STRATEGIES TO IMPROVE TOBACCO PROFITABILITY IN TOBACCO PRODUCTION AMONG SMALLHOLDER FARMERS. