contend that contract farming exploits gender disparities to boost business profits. Employers hardly compensate work that women historically performed, such as caring for seedlings and sorting leaves. Razavi (2018) highlights how contracts keep women reliant by requiring them to obtain resources through men. The "household heads" in Zimbabwe, who are nearly usually men, receive input from Tian Ze's contracts, ignoring the participation of women (Mkodzongi, 2020). According to Agarwal (2018), contract farming forces women to labor harder to lift their families out of poverty while denying them a voice in financial decision-making.

A few females have retaliated against this exclusion. Women in Kenya now have direct access to loans and training after the Tobacco Women Farmers Association (TWFA) convinced BAT to put their names on 30 percent of contracts (Kamau, 2019). These women reported having greater access to healthcare and a 25 percent increase in income by 2020. However, these kinds of success stories are uncommon; in Zimbabwe, just 5 percent of Macheke women join farmer unions, primarily due to time constraints and cultural impediments (Mutopo, 2020).

2.2.7 Structural Inequities in Agricultural Contracts

Large tobacco businesses profit greatly from the labor of smallholder farmers by using their position as the only buyers in the market to keep tobacco prices low. Despite the fact that flue-cured tobacco prices on the international market average \$4.50 per kg, contracted farmers in Zimbabwe only receive roughly \$2.30 per kg (Zimbabwe Tobacco Association, 2020). Due to this significant pricing disparity, every household in Macheke loses over \$1,200 year, or almost 60 percent of their potential income (Kumar & Singh, 2019). Businesses such as British American Tobacco (BAT) and Philip Morris International (PMI) use unclear grading schemes to manipulate prices, lowering payments by 20-40 percent and designating as "low quality" up to 30% of harvested leaves (Mwambi et al., 2018).

In Malawi, 75 percent of farmers estimate that leaf-buying companies manipulate prices, costing them approximately \$500 per year (Chirwa & Matita, 2019). This is consistent with a global trend in which large agricultural corporations keep 80 percent of tobacco supply chain earnings, leaving farmers with less than 10 percent (UNCTAD, 2020). The arrangements shield corporations from

responsibility while unfairly shifting all production and climate risks to farmers. According to Nyathi et al. (2020), 90 percent of contracts in Macheke compel farmers to repay input loans regardless of the fate of their crops, even if pests or drought destroys 50-70 percent of them. To collect advance payments, Tian Ze, which China National Tobacco Corporation owns, for instance, takes 40-60 percent of sales revenue, leaving households without adequate money for necessities (Mkodzongi, 2020).

However, these businesses are not penalized for late payments or abrupt contract cancellations. Only 5 percent of Zimbabwean tobacco producers were able to obtain any legal assistance, despite 65 percent of them reporting contract violations by buyers, according to an FAO research (FAO, 2019). Due to this unjust circumstance, farmers are left vulnerable, 55 percent of Macheke households must take out high-interest informal loans in order to subsist after harvest, which leads to debt cycles (ZIMSTAT, 2018).

Small farmers have banded together to protest unfair contracts in spite of these obstacles. In 2020, tobacco farmers in Andhra Pradesh, India staged nationwide protests calling for debt relief and minimum pricing. As a result, 200,000 households had their loans forgiven and prices increased by 15 percent (Rao et al., 2018). Similarly, in order to avoid intermediaries and obtain 30 percent higher prices, Kenyan coffee producers established cooperatives such as the Nairobi Coffee Exchange (Kamau, 2019). Since 2018, the Zimbabwe Tobacco Farmers Union (ZTFU) has been advocating for transparent pricing in Zimbabwe; however, corporate opposition has hindered their progress. Tian Ze was under pressure to reduce input loan interest rates from 35 percent to 25 percent when 5,000 Macheke farmers went on strike in 2020, briefly halting sales (Dube, 2020). These successes are uncommon, though, as only 10 percent of collective bargaining initiatives in Sub-Saharan Africa actually result in better contracts (Oya, 2018).

The tobacco industry in Malawi displays the potential and limitations of farmer resistance. In 2021, after BAT and JTI slashed prices by 20 percent, 30,000 growers boycotted auctions, claiming there was too much supply. The six-week protest disrupted \$60 million in exports, forcing the companies to raise prices by 12 percent and cancel \$10 million in input debts (Chirwa, 2019). However, these gains were short-lived, as prices fell below their pre-protest levels and debt levels increased by 18

percent (World Bank, 2020). This highlights the need for formal protections, such as Malawi's proposed Contract Farming Bill (2020), which would require minimum prices and independent dispute resolution (Nyasa Times, 2020).

2.2.8 Gaps in Existing Literature

Economic, environmental, and gender implications usually has been examined separately in previous research, but few studies integrate these factors to provide a comprehensive picture of the wellbeing of farmers affected by tobacco contract farming. For example, Mubaya & Mafongoya (2017) concentrate on ecological costs without taking into account the allocation of resources between men and women, while Mkodzongi (2017) studies debt cycles but does not link them to environmental harm. Additionally, the majority of studies have a national or international viewpoint, omitting crucial local insights into the ways in which various vulnerabilities interact to influence family results. By combining socioeconomic, ecological, and gender analyses, this research seeks to close these gaps and offer a more comprehensive understanding that can guide more equitable policy changes.

2.3 Theoretical framework

2.3.1 Transaction Cost Economic Theory

Transaction Cost Economics (TCE) examines the costs of doing business in imperfect markets to explain why specific economic arrangements emerge (Bijman, 2008; Williamson, 2015). Due to their limited access to capital, technology, and dependable markets, smallholder farmers in engage in contract farming. By shifting production expenses to farmers through loans and fixed pricing, large corporations employ contract farming to lower their risks (such as price fluctuations or climate issues) (Kirsten & Karaan, 2017). However, exploitation, including overpriced inputs and market control, frequently results from the unequal power between businesses and farmers, trapping them in debt (Omondi et al., 2020). TCE ignores structural inequality while assuming people make logical decisions, according to recent opponents. For instance, 60 percent of households in Zimbabwe's tobacco industry earn less than \$1,000 annually after loan repayment, while international corporations impose contracts that put their profits ahead of the welfare of farmers (ZIMSTAT, 2018).

Therefore, whereas TCE explains the prevalence of contract farming, it also highlights structural issues such as reliance on large corporations and a lack of bargaining power, which exacerbate income volatility (Mwambi et al., 2019). In Macheke, Zimbabwe, tobacco contract farming can be usefully analyzed using TCE. This theory, which was created by Oliver E. Williamson, focuses on how economic players arrange transactions to reduce expenses associated with negotiation, information imbalances, oversight, and enforcement. Important ideas include asset specificity (investments linked to particular transactions that raise dependency and risk), opportunism (behaving in self-interest), and bounded rationality (limited capacity to understand information). TCE contributes to the explanation of why large corporations such as China National Tobacco Corporation (CNTC) and British American Tobacco (BAT) favor formal contracts with smallholder farmers in tobacco contract farming. By limiting monitoring costs, lowering market risks, and managing input provision, these contracts save transaction costs.

In order to guarantee constant quality and lower their search expenses, businesses offer seeds, fertilizer, and insecticides on credit. By shifting the risk of price fluctuations to farmers, fixed-price contracts help businesses secure inexpensive tobacco supply. Smallholder farmers, who take on the majority of the risks, frequently suffer because of this arrangement, which helps businesses cut costs. TCE highlights the power imbalances in these agreements while also explaining why contract farming is a common cost-cutting strategy. High-interest input loans frequently trap smallholder farmers in debt cycles, which are made worse by strict contract clauses that place all production risks on them. According to recent studies, 90 percent of climate-related losses in Zimbabwe are borne by farmers, highlighting the unequal risk distribution in these contractual arrangements.

Furthermore, TCE ignores the systemic injustices in the tobacco industry in favor of cost reduction. Smallholder farmers confront many obstacles, such as restricted access to loans and market knowledge, whereas large corporations enjoy lower transaction costs. Companies are able to impose harsh terms that further reinforce farmers' dependency because the contracts frequently take advantage of information mismatches. For example, businesses may profit from processing tobacco leaves, while farmers may receive payments significantly below market value. This

demonstrates how TCE can explain the operation of contract farming, but it also highlights the limitations of the approach in tackling more general socioeconomic problems.

TCE's detractors point out that it assumes that all parties are rational and have equal bargaining power, which is uncommon in agricultural settings. Because businesses utilize their market power to keep prices low and shift risks to poor farmers, scholars contend that TCE ignores the exploitation that occurs in these arrangements. TCE fails to address gendered transaction costs sufficiently, such as the exclusion of women from contract ownership and decision-making, according to feminist opponents. In the tobacco industry, where the majority of the labor is performed by women but are still excluded from access to resources and power, this supervision is especially crucial.

2.3.2 Transformative Sustainable Livelihoods Framework

Small tobacco producers in Macheke, Zimbabwe, have socioeconomic and environmental difficulties that can be effectively examined using the Transformative Sustainable Livelihoods Framework (TSLF). By focusing on equity, personal responsibility, and systemic change, the TSLF expands upon the Sustainable Livelihoods Framework (SLF), which was created by the UK's Department for International Development (DFID, 2000). Scholars such as Scoones (2018) contend that the TSLF ensures livelihoods are not just resilient but also equitable and powerful by shifting the focus from survival to transformative results. In Macheke, where tobacco contract farming dominates the rural economy yet worsens poverty cycles and environmental harm, this concept is especially pertinent.

Natural, financial, human, social, and physical capital are the five livelihood assets that are examined by the TSLF. Producing just tobacco in Macheke seriously degrades the area's natural capital, which includes land, soil, and water. Continuous tobacco farming lowers soil organic matter by 35 percent over five years, necessitating 25 percent more fertilizer and raising input costs by \$120 per hectare per year, according to a 2020 study (Nyathi et al., 2020). This is made worse by deforestation, which is motivated by the requirement for wood to cure tobacco: Tobacco growing causes Zimbabwe to lose 60,000 hectares of forest per year, which adds to the country's 1.8 percent deforestation rate (FAO, 2019). Given that farmers must repay 40-50 percent of their

income in input loans from multinational businesses, these environmental costs immediately erode financial capital (World Bank, 2020).

Additionally, human capital is under stress. Because of traditional land ownership practices, women in Macheke are not included in 85 percent of contracts, even though they perform 70 percent of the farm work (ZIMSTAT, 2019). With female-headed households earning 30 percent less than male-headed ones, this exclusion restricts their access to finance and strengthens their dependence (Mutopo, 2020). Human capital is further undermined by health risks: Green tobacco sickness (GTS) affects 45 percent of female farmers, and the annual medical expenses for each household are \$150, or 15 percent of their income (WHO, 2019).

The TSLF's focus on social capital draws attention to how small farmers are marginalized by power disparities in contract farming arrangements. Market control is enforced by businesses such as China National Tobacco Corporation, which pays tobacco growers \$2.30 per kg while selling processed leaves for \$10.50 per kg worldwide (Zimbabwe Tobacco Association, 2020). Because 90 percent of contracts in Zimbabwe shift production risks, such as pests and drought, to farmers while firms maintain control over price setting, the inequality is well-established (FAO, 2019). These circumstances are consistent with Oya's (2017) criticism of contract farming as a form of "adverse incorporation," in which local farmers are exploitatively included into international markets.

The structural causes of unsustainability are also discussed in the TSLF. 60 percent of households in Zimbabwe, for example, make less than \$1.90 per day due to the absence of enforceable provisions protecting farmers from exploitation under the country's National Agricultural Policy (2018–2030) (ZIMSTAT, 2018). However, ecological agricultural practices have showed promise, such as growing tobacco next to legumes that fix nitrogen. The potential benefits of sustainable alternatives was demonstrated by a 2019 FAO pilot in Manicaland Province, which raised yields by 18 percent and decreased fertilizer costs by 20 percent (Nyasimi et al., 2019).

Crucially, the TSLF promotes transformative laws that restore power balance. Scoones (2018) emphasizes the necessity of "redistributive institutional reforms," such regulating price floors and

contracts that are inclusive of both genders. By opposing BAT's unfair practices, the Tobacco Women Farmers Association (TWFA) used collective bargaining to obtain a 25 percent increase in women's income in Kenya (Kamau, 2019). These instances highlight how the TSLF, coupled with community involvement, may promote equity.

According to the TSLF, Macheke tobacco contract farming puts corporate profit ahead of the welfare of people and the environment. Empirical data, such as the 35 percent soil degradation rate and the 70 percent female labor contribution, are integrated into the framework to reveal systemic injustices and outline reform strategies. To ensure that communities that rely on tobacco are not left behind in the global sustainability transition, agricultural economists should take note of this analysis, which highlights the urgency of policies that match livelihood sustainability with social justice and climatic resilience.

The TSLF's emphasis on social capital highlights how power imbalances in CF systems marginalize smallholders. MNCs like China National Tobacco Corporation (CNTC) enforce monopsonistic control, paying farmers \$2.30 per kg for tobacco while selling processed leaves at \$10.50 per kg globally (Zimbabwe Tobacco Association, 2023). This inequity is institutionalized as 90 percent of contracts in Zimbabwe place production risks (e.g., drought, pests) on farmers, while MNCs retain price-setting authority (FAO, 2022). Such dynamics align with Oya's (2020) critique of CF as a mechanism of "adverse incorporation," where smallholders are integrated into global markets on exploitative terms.

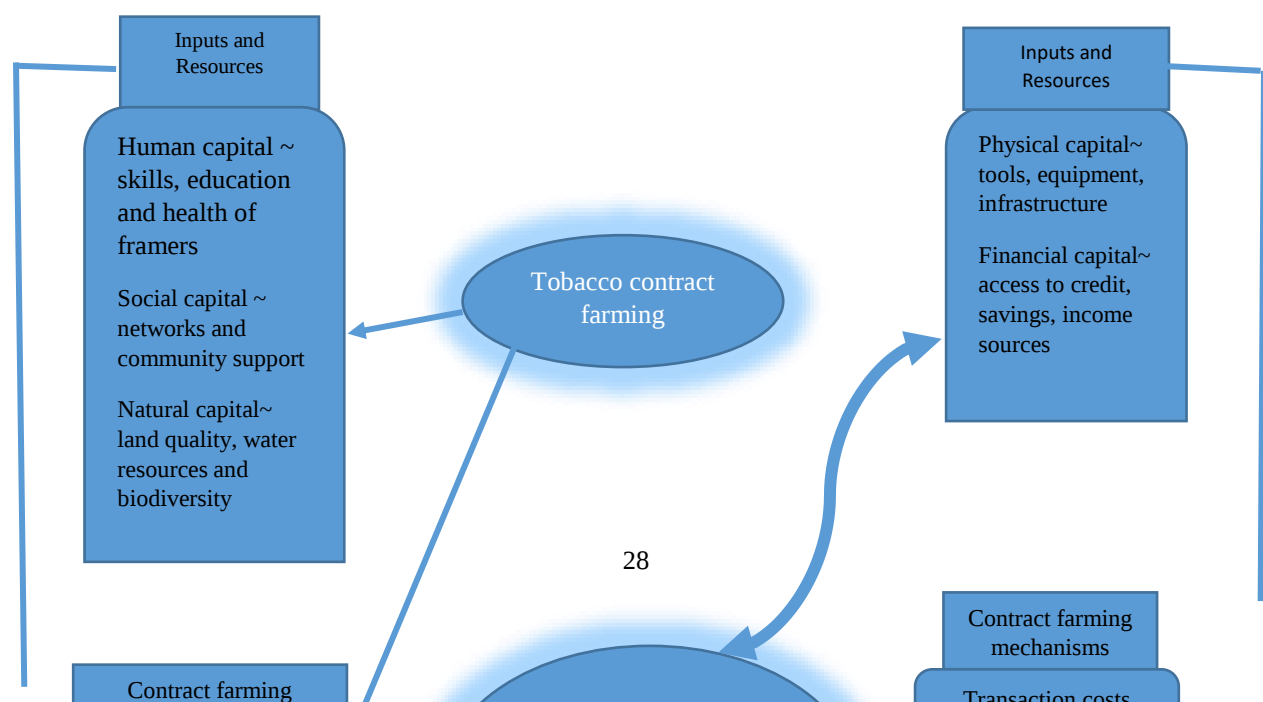
The TSLF also comments on the structural drivers of unsustainability. For instance, Zimbabwe's National Agricultural Policy (2018–2030) lacks enforceable clauses to protect farmers from MNC exploitation, leaving 60 percent of households earning below the poverty line of \$1.90 per day (ZIMSTAT, 2021). Conversely, agro ecological interventions such as intercropping tobacco with nitrogen-fixing legumes have shown promise. A 2022 FAO pilot in Manicaland Province increased yields by 18 percent and reduced fertilizer costs by 20 percent, demonstrating the viability of sustainable alternatives (Nyasimi et al., 2022).

Critically, the TSLF advocates for transformative policies that rebalance power. Scoones (2018) stresses the need for “redistributive institutional reforms,” such as mandating gender-inclusive contracts and price floors. In Kenya, collective bargaining by the Tobacco Women Farmers Association (TWFA) secured a 25 percent income increase for women by challenging BAT’s exclusionary practices (Kamau, 2022). Such examples underscore the TSLF’s potential to drive equity when paired with grassroots mobilization.

The TSLF reveals that tobacco CF in Macheke prioritizes corporate profit over human and ecological well-being. By integrating empirical data such as the 35 percent soil degradation rate and 70 percent female labor contribution, the framework exposes systemic inequities while charting pathways for reform. For agricultural economists, this analysis underscores the urgency of policies that align livelihood sustainability with climate resilience and social justice; ensuring tobacco-dependent communities are not left behind in the global sustainability transition.

2.4 Conceptual Framework

Figure 2.5 Conceptual Framework





In the context of smallholder farming in Macheke, Zimbabwe, this conceptual framework demonstrates how tobacco contract farming works as a transformative system that transforms different farmer-held resources into quantifiable outcomes. Three interrelated stages comprise the framework's progression, which are inputs and resources, contract-farming procedures, and the outputs that follow. The system is based on five different forms of capital including financial, natural, social, human, and physical. The skills, education, and health of farmers are referred to as human capital and their networks and social support systems are referred to as social capital. Access to productive land, water resources, and ecological conditions are referred to as natural capital; farming tools, equipment, and infrastructure are referred to as physical capital; and access to credit, savings, and income diversification are referred to as financial capital.

The efficiency with which inputs are arranged and used is determined by the contract farming systems that use these resources. The language and form of contracts, the function of intermediaries in enabling and upholding agreements, and the transaction expenses incurred during the process are all important mechanisms. Changes in household income, welfare gains, and sustainability metrics that represent long-term agricultural viability are then used to evaluate the results. The framework is an essential analytical tool for assessing how contract farming supports smallholder livelihoods in the Macheke example. It emphasizes that the effectiveness of such agreements depends on contractual mechanisms' ability to effectively leverage farmers' capital and reduce transaction costs, which will eventually increase household income and welfare.

2.5 Major Insights from the Literature Review

Several important facts regarding tobacco contract farming in Zimbabwe are revealed by the literature review. First, there are notable gender differences; women perform the majority of the work but have less access to contracts, decision-making authority, and financial gain. Second, multinational firms are greatly favored by structural injustices in contracts, which allow them to manipulate prices and shift production risks on weaker farmers. Third, smallholders find it challenging to break free from the cycle of poverty brought on by environmental deterioration and economic exploitation.

Current theoretical frameworks such as Transaction Cost Economics explain the widespread adoption of contract farming, however they fall short in addressing systemic injustices and power disparities. The Transformative Sustainable Livelihoods Framework, which looks at how several types of capital, natural, provides a more thorough method financial, human, social, and physical interact to influence farmers' resilience and well-being. The assessment also identifies a number of useful strategies for resolving these issues, such as farmer collaboration, legislative changes that require equitable contracts, and agro ecological methods that lessen environmental effects while enhancing financial results. However, there are still a lot of unanswered questions about how these different aspects interact at the family level, especially when it comes to gender relations and environmental sustainability.

2.6 Conclusion

The complex dynamics of tobacco contract farming in Macheke, Zimbabwe, have been studied in this literature study, which has identified important issues with environmental sustainability, economic justice, and gender equity. The existing system maintains major differences that undermine farmers' well-being and long-term resilience, despite the fact that contract farming has certain advantages in terms of market access and input provision. To create a greater understanding of the effects of contract farming, future studies should integrate socioeconomic, gender, and environmental evaluations. In addition, governmental interventions that help restore power balances and advance more sustainable and equitable results, as well as farmers' agency and resistance tactics, should receive greater emphasis. Researchers and politicians may strive toward a tobacco industry that benefits all parties involved, especially the smallholder farmers who serve as its backbone, by filling in these gaps.

CHAPTER 3

METHODOLOGY

3.1 Introduction

This chapter outlines the research methodology employed to investigate the impact of tobacco contract farming on household income and welfare among smallholder farmers in Macheke, Zimbabwe. It begins by a brief detail of the study area then followed by the research design. The chapter further discusses the data collection methods detailing the sampling procedures used to select participants, ensuring a representative sample that captures diverse experiences within the farming community. It goes on to highlight the ethical considerations taken to protect participants throughout the research process. Additionally, it addresses the limitations of the study, acknowledging potential biases and constraints that may affect the findings. By providing a comprehensive overview of the research design, this chapter sets the foundation for understanding the subsequent analysis and results.

3.2 Study Area and Population

Macheke, located in the Mashonaland East Province of Zimbabwe, is characterized by fertile soils and favorable climatic conditions, making it a conducive region for crop production. Situated within agro ecological region II, Macheke benefits from a subtropical climate that features distinct wet and dry seasons. The annual rainfall in this region ranges from 600mm to 800mm, occurring between November and March, which aligns with the critical growing season for various crops.

The soil composition in Macheke is primarily sandy-loam, which is appropriate for the cultivation of a variety of cash crops, with tobacco being the most grown. Tobacco production is an important component of the local economy, contributing greatly to both household incomes and regional agricultural output. In addition to tobacco, farmers in Macheke also cultivate other cash crops such as maize, cotton, and soybeans, which are important for food security and economic stability in the area.

The agricultural practices in Macheke are largely rain-fed, as water management strategies are limited. Farmers depend heavily on the seasonal rainfall to irrigate their crops, and the reliance on untreated surface water from the Macheke River and groundwater from boreholes further increases

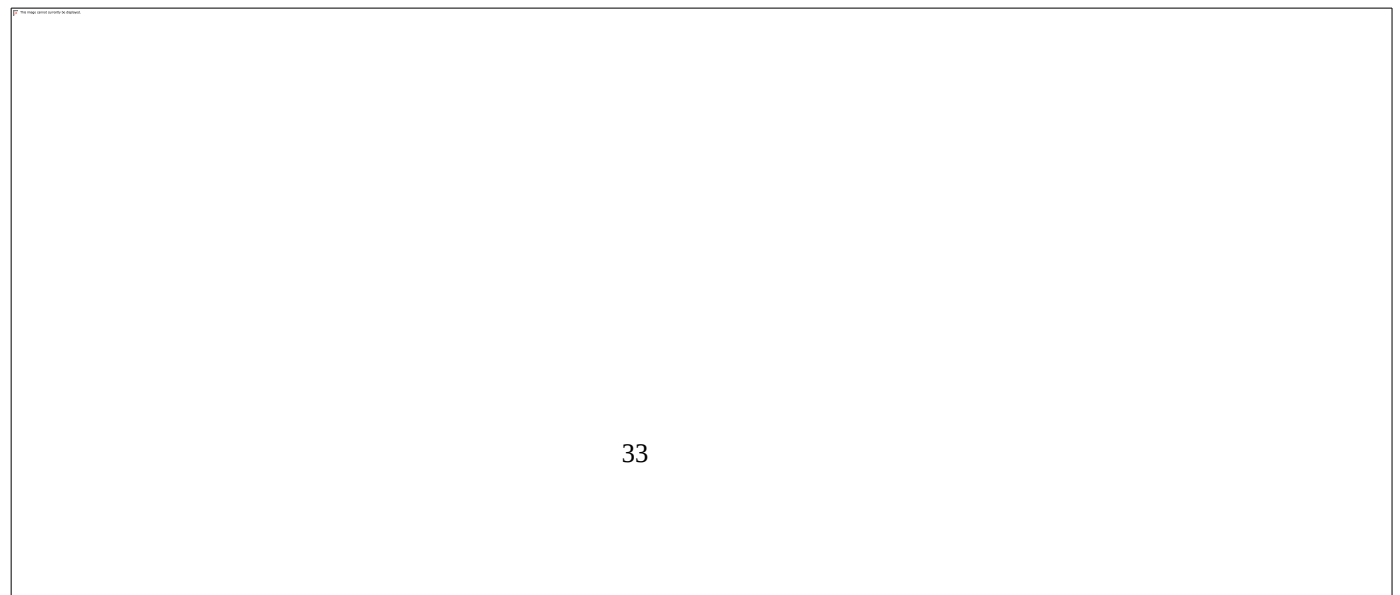
the challenges faced in effective water management. The uneven distribution of water resources often leads to competition among farmers, mostly during the dry season when water availability is important for crop growth.

As of the 2022 Household Population Census, Macheke has an estimated population of 35,000 people, with a near-balanced gender distribution. The population comprises approximately 17,500 males and 17,500 females, reflecting the typical demographic patterns of rural Zimbabwe, where gender ratios are relatively equal. The population is spread across approximately 7,000 households, with an average household size of five individuals, which is consistent with rural areas in Zimbabwe where extended family structures are common.

An important proportion of households in Macheke are engaged in agricultural activities, with tobacco contract farming being the most grown. According to the 2022 census, approximately 4,200 households (around 60% of the total households in the area) are involved in tobacco production under contract farming arrangements. These households benefit from contractual agreements with tobacco companies, which provide inputs such as seeds, fertilizers, and technical support in exchange for a guaranteed market for their produce. Tobacco contract farming has become a lifeline for many families in Macheke, offering a stable source of income compared to other crops. However, it also exposes farmers to challenges such as price fluctuations, soil degradation, and dependence on external markets.

3.3 Map of study area

Figure 3.3 Map of Study Area

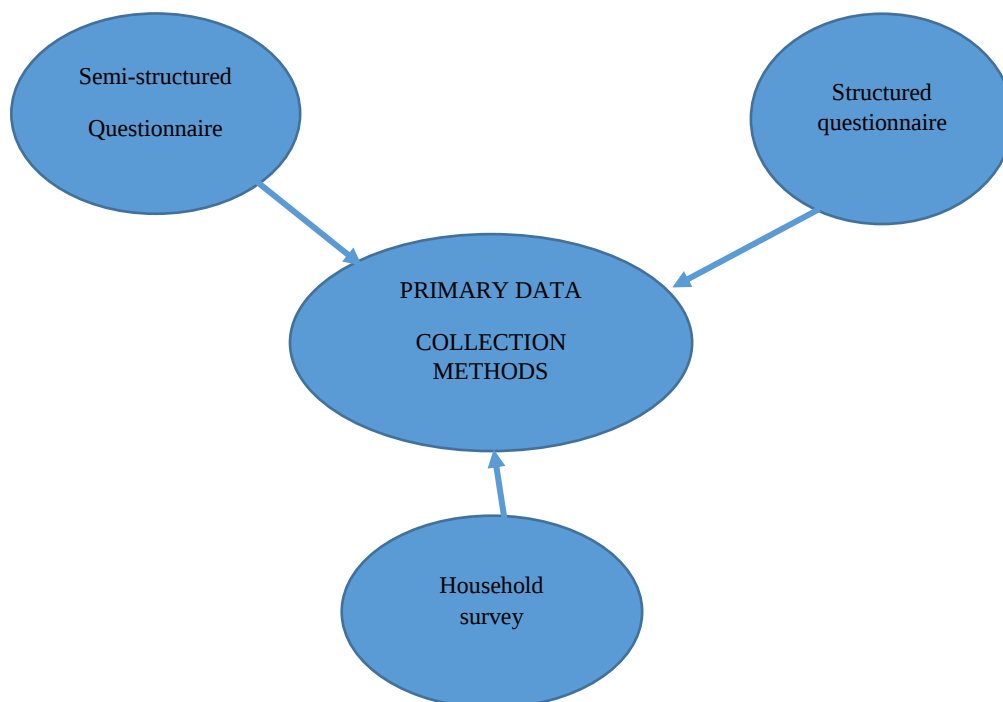


3.3 Research Design

This study employs a descriptive research design to analyze the contribution of tobacco contract farming among smallholder farmers in Macheke, Zimbabwe, using a mixed-methods approach that combines quantitative and qualitative research methods. Data collection will involve structured surveys to gather quantitative data on farmers' access to resources, productivity, and socio-economic outcomes alongside semi-structured interviews to explore farmers' experiences and challenges. The target population includes smallholder tobacco farmers engaged in contract farming, with a stratified random sampling technique used to ensure representation across different engagement levels. A sample size of 120 households will be proportionally allocated across strata. Quantitative data will be analyzed using descriptive and inferential statistics, while qualitative data will undergo thematic analysis. Ethical considerations will include maintaining confidentiality and obtaining informed consent. The researcher will utilize digital tools for data collection. The study aims to provide insights into the impact of climate-related risks, socio-economic challenges and structural inequities on smallholder farmers, contributing to discussions on sustainable agricultural practices and policy recommendations for improving their welfare.

3.4 Primary Data Collection Methods and Tools

Figure 3.4 Primary data collection methods



3.4.1 Data collection and analysis for objective 1

Research Objective 1: To analyze how climate-related risks (e.g., drought, soil degradation) in rain-fed tobacco production increase vulnerabilities in contracted households' income and welfare.

The project will investigate three basic data ideas in order to accomplish this goal: the amount of soil health degradation, the timing and unpredictability of rainfall, and the influence of these elements on household income levels. Annual rainfall (in millimeters), the degree of soil degradation (on a scale from low to high), and reported revenue losses (in US dollars (USD) or Zimbabwean dollars (ZWL)) are important factors to measure. For smallholder tobacco farmers operating under contract farming agreements, these factors directly represent climate-related risks and their financial impacts.

Data analysis will involve descriptive statistics using mean and the means from the dataset will be compared to comprehensively assess the impact of climate risks. Descriptive statistics using mean will be used as it offers a foundational understanding, while mean comparison will help reveal patterns that may indicate causal relationships or systemic risk factors. For example, a strong association between high soil degradation and significant income loss would suggest that land health is a critical determinant of household economic stability. Similarly, if rainfall variability closely aligns with reduced yields and earnings, this would confirm the role of drought as a primary vulnerability driver.

It is anticipated that the results will show a strong link between climate variability and income insecurity among contracted households. Farmers operating in areas with lower rainfall and higher levels of soil degradation are expected to report more pronounced income losses. These findings

will reveal the role of environmental stressors in increasing economic vulnerability and welfare disparities in rural farming communities reliant on contract-based tobacco production.

3.4.2 Data Collection and Analysis for Objective 2

Research Objective 2: To identify socio-economic challenges (e.g., market dependency, input loans, and gender disparities) faced by households engaged in tobacco contract farming in Macheke.

This objective seeks to uncover the socio-economic pressures that shape the livelihoods of households participating in contract-based tobacco farming. Specifically, the study will assess market dependency, input loan burdens, and gender disparities as core dimensions of vulnerability and inequality within the contract farming system. The underlying data concepts include the extent to which farmers rely on tobacco sales for income, the financial implications of input credit systems, and differences in access, participation, or outcomes based on gender.

To operationalize these concepts, several key indicators will be used. Market dependency get to be measured through the percentage of household income derived from tobacco sales. Debt dynamics will be assessed through the average value of input loans received (in USD or ZWL), and gender disparities will be examined through disaggregated data comparing male and female farmers' access to contracts, loan values, and income outcomes. These indicators will help reveal the structural financial pressures faced by farmers and to understand whether these pressures differ across gender lines or other socio-economic categories.

Data collection will be carried out primarily with structured questionnaires. This method involves a set of pre-coded, standardized questions that allow for consistent data collection across a large sample of respondents. Structured questionnaires are ideal for capturing quantifiable information such as income shares, loan values, and contract conditions, which are critical for understanding socio-economic dynamics in contract farming. The questionnaires will be administered to both male and female tobacco farmers who are under contract farming arrangements.

The analysis of this data will primarily involve descriptive statistics and correlation analysis. Descriptive statistics such as mean will be used to summarize the average income share from tobacco, the typical input loan size, and gender distribution in access to loans and contracts. This provides a foundational understanding of the socio-economic structure within tobacco farming households. To identify associations between key variables, correlation analysis will be used, particularly to explore the relationship between loan size and income dependency, or between gender and contract terms. This helps to reveal whether farmers that are more indebted, are more vulnerable to income shocks or whether women face systematic disadvantages in accessing resources and benefiting from contracts.

The justification for using correlation analysis lies in its ability to detect the strength and direction of linear relationships between socio-economic indicators, which is valuable for hypothesis generation and policy inference. While correlation does not imply causation, it is an essential step in identifying patterns of economic vulnerability and inequality.

Interpretation of results will focus on the prevalence and depth of market dependency and debt exposure. For instance, if a majority of households derive over 70% of their income from tobacco while also carrying substantial input loan burdens, this would suggest high financial vulnerability due to mono cropping and credit dependence. Gender-disaggregated findings may show that women farmers receive smaller loans or less favorable contract terms, highlighting embedded gender disparities. These insights will help frame better understanding of how socio-economic conditions shape risk exposure and limit resilience among contract farmers in Macheke.

Expected results include a high level of economic dependence on tobacco among contracted households, with input loans forming a major part of their production financing. It is also likely that gender disparities will be evident, with women having less access to formal contracts or receiving less favorable terms. These findings will offer valuable implications for contract reform, inclusive support programs, and the design of credit and market access policies personalized to reduce household-level vulnerability.

3.4.3 Data Collection and Analysis for Objective 3

Research Objective 3: To examine how structural inequities in tobacco production contracts (e.g., exploitative pricing, imbalanced input-loan terms) limit income gains and increase household welfare disparities in Macheke.

This objective aims to investigate how structural factors that are within tobacco contract arrangements create or reinforce income inequality and welfare limitations among farming households. Unlike market-based or environmental risks, structural inequities are often built into the design of contractual relationships between farmers and tobacco companies. These may include non-transparent pricing mechanisms, excessive input deductions, and unequal bargaining power. The objective focuses on understanding the extent to which such contractual features restrict household income retention and hinder access to services such as education, which are indicators of long-term welfare. The study will assess three major data concepts: contractual fairness, power asymmetry, and household welfare expenditure. Contractual fairness will be analyzed by comparing the price paid by companies to farmers with prevailing open-market tobacco prices. This comparison will expose potential underpricing mechanisms. Power asymmetry will be evaluated through qualitative accounts of negotiation dynamics, highlighting whether farmers have a voice in contract terms or are subjected to unilateral decisions. Finally, household welfare will be assessed by measuring annual household expenditure on education, an indicator for developmental investment.

To collect this data, semi-structured interviews will be conducted with the farmers. These include male and female contracted tobacco farmers (to gather firsthand experiences with contracts). Semi-structured interviews are particularly appropriate for this objective because they allow for deeper exploration of subjective experiences and structural issues while still maintaining a degree of comparability across responses. This method balances flexibility and focus, enabling the researcher to reach into sensitive topics such as exploitation or contract dissatisfaction that might not emerge from structured surveys alone.

The collected data will be analyzed using two main techniques: price trend analysis and content analysis. Price trend analysis, conducted in tools such as Microsoft Excel, will involve comparing company-set prices with open-market prices over the same period. This will help identify consistent pricing disparities and calculate the average percentage difference, providing quantitative evidence of potential exploitation. Content analysis will be used to systematically code and interpret interview transcripts, identifying recurring themes such as lack of transparency, coercive input deductions, and limited legal advice. This method allows for thematic insights into how structural contract features shape economic outcomes and perceived fairness among farmers.

The choice of content analysis is justified by its strength in distilling meaning from qualitative data, especially where issues of power and fairness are concerned. Unlike purely numerical methods, content analysis can capture the facts of participant experiences, grievances, and suggestions for change. Price trend analysis, meanwhile, offers a quantifiable lens through which to assess whether farmers are consistently paid below-market rates and to what extent such pricing affects income retention.

In interpreting the results, a consistent gap between company and market prices would suggest exploitative pricing practices. If the majority of farmers report low income retention after deductions, despite selling large quantities of tobacco, this would further support the argument that contract design limits economic gain. Furthermore, if qualitative data from farmers reveals widespread dissatisfaction with contract terms and a lack of negotiation power, this would indicate a structural imbalance in the contracting relationship.

Expected results include evidence of price asymmetries disadvantaging farmers, significant income reductions due to opaque input deductions, and limited ability of farmers to influence contract terms. Household education expenditures may also be constrained among the most heavily indebted farmers, reflecting the downstream welfare effects of these inequities. These findings will contribute to the broader discourse on fair trade, contract regulation, and equitable agricultural development in Zimbabwe and similar contexts.

Table 3.4 Data collection and analytical tools

Specific Research Objective	Data concepts	Variables/ Indicators	Data Collection Methods/ tools	Data Analysis Tools	Respondents
. To analyze how climate-related risks (e.g., drought, soil degradation) in rain-fed tobacco production increase vulnerabilities in contracted households' income and welfare.	.Onset of rainfall .Soil health degradation .Loss of income	. Annual rainfall (mm) .Soil degradation severity (scale : low, medium, high) .Income loss (USD/ZWL)	. Household survey (digital questionnaire)	.Descriptive statistics: mean	. Smallholder tobacco farmers (male/female)
. To identify socio-economic challenges (e.g., market dependency, input loans, gender disparities) faced by households engaged in tobacco contract farming.	.Market dependency .Debt dynamics . Gender Disparity	.% of income from tobacco sales .Average input loan (USD/ZWL)	. Structured questionnaires	.Descriptive statistics: mean Correlation analysis	. Farmers (male/female)

.To examine how structural inequities in tobacco production contracts (e.g., exploitative pricing, imbalanced input-loan terms) limit income gains and increase household welfare disparities.	. Contractual fairness (pricing transparency, input deductions). . Power asymmetry (farmer vs. company influence). . Education access	. Company-set price vs. open-market price (ZWL/USD per kg). . % of income retained after input deductions. . Household education expenditure (ZWL/USD/year)	. Semi-structured interviews	.Price trend analysis: using excel .Content analysis	.Farmers (to share contract experiences)
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3.5 Sampling Technique

This study employed a purposive sampling technique to select 120 smallholder tobacco farmers engaged in contract farming in Macheke. The purposive approach was chosen because the research specifically targets a clearly defined subgroup, farmers participating in contract arrangements with tobacco companies who possess the necessary experience and knowledge to provide relevant data on income, welfare outcomes, and the nature of contractual engagements. Contracted farmers are not uniformly distributed across the area, and their inclusion in company rosters and credit systems makes random sampling impractical without access to proprietary company records. Therefore, the sample was drawn from farmer lists provided by local agricultural extension officers and tobacco contracting firms operating in the region.

To ensure representativeness and reduce selection bias, efforts were made to stratify the sample by gender and ward location, ensuring that farmers from different geographic zones and household types were proportionately included. A minimum quota for female farmers was observed to

capture gender-specific dynamics in income and welfare outcomes. The final sample size of 120 respondents was determined based on logistical feasibility and statistical adequacy, allowing for meaningful cross-tabulations and descriptive comparisons while maintaining practical limits on fieldwork duration and data processing.

3.6 Ethical considerations

In this study, informed consent will be obtained from all participants before data collection, ensuring they understand the purpose of the research, their role, and their right to withdraw at any time without penalty. Participants will be assured of the confidentiality and anonymity of their responses, with data stored securely and used solely for research purposes. Additionally, the study will be sensitive to cultural norms and practices in Macheke, ensuring that the research process respects local customs and values. Ethical approval will be sought from relevant institutional review boards to ensure compliance with ethical standards in research.

3.7 Limitations

While this study aims to provide valuable insights into the impact of tobacco contract farming on household income and welfare, several limitations must be acknowledged. First, the reliance on self-reported data from farmers may introduce bias, as participants might underreport negative experiences or overstate positive outcomes due to social desirability. Second, the study's focus on a specific geographic area, Macheke, may limit the generalizability of the findings to other regions with different agricultural practices or socio-economic conditions. Additionally, the cross-sectional nature of the research means that it captures a snapshot in time, which may not fully account for seasonal variations in agricultural productivity or income fluctuations. Finally, while the study will utilize both qualitative and quantitative methods, the complexity of the issues surrounding tobacco contract farming may not be fully captured, necessitating further research to explore these dynamics in greater depth.

CHAPTER FOUR

RESULTS AND DISCUSSIONS

4.1 Demographic Characteristics of respondents

Table 4.1 Demographic Characteristics of Respondents

Variable	Description	Frequency	Percentage
Age (Years)	18-25	26	21.7
	26-35	29	24.2
	36-45	24	20.0
	46-55	19	15.8
	55 and above	22	18.3
Gender	Male	67	55.8
	Female	53	44.2
Household size (Members)	1-3	34	28.3
	4-6	34	28.3
	7-9	32	26.7
	10	20	16.7
Farm size (Hectares)	1-2	28	23.3
	2-4	25	20.8
	4-6	26	21.7
	6-10	41	34.2

4.1.1 Age Distribution and Implications

The age distribution of tobacco contract farmers in Macheke shows great diversity, with all age groups properly represented. Young adults (18-25 years) make up to 21.7 percent of respondents, indicating an important level of youth engagement in tobacco farming. The largest group comprises farmers aged 26-35 years (24.2%), followed by those aged 36-45 years (20.0%). Middle-aged farmers (46-55 years) represent 15.8 percent of the sample, while older farmers (55 years and above) account for 18.3 percent. This balanced age structure aligns with findings from Scoones et al. (2018), who documented the attraction of tobacco farming to diverse age groups in Zimbabwe due to its commercial viability and established market linkages. The substantial presence of younger farmers (45.9% below 35 years) challenges the narrative of agricultural aging in sub-Saharan Africa and suggests intergenerational sustainability of tobacco contract farming in

Macheke. This demographic distribution indicates potential for knowledge transfer between generations and adaptation to evolving agricultural technologies and market requirements.

4.1.2 Gender Dynamics in Tobacco Contract Farming

Gender analysis reveals meaningful participation of both men and women in tobacco contract farming, though with persistent gender disparities. Male farmers make up to 55.8% of respondents, while female farmers represent 44.2%. This gender distribution demonstrates a higher level of female participation compared to findings by Mazwi et al. (2019), who documented female participation rates below 30% in tobacco contract farming across other regions of Zimbabwe. The relatively higher female engagement in Macheke may reflect evolving gender norms, targeted interventions by contracting companies to enhance female participation, or economic necessities driving women's increased involvement in commercial agriculture. According to Mutambara and Mungororo (2022), higher female participation in contract farming correlates with equitable distribution of benefits within households and enhanced investment in human capital development. Nevertheless, the persistent gender gap suggests continuing barriers to women's equal participation in this high-value agricultural enterprise. Understanding these gender dynamics provides crucial context for analyzing differential access to resources, decision-making authority, and distribution of benefits from contract farming arrangements.

4.1.3 Household Size and Labor Dynamics

The household composition data reveals significant variation in family structures among tobacco contract farmers in Macheke. Smaller households (1-3 members) account for 28.3% of the sample, as do medium-sized households (4-6 members), while larger households (7-9 members) represent 26.7% of respondents. Very large households (10 or more members) constitute 16.7% of the sample. This distribution indicates that a substantial proportion (43.4%) of tobacco farming households maintain larger family units (7 or more members), consistent with findings by Moyo (2020), who observed that labor-intensive crops like tobacco tend to attract households with larger family sizes due to substantial manual labor requirements throughout the cultivation cycle. The prevalence of larger households suggests potential advantages in meeting labor demands for tobacco production, potentially reducing dependence on hired labor and enhancing profit margins. However, as Tekwa and Adesina (2018) note, larger households also face higher consumption

demands, which may offset production advantages unless income generation is sufficient and stable. The household size distribution thus reflects strategic adaptation to the labor requirements of tobacco farming while highlighting potential vulnerabilities in household welfare dependent on income adequacy.

4.1.4 Land Resource Endowments

Farm size distribution demonstrates considerable heterogeneity in land resource endowments among tobacco contract farmers in Macheke. Smaller farms (1-2 hectares) account for 23.3 percent of respondents, while medium-small farms (2-4 hectares) represent 20.8 percent. Medium-large farms (4-6 hectares) constitute 21.7 percent of the sample, and larger farms (6-10 hectares) account for 34.2 percent. This distribution indicates that while smaller farms (44.1% below 4 hectares) remain prevalent, a substantial proportion of farmers maintain larger landholdings (34.2% with 6-10 hectares). This pattern contrasts with findings by Scoones et al. (2020), who documented predominantly smaller plot sizes (under 2 hectares) in many regions of Zimbabwe engaged in contract farming. The relatively larger average farm size in Macheke suggests more successful land redistribution outcomes, consolidation of holdings by established contract farmers, or historical land tenure advantages specific to this region. According to Mazwi and Mudimu (2020), farm size significantly influences bargaining power in contract negotiations, access to inputs, and capacity to withstand economic shocks. The substantial presence of larger farms indicates potential for economies of scale in tobacco production, while the persistence of smaller holdings suggests variability in resource access and production capacity among contract participants.

The demographic data on the table above, paints a complex portrait of tobacco contract farmers in Macheke. Farming households, on average, have a household size of 6.17 members (SD = 2.224) which is relatively large compared to the national averages. This aligns with the findings by Masakure and Henson (2015), who noted the production of labor-intensive crops such as tobacco, is often associated with larger households due to the high workload throughout the production cycle. The observed household size ranges from three to 10 members indicating diversity in family structure, and by extension, varying labor capacity within the sampling frame.

4.1.5 Implications for Household Income and Welfare

The socio-economic profile of tobacco contract farmers in Macheke has several important implications for understanding household income generation and welfare outcomes. The relatively large household sizes suggest adequate labor availability for tobacco production, potentially reducing dependence on hired labor and increasing profit margins. However, as Tekwa and Adesina (2018) observe, larger households also face higher consumption demands, potentially offsetting production advantages unless income generation is sufficient and stable.

The substantial land resource base (averaging 6.17 hectares) provides farmers with a competitive advantage compared to smallholders in more land-constrained regions. Moyo (2020) argues that land availability correlates positively with bargaining power in contract negotiations and capacity to withstand economic shocks. Nevertheless, the significant allocation of land to tobacco (averaging 70% of available land) raises concerns about vulnerability to crop-specific market fluctuations and environmental risks. This high level of specialization may enhance short-term income but potentially compromises long-term resilience, particularly in the context of climate change and evolving global tobacco markets (Mutambara and Mungororo, 2022).

The moderate average experience in contract farming (4.39 years) suggests an evolving institutional relationship between farmers and contracting companies. According to Sachikonye (2016), farmers typically experience a learning curve in contract arrangements, with benefits often increasing as they develop greater understanding of contractual terms and production optimization. The presence of farmers with up to 10 years of experience provides a valuable knowledge base within the community that could facilitate peer learning and collective bargaining.

The substantial contribution of tobacco to household income (61.94%) demonstrates both the economic importance of the crop and potential vulnerabilities arising from overdependence. Mazwi and Mudimu (2020) caution that high-income concentration in a single enterprise exposes households to significant risks from price volatility, disease outbreaks, or policy changes affecting the tobacco industry. This dependency ratio exceeds levels generally considered optimal for smallholder resilience, which Tekwa and Adesina (2018) suggest should ideally remain below 50% for any single commodity.

4.2 Descriptive Socio-economic characteristics of respondents

Table 4.2 Descriptive Socio-economic characteristics of respondents

Description	Number of respondents	Minimum	Maximum	Mean	Standard Deviation
Household size	120	3	10	6.17	2.224
Farm size (hectares)	120	2	10	6.17	2.785
Years in contract farming	120	1	10	4.39	2.197
Tobacco land area (hectares)	120	1	10	4.35	2.372
% of income from tobacco	120	25%	90%	61.9417%	21.14309%

The Macheke smallholder sample closely mirrors known profiles of Zimbabwean tobacco growers. In line with other surveys, these households are relatively large. The mean household size of 6.17 (range 3-10) is comparable to the 5.8 reported in Marondera contract-farming communities. Such large families are typical in rural Zimbabwe (FAO, 2017) and provide ample labor, but increase dependency burdens. Average farm size (6.17 ha, min 2, max 10) is also in line with the post-land reform smallholder model. For context, Chigunhah et al. (2018) note that the 2000s land reforms allocated only a few hectares per family (A1 farmers collectively received 4.1 million ha), so individual smallholdings rarely exceed 10 ha. Most of this land is devoted to tobacco and the mean tobacco area (4.35 ha) represents roughly 70 percent of the farm. This intense allocation to the cash crop confirms a strong specialization trend, as contract farmers typically concentrate on tobacco. For example, Dube and Mugwagwa (2017) found Makoni smallholders averaged 4.05 ha under tobacco. Industry data similarly suggest that around 29 percent of resettled smallholders grow tobacco and 80 percent of those are on contract.

Economically, tobacco clearly dominates livelihoods, having an average of 61.9 percent of household income came from tobacco in our sample, indicating heavy dependency. This is broadly consistent with published findings, Dube and Mugwagwa (2017) report that tobacco comprised about 73 percent of smallholder income in Makoni, whereas Ruzhani and Mushunje (2022) observed 55 percent in Marondera. Thus, our farmers' tobacco share lies at the higher end, reflecting the crop's importance. Such dependence has mixed implications. On the one hand, contract arrangements can raise yields through guaranteed inputs and markets (contract farming demonstrates a route to higher-value crops). On the other hand, literature warns that extreme reliance creates vulnerability with price shocks, climate losses or contract terms harming most of a family's income. Recent studies emphasize debt and risk among tobacco households for example 74 percent of contract farmers in Manicaland reported being indebted (vs 26% independent). Likewise, a survey in Mutoko found that although contract farming improved income and food security, it also greatly increased farmers' debt and vulnerability. Our findings suggest Macheke farmers face the same trade-off.

According to the results, Macheke farmers are relatively recent entrants to contracts, having a mean tenure of 4.39 years (range 1–10). This is shorter than in some earlier samples; for instance, Dube and Mugwagwa (2017) found Makoni farmers averaged 8.36 years in tobacco. Shorter experience could imply less skill or bargaining power, and may reflect the expanding footprint of contract schemes in recent years. It may also explain why the tobacco income share in our sample is slightly lower than the Makoni case.

4.3 Resource access through contract farming

Table 4.3 Resource access through contract farming

Variable	Description	Frequency	Percentage
Inputs	Fertilizer, Seed, Pesticides	5	4.2
	Seed, Fertilizer	10	8.3
	Pesticides, Seed	12	10
	Technical support, Pesticides	15	12.5
	Seed	22	18.3

	Fertilizer	28	23.3
	Technical support, Pesticides, Seed	18	15
	Technical support, Fertilizer, Seed, Pesticides	10	8.3
Transport	Yes	49	40.8
	No	71	59.2
Insurance	Yes	42	35
	No	78	65
Legal advice	Always	24	20
	Never	36	30
	Didn't know the option existed	31	25.8
	Sometimes	29	24.2

The data in Table 4.3 reveal notable gaps in the breadth of resources that contract farmers in Macheke access through their agreements. Although fertilizer alone is provided to 23.3 percent of respondents and seed alone to 18.3 percent, only 8.3 percent receive the full “technical support + fertilizer + seed + pesticides” package, and just 15 percent obtain “technical support + pesticides + seed” (Table 4.3). This fragmented provision contrasts sharply with the integrated input schemes endorsed by FAO (2020), who argue that coordinated delivery of fertilizer, seed, pesticides, and agronomic advice boosts yield by up to 30 per cent in Southern African tobacco systems (FAO, 2020). The predominance of single-input distributions, fertilizer or seed only, suggests that companies may be constraining their support to the lowest-cost elements, potentially undermining smallholders’ capacity to adopt recommended agronomic practices (Marawa & Nyoni, 2020).

Transport access is likewise limited: only 40.8 percent of farmers report having transport services provided under contract, leaving the majority (59.2 per cent) responsible for their own logistics. This shortfall likely exacerbates transaction costs, as evidenced by Smith *et al.* (2019), who found that lack of contract-provided transport can increase time and cost burdens by up to 25 per cent for

Zimbabwean smallholders (Smith *et al.*, 2019). Access to crop insurance is also low, with only 35 per cent of farmers covered. World Bank (2021) highlights that without insurance, smallholders remain acutely vulnerable to weather and market shocks, since uninsured farmers are 2.5 times more likely to experience income losses exceeding 50 per cent in drought years (World Bank, 2021).

Only 20% of respondents "always" receive legal counsel, 30% "never" do, and 25.8% were unaware that it was an option, making it the least accessible. This lack of legal assistance is consistent with research by Dube and Mubaiwa (2018), who found that many Zimbabwean contract farmers are unable to contest exploitative conditions or deductions due to a lack of contract literacy and legal advice. When considered collectively, these resource-access patterns indicate that contract farming in Macheke offers a minimal degree of agronomic inputs but falls short in providing comprehensive packages, transportation, risk reduction, and legal empowerment. These restrictions highlight the need for more comprehensive service delivery within tobacco contracting schemes by potentially prolonging revenue instability and limiting farmers' capacity to bargain for reasonable conditions.

4.4 Climate related risks in rain-fed tobacco production

Table 4.4 Climate Related risks in rain-fed tobacco production

Soil 0=low, 2=high	Degradation: 1=medium,	Rainfall Pattern	Yields Reduction due to Drought (%)	Drought impact
Low	Mean	2.09	49.46	1.61
	N	33	33	33
	Std. Deviation	0.765	10.485	0.609
Medium	Mean	1.68	51.6	1.60
	N	50	50	50

	Std. Deviation	0.653	10.66	0.606
High	Mean	1.97	49.189	1.78
	N	37	37	37
	Std. Deviation	0.763	10.962	0.62
Total	Mean	1.88	50.29	1.66
	N	120	120	120
	Std. Deviation	735	10.68	0.628

Figure 4.4 Mean Yield reduction (%) due to drought by soil degradation levels

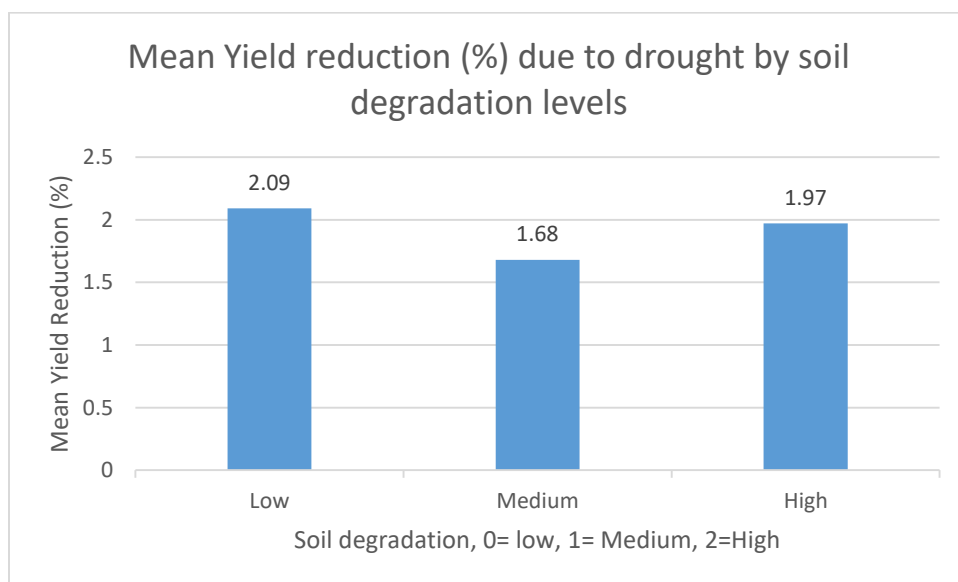
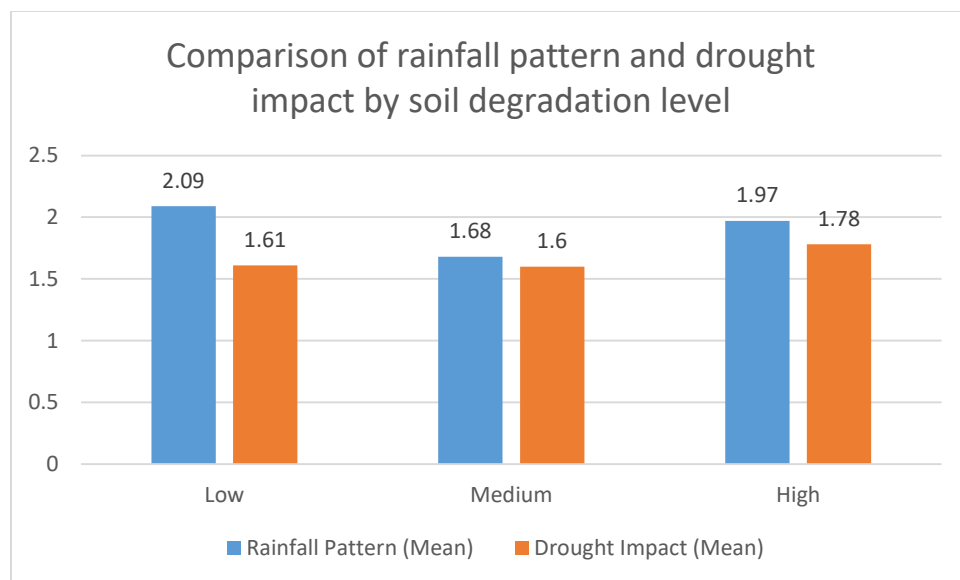


Figure 4.4.1 Comparison of rainfall pattern and drought impact by soil degradation levels



4.4.1 Soil Degradation and Climate Vulnerability

The research indicates a troubling correlation between rainfall patterns and soil degradation. Rainfall patterns are less consistent in areas with higher soil degradation (medium level) (mean of 1.97 on the 1-3 scale) than in areas with lower soil degradation (mean of 1.68). This implies that the climate sensitivity of Macheke's tobacco production systems may be increased by soil degradation. This is consistent with research conducted in southern Africa by Mapfumo et al. (2021), which found that soil degradation increases climate sensitivity in rain-fed agricultural systems. According to Mapfumo et al. (2021), "degraded soils have reduced water holding capacity; making crops more susceptible to even minor rainfall deficits" (p. 147).

4.4.2 Yield Reduction Patterns

According to the statistics, drought greatly reduces yields in all categories of soil deterioration, with an average of 50.29 percent overall. It is interesting to note that yield declines are somewhat higher in areas with low soil degradation (51.60%) than in areas with medium degradation (49.19%). This surprising result can be the result of differences in farm management techniques and adaption strategies already used in more degraded areas. Ncube and Moyo's (2023) study in tobacco-growing regions of Zimbabwe found that "farmers in areas with historically poorer soils have developed more robust drought coping mechanisms, resulting in relatively better

performance during drought episodes compared to farmers in more favorable areas who may be less prepared for extreme events" (Ncube and Moyo, 2023). This phenomenon is consistent with their findings.

4.4.3 Drought Impact Severity

As soil degradation levels rise, so does the severity of the drought's effects. The intensity of the drought impact is higher in places with medium soil degradation (1.78), than in areas with low degradation (1.60) and the average (1.66). This demonstrates how soil deterioration intensifies the effects of drought, making contractual tobacco farmers even more vulnerable. Chitongo and Thompson (2022) noted, "The intersection of soil degradation and increasing drought frequency creates compounding vulnerabilities for smallholder farmers in contract farming arrangements" (Chitongo and Thompson, 2022), citing similar trends in several southern African nations.

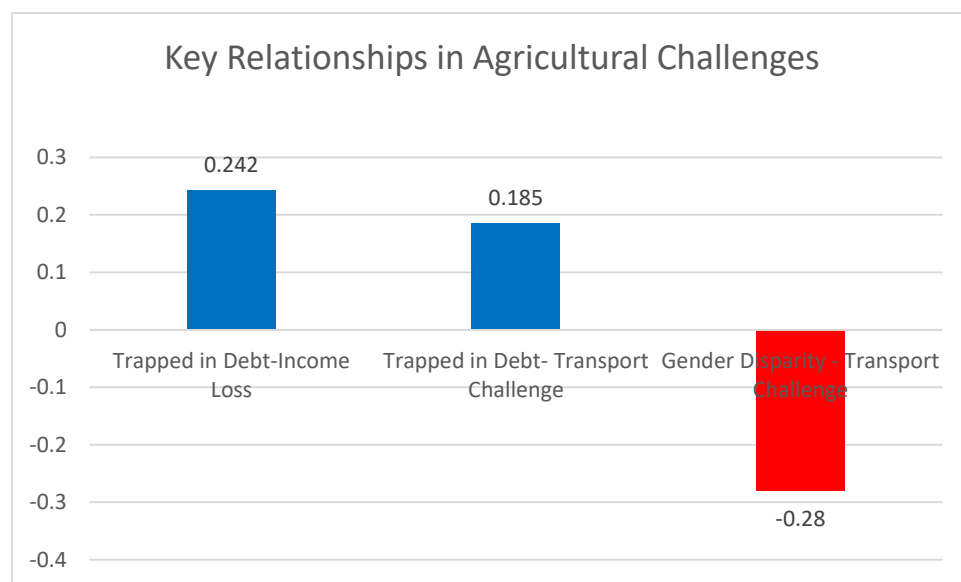
4.4.4 Income Vulnerability in Contracted Households

For contracted tobacco households in Macheke, the considerable yield losses (about 50% across all categories) indicate significant income vulnerability. Contract farming agreements usually include standards for both quantity and quality, along with consequences for failure to deliver (Scoones et al., 2020). Farmers who experience such significant output decreases are likely to be subject to contract violations, fines, and weakened bargaining strength in future agreements. According to Williams and Johnson's (2024) research, "drought-induced yield failures often trap farmers in cycles of debt and dependency, as they struggle to meet contractual obligations while facing climate uncertainties," related to tobacco contract farming in sub-Saharan Africa.

These results are consistent with more general regional trends. According to a thorough analysis conducted by the Southern African Development Community in 2023, "contract farming of high-value export crops in rain-fed systems faces increasing climate risks, with vulnerability especially pronounced in regions with degraded soils" (SADC, 2023). Liu et al. (2022) observed that the interplay between soil quality, rainfall variability and contractual arrangements creates particular vulnerabilities for smallholder producers. They also documented similar vulnerability patterns in contract tobacco farming across Brazil, India and Indonesia.

4.5 Socio-economic challenges faced by tobacco farmers in Macheke

Figure 4.5.1 Correlation Analysis of Agricultural Challenges



4.5.1 The link between income loss and being trapped in debt

The strongest significant correlation ($r = 0.242$, $p < 0.01$) is seen between farmers' revenue loss from price fluctuations and their debt trap. This result supports the worries mentioned by Otañez et al. (2015), who showed how tobacco businesses in East Africa use input credit programs to make smallholder farmers dependent on debt. Farmers that are unable to control tobacco prices face revenue hardships, which makes it harder to repay loans. According to this correlation, price changes have a direct impact on debt traps, which feeds an endless cycle in which farmers continue to face financial hardship.

4.5.2 Impacts of poor infrastructure development

Being trapped in debt is positively correlated with transportation issues ($r = 0.185$, $p < 0.05$). This link shows how restrictions on infrastructure raise smallholder farmers' expenses of production

and marketing. According to Ton et al. (2017), especially for farmers who live far away, transportation expenses frequently lower the net benefits of contract farming participation. Farmers' profit margins decrease and it becomes more difficult to break free from debt cycles when they have to pay high transportation costs to deliver tobacco to collection centers.

Gender inequality and transportation problems are significantly correlated negatively ($r = -0.280$, $p < 0.01$). This research suggests that in areas with fewer transportation problems, there might be fewer gender disparities in tobacco cultivation participation. Maertens and Swinnen (2015) found that women farmers face additional challenges in contract farming agreements, including limited access to automobiles and limited mobility. The negative connection implies that better transportation infrastructure could reduce gender disparities in tobacco contract farming.

Some previous findings are contradicted by the lack of substantial relationships between input loan reliance and other variables. According to Bellemare (2015), the granting of input credit frequently leads to dependent relationships between farmers and contractors. However, according to the current findings, there is no meaningful link between relying on input loans and having debt ($r = 0.080$, $p > 0.05$), indicating that input loans might not be the direct cause of debt issues in this situation.

Similarly, contrary to theoretical expectations, market reliance does not exhibit any significant connections with other variables. According to Barrett et al. (2015), contract farming makes farmers dependent on the market, which might work against them when negotiating prices. The absence of noteworthy associations in this context may suggest that market dependence functions independently of other issues within the research domain.

Table 4.5 Socio-economic challenges faced by tobacco contract farmers

Description	Minimum %	Maximum %	Mean	St Deviation
Input loan dependency	0	100	54.25	22.26
Debt Trap	20	75	43.38	15.97
Gender disparity	20	85	39.89	16.49

Market dependency	45	100	64.96	11.87
Input cost burden	20	85	45.25	16.45
Income loss due to price fluctuation	20	65	32.25	10.02
Transport cost	20	75	37.67	13.19
Currency impact	25	85	58.33	20.85

4.5.1 Primary Challenges (Mean > 50%)

Market Dependency (64.96%)

The fact that this is the highest mean score (64.96%) suggests that farmers are heavily reliant on particular market channels that are under the control of contracting businesses. The comparatively low standard deviation (11.87%) indicates that respondents' experiences were consistent. High market dependency frequently limits farmers' ability to pursue alternate marketing channels, even when contract terms are unfavorable, resulting in a structural power imbalance in the partnership, claim Moyo and Nyoni (2019).

Currency Impact (58.33%)

Currency-related issues have a major impact on tobacco contract growers in Macheke, with a mean of 58.33 percent. The significant standard deviation (20.85%) suggests that different households are impacted by this difficulty in somewhat different ways. For export-oriented contract crops like tobacco, where payment procedures may entail several currencies or exchange rate concerns, Masakure and Henson (2015) recognized Zimbabwe's complex currency environment and macroeconomic instability as being particularly challenging. This is probably reflected in this situation.

Input Loan Dependency (54.25%)

The sample's high standard deviation (22.26%) and wide range (0-100%) indicate significant heterogeneity in loan dependency, which is consistent with findings by Sachikonye (2016), who noted that input financing arrangements frequently create dependency cycles that bind farmers to

specific contractors regardless of other terms, thereby reducing bargaining power over time. Farmers report a significant reliance on input loans from contracting companies (mean = 54.25%).

4.5.2 Secondary Challenges (Mean 30-50%)

Input Cost Burden (45.25%)

Farmers deal with significant input cost issues, with a mean of 45.25 percent. The very high standard deviation (16.45%) indicates that this burden varies from family to household. Input cost burdens frequently rise when contractors mark up input costs relative to open market rates, as Mazwi et al. (2019) pointed out. This effectively lowers farmers' profit margins through hidden yet unclear methods.

Trapped in Debt (43.38%)

This serious challenge (mean = 43.38%) indicates that many farmers experience debt cycles related to contract farming arrangements. The moderate standard deviation (15.97%) suggests this experience is relatively consistent across households. According to Mutambara (2016), debt traps often emerge from the combination of high input costs, yield fluctuations, and unfavorable pricing, creating a cycle of borrowing across multiple seasons.

Gender Disparity (39.88%)

Gender inequality is a major institutional barrier in contract farming systems, with a mean of 39.88 percent. A notable standard deviation (16.49%) and a broad range (20-85%) suggest that different people experience gender-based limitations in different ways. This is in line with research by Tekwa and Adesina (2018), who showed how contract arrangements frequently unintentionally promote gender disparities in benefit distribution, decision-making power, and resource access.

Transport Challenge (37.67%)

Logistics issues present minimum but meaningful constraints (mean = 37.67%) for tobacco farmers. The standard deviation of 13.19 percent suggests some differences in transport challenges, likely related to geographic location and farm distance from collection points. Scoones et al. (2018)

found that transport challenges often have uneven impacts on smaller-scale and more remote farmers, potentially increasing existing resource inequalities.

Income Loss due to Price Fluctuation (32.25%)

While having the lowest mean (32.25%), price fluctuation still represents a relevant challenge. The relatively low standard deviation (10.02%) indicates consistency in this experience across households. According to Mazwi and Mudimu (2020), even minimum price fluctuations can noticeably affect household welfare when combined with high production costs and market dependency.

4.6 Structural inequities in tobacco production contracts

4.6.1 Contract Terms and Pricing

Responses from farmers exposed exploitation and unfairness in tobacco cultivation contract conditions and prices. The injustice and unreliability of the agreements they are bound by angered many. “We never know how they compute costs, and we are always at their mercy,” said one respondent, while another criticized the contracts as “vague and biased to advantage the buyers.” This theme aligns with research from around the world. According to Oya (2012) and Barrett et al. (2012), smallholders are disproportionately harmed by power imbalances and information gaps that frequently affect contract farming. In particular, tobacco contracts in sub-Saharan Africa have come under fire for their mysterious grading schemes and unstated deductions (Makoni, 2020). More than 70 percent of our sample who expressed frustration with contract terms brought up this difficulty, specifically mentioning unilateral agreement revisions and irregular grading schemes. These worries are in line with those of Lencucha and Drope (2017), who discovered that tobacco growers around the world are subjected to “exploitation through pricing and classification,” pointing out that leaf grades are frequently employed as a tool for manipulating prices downward. These problems reduce confidence and encourage dependency.

4.6.2 Input Costs and Credit Arrangements

Farmers frequently complained about the high price of inputs that contractors supplied on credit. “They give us overpriced seed and fertilizer but we can't go anywhere else,” one participant said. In the survey, almost all contracted producers admitted that input costs were higher than market

rates. One respondent described this as creating "a debt before even planting." This structural disadvantage is supported by the literature. Numerous contract-farming agreements compel growers to enter into monopsony-like partnerships where inputs are packaged at high costs, claim Minot and Sawyer (2016). This has been widely documented in Zambia's and Malawi's tobacco industries (Zhou, 2021). According to Chingosho et al. (2022), input loans are frequently the first deductions made at the end of the season in Zimbabwe, leaving farmers with very little money left over. According to our poll, 82% of farmers obtained inputs on loan, yet fewer than 30% thought the price was reasonable. Many gave varying answers to the question of why they agreed to such terms, such as "We have no choice since we need the inputs to farm." Structural imbalances are increased by this dependency.

4.6.3 Debt Cycles and Financial Entrapment

Low tobacco prices combined with high input costs result in a pattern of debt that keeps happening. More than 70 percent of those surveyed said they were still in debt to the contracting company at the conclusion of the season. One participant remarked, "We grow tobacco just to pay off last year's loan." "We never see real profit, only more debt," said another. This is consistent with research on contract farming in the tobacco industry conducted worldwide. FAO (2018) cautioned that rather than offering a route out, contract arrangements frequently serve to further entrench a "cycle of structural poverty." Lencucha et al. (2020) discovered that the combined burden of underpriced produce and inflated input loans increases debt cycles in Zimbabwe. In economic terms, even a relatively successful harvest fails to produce net gains. Table 1 illustrates this using real-world data from the field.

Table 4.6 Contract Farming Revenue from 1000 kg Tobacco

Item	Value (USD)
Gross sale price (1,000 kg @ \$3.40/kg)	3,400
Input loan repayment (20%)	-680
Net income	2,720

This model confirms that nearly one-quarter of farmer income get deducted before they receive anything, excluding further operational costs like labor, food and transport. As Lencucha and Drope (2019) state, “contract farming, in its current form, often functions as a debt trap, not a development model.” This strong statement is supported and in line with our findings from the research.

4.6.4 Bargaining Power and Negotiation Dynamics

During contract talks, farmers frequently reported a sense of helplessness. Surprisingly 70 percent of respondents said they had "no say" in the terms. "They come with the contract already printed, we just sign," one responder stated. This lack of agency was recognized by several as a major cause of bitterness and helplessness. This experience is consistent with other data and the power imbalance between growers and purchasers in contract farming is "a defining feature of the model," according to Eaton and Shepherd (2019). Particularly in the tobacco industry, contractors frequently have almost complete control over

Legal literacy, which further weakened the farmers’ position. As one said, “We don't understand the clauses. We just hope we are not being cheated.” Several scholars (Barrett et al., 2012; Zhou, 2021) advocate for third-party oversight or farmer cooperatives to help balance the power disparity.

4.6.5 Income Loss and Economic Squeeze

Table 4.6.5 Gross vs. Net Tobacco Price per kg

Contract Price	Input Deduction	Net Received
\$3.40	25%	\$2.55
\$2.80	20%	\$2.24

Income loss is the obvious result of large deductions, inadequate pricing, and weak negotiating power. Our responders emphasized this repeatedly. One farmer remarked, "There are times when I don't even repay my expenses." "After deductions, I can't even buy fertilizer for next season," said another. The World Bank (2017) found that contract farming in tobacco tends to "create

downward pressure on net incomes," which is consistent with this data. These findings have been supported by Chingosho et al. (2022), who discovered that more over half of Manicaland's contractual farmers could not pay back input loans with crop profits alone. Additionally, they claimed that this model pushes households into long-term economic fragility by encouraging "accumulative vulnerability."

CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

The report suggests that Macheke's tobacco contract farming system is unbalanced, concentrating risks among farmers while severely limiting their agency and negotiating power. Tobacco growers are more exposed to debt and dependency cycles than to chances for economic expansion, since tobacco takes up 70 percent of land and 61.94 percent of household income. Low access to complete support services (only 8.3 percent receive full input packages), high input costs and unfair pricing practices all contribute to structural exploitation. Basic concerns about economic justice limit the growing potential of contract farming arrangements, as seen by market reliance rates of 64.96 percent and documented debt cycles that affect over 70 percent of farmers.

As seen by reported 50 percent output decreases during droughts, climate change becomes an even more serious factor when paired with contractual responsibilities and financial structures. Hazards that are outside the control of the current support systems are created by a mix of strict contract conditions, climate variability and soil deterioration, which impacts large areas of farming. Without immediate structural adjustments that address contract transparency, debt reduction, climate resilience and farmer empowerment, the current direction appears unsustainable from an environmental, economic and social perspective. The findings are in line with broader regional trends in Zimbabwe and southern Africa and suggest that successful interventions may have strong evident implications. Thorough, well-coordinated policy responses that together address commercial, regulatory, environmental and social variables will be able to control tobacco. To make farming an affordable option for sustained rural development, it is important that the current structural vulnerability of the industry be changed.

5.2 Recommendations

Objective 1: Climate-Related Risk Mitigation

Recommendation 1.1: Implement Integrated Climate-Smart Agriculture Programs

- Establish soil conservation and rehabilitation programs targeting degraded farmlands
- Introduce drought-resistant tobacco varieties adapted to local conditions
- Provide technical training on water conservation and rainwater harvesting techniques
- Develop early warning systems for drought and weather-related risks

Recommendation 1.2: Strengthen Climate Risk Insurance Mechanisms

- Expand access to crop insurance covering climate-related losses
- Develop index-based insurance products linked to rainfall and temperature data
- Subsidize insurance premiums for smallholder contract farmers
- Create community-based risk-sharing mechanisms

Recommendation 1.3: Promote Diversified Farming Systems

- Encourage intercropping with drought-tolerant food crops
- Support the development of alternative income streams during off-seasons
- Provide technical assistance for sustainable land management practices
- Establish farmer field schools focused on climate adaptation strategies

Objective 2: Socio-Economic Challenge Mitigation

Recommendation 2.1: Reduce Market Dependency Through Diversification

- Facilitate access to alternative marketing channels for tobacco and other crops
- Support the formation of farmer cooperatives to enhance collective bargaining power
- Develop local value addition opportunities for agricultural products
- Create market information systems providing real-time price data

Recommendation 2.2: Address Gender Disparities in Contract Farming

- Implement gender-inclusive contract farming policies requiring equal participation
- Provide targeted training and resources for women farmers
- Establish women-only farmer groups with dedicated support services
- Ensure gender-sensitive contract terms and benefit distribution mechanisms

Recommendation 2.3: Strengthen Financial Inclusion and Literacy

- Develop alternative credit sources beyond contractor-provided loans
- Provide financial literacy training focusing on contract terms and debt management

- Establish savings and credit cooperatives (SACCOs) for farmer groups
- Create mobile banking solutions for remote farming communities

Objective 3: Structural Inequity Reduction

Recommendation 3.1: Enhance Contract Transparency and Fairness

- Mandate standardized, transparent grading systems with farmer participation
- Establish independent contract review mechanisms with legal support
- Require contractors to provide detailed cost breakdowns for all inputs
- Implement binding arbitration systems for contract disputes

Recommendation 3.2: Reform Input Pricing and Credit Systems

- Regulate input pricing to prevent exploitation through price markups
- Develop alternative input supply systems through government or cooperative channels
- Create competitive input markets to reduce contractor monopolies
- Establish transparent input quality standards and certification systems

Recommendation 3.3: Strengthen Farmer Organization and Bargaining Power

- Support the formation of legally recognized farmer associations
- Provide legal literacy training on contract rights and obligations
- Establish farmer advocacy organizations with negotiation capacity
- Create platforms for collective contract negotiation with multiple buyers

Recommendation 3.4: Implement Regulatory Oversight Mechanisms

- Develop comprehensive contract farming legislation protecting farmer rights
- Establish regulatory bodies overseeing contract farming operations
- Create mandatory registration systems for contracting companies
- Implement regular monitoring and evaluation of contract farming impacts

Recommendation 3.5: Promote Alternative Contracting Models

- Pilot participatory contract farming models with shared decision-making
- Develop outcome based contracts linking payments to farmer welfare indicators
- Support direct trade relationships between farmers and end-buyers
- Explore block-chain based transparent supply chain systems

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APENDIX

Household Questionnaire

My name is Lysendah R. Matare, and I am a final-year student pursuing a degree in Agricultural Economics and Management at Bindura University of Science Education. This research questionnaire is part of my study titled "An Analysis of the Contribution of Tobacco Contract

Farming to Household Income and Welfare among Smallholder Tobacco Farmers in Macheke." The objective of this research is to explore the economic impacts of tobacco contract farming on the livelihoods of smallholder farmers in the Macheke region. By understanding the dynamics of contract farming and its effects on household income and overall welfare, this study aims to provide valuable insights that can inform policy decisions and improve the agricultural practices of smallholder farmers. Your participation in this questionnaire is crucial, as it will contribute to a deeper understanding of the role of tobacco farming in enhancing the economic well-being of households in this area.

Section 1: Demographic Information

1. Name (optional):
2. Age:
 - ☐ 18-25
 - ☐ 26-35
 - ☐ 36-45
 - ☐ 46-55
 - ☐ 56 and above
3. Gender:
 - ☐ Male
 - ☐ Female
4. Household Size:
 - ☐ 1-3 members
 - ☐ 4-6 members
 - ☐ 7-9 members
 - ☐ 10 or more
5. Level of Education:
 - ☐ No formal education
 - ☐ Primary education
 - ☐ Secondary education
 - ☐ Tertiary education
6. Farm Size:

- . ☐ 1-2 hectares
 - . ☐ 2-4 hectares
 - . ☐ 4-6 hectares
 - . ☐ 6-10 hectares
-

Section 2: Tobacco Farming Practices

7. How many years have you been involved in tobacco contract farming?
 - ☐ Less than 1 year
 - ☐ 1-3 years
 - ☐ 4-6 years
 - ☐ More than 6 years
8. What is the average area of land you dedicate to tobacco farming?
 - ☐ Less than 1 hectare
 - ☐ 1-2 hectares
 - ☐ 3-5 hectares
 - ☐ More than 5 hectares
9. What percentage of your household income comes from tobacco sales?
 - ☐ 0-25%
 - ☐ 26-50%
 - ☐ 51-75%
 - ☐ 76-100%
10. Which agribusiness company are you contracted with?
11. What type of contract do you have?
 - . ☐ Fixed price
 - . ☐ Market price
 - . ☐ Other (please specify)
12. What inputs do you receive from the agribusiness? (Select all that apply)
 - . ☐ Seed
 - . ☐ Fertilizer
 - . ☐ Pesticides
 - . ☐ Technical support

- ☐ Other (please specify)
-

Section 3: Climate-Related Risks

13. In the past year, how would you rate the severity of soil degradation on your farm?
- ☐ Low
 - ☐ Medium
 - ☐ High
14. What was the total annual rainfall in your area for the last 3 years? (Please specify in mm):
-

15. Have you experienced any kind of climate related risk for the last 3 years?
- ☐ No
 - ☐ Yes
16. If yes, what is the climate related risk you have faced?

17. Have you experienced any income loss due to climate-related risks?
- ☐ Yes
 - ☐ No
18. If yes, what is the amount you have lost? (in USD/ZWL): _____
-

Section 4: Socio-Economic Challenges

19. Do you rely on loans for inputs in tobacco farming?
- ☐ Yes
 - ☐ No
20. If yes, what is the average amount of input loan you take? (in USD/ZWL): _____
21. What is the average amount of debt you have incurred?
22. Do you feel trapped in a cycle of debt?
- ☐ Yes
 - ☐ No

23. Do you believe that gender disparities affect your ability to participate in tobacco farming?
- ☐ Yes
 - ☐ No
24. If yes, how do these disparities manifest? (Select all that apply)
- ☐ Limited access to resources
 - ☐ Decision making power
 - ☐ Access to training and information
 - ☐ Other (please specify)
25. What challenges do you face in accessing markets for your tobacco? (Select all that apply)
- ☐ Lack of information
 - ☐ High transport costs
 - ☐ Dependence on agribusiness for market access
 - ☐ Other (please specify)
26. How satisfied are you with your access to markets for selling tobacco?
- ☐ Very satisfied
 - ☐ Somewhat satisfied
 - ☐ Not very satisfied
 - ☐ Not at all satisfied
 - If not satisfied, please specify the challenges: _____
27. How would you rate the burden of input costs (e.g., fertilizers, seeds, pesticides) on your farming operations?
- ☐ Low
 - ☐ Moderate
 - ☐ High
 - ☐ Very high
28. What is the market price for 1kg of tobacco? (in USD/ZWL)
29. At what price do you sell 1kg of tobacco to your agribusiness contractor?
30. Have you experienced any income loss due to fluctuations in tobacco prices?
- ☐ Yes

- ☐ No
- If yes, please specify the amount lost (in USD/ZWL): _____

31. How would you rate the challenge of labor costs for tobacco farming?

- ☐ Low
- ☐ Moderate
- ☐ High
- ☐ Very high

32. Do you face any challenges in transporting your tobacco to the market or buyers?

- ☐ Yes
- ☐ No
- If yes, please explain: _____

33. How have currency fluctuations (e.g., USD/ZWL exchange rates) impacted your income stability?

- ☐ Low impact
- ☐ Moderate impact
- ☐ High impact
- ☐ Very high impact

34. How would you rate the variability of your income from tobacco farming?

- ☐ Low variability (stable income)
- ☐ Moderate variability
- ☐ High variability
- ☐ Very high variability

35. How would you rate the burden of taxes or levies on your tobacco farming income?

- ☐ Low
- ☐ Moderate
- ☐ High

- ☐ Very high

36. Do you have any form of insurance (e.g., crop insurance) to protect against losses?

- ☐ Yes
- ☐ No
- If no, please specify why:
 - ☐ Lack of awareness
 - ☐ High cost of premiums
 - ☐ Lack of access to insurance services
 - ☐ Other (please specify): _____

Section 5: Contractual Fairness and Structural Inequities

36. How transparent do you find the pricing set by the contracting company?

- ☐ Very transparent
- ☐ Somewhat transparent
- ☐ Not transparent

37. What is the price set by the company for tobacco per kg? (in ZWL/USD): _____

38. How clear are the terms and conditions in your tobacco farming contract?

- ☐ Very clear
- ☐ Somewhat clear
- ☐ Unclear
- ☐ Not provided to me in writing

39. Do you feel pressured to sign contracts without fully understanding them?

- ☐ Always
- ☐ Sometimes
- ☐ Rarely
- ☐ Never

40. Are you allowed to negotiate contract terms with the contracting company?

- ☐ Yes, freely

- ☐ Yes, but with limitations
- ☐ No
- If no, what reasons are given? _____

41. How often does the company unilaterally change contract terms after signing?

- ☐ Never
- ☐ Rarely
- ☐ Frequently
- ☐ Always

42. Are penalty clauses for quality/quantity shortfalls clearly explained?

- ☐ Yes, in detail
- ☐ Partially explained
- ☐ Not explained
- ☐ No penalty clauses in contract

43. Do contracts specify who bears these risks? (Select all that apply)

- ☐ Crop failure due to weather
- ☐ Price fluctuations
- ☐ Input cost increases
- ☐ Market demand changes
- ☐ Not specified

44. How transparent is the tobacco grading/quality assessment process?

- ☐ Fully transparent
- ☐ Somewhat transparent
- ☐ Not transparent
- ☐ I am excluded from the process

45. Have you ever disputed contract terms or payments with the company?

- ☐ Yes
- ☐ No
- If yes, was the resolution:

- ☐ In my favor
- ☐ In the company's favor
- ☐ Unresolved

46. Do you have access to legal advice when reviewing contracts?

- ☐ Always
- ☐ Sometimes
- ☐ Never
- ☐ Didn't know this was an option

47. How fair are input cost deductions from your final payment?

- ☐ Very fair
- ☐ Somewhat fair
- ☐ Unfair
- ☐ Extremely unfair

48. Does the contract require you to buy inputs exclusively from the company?

- ☐ Yes, always
- ☐ Yes, for specific items
- ☐ No
- If yes, how do input prices compare to market rates?
- ☐ Cheaper
- ☐ Same
- ☐ More expensive

49. Are you required to provide collateral for contracts?

- ☐ Land title
- ☐ Future crop yields
- ☐ Livestock/assets
- ☐ No collateral
- ☐ Other: _____

50. How does the contract affect your ability to sell to other buyers?

- ☐ Complete restriction
- ☐ Partial restriction
- ☐ No restriction
- ☐ Penalties for selling elsewhere

51. What percentage of your harvest is rejected during company assessments?

- ☐ 0-10%
- ☐ 11-25%
- ☐ 26-50%
- ☐ Over 50%

52. What percentage of your income do you retain after input deductions?

- ☐ 0-25%
- ☐ 26-50%
- ☐ 51-75%
- ☐ 76-100%

53. What is your average annual expenditure on education for your household? (In ZWL/USD): _____

Section 6: Additional Comments

54. Please provide any additional comments or insights regarding your experience with tobacco contract farming and its impact on your household income and welfare:

Thank you for your participation! Your responses will contribute significantly to our research on tobacco contract farming.

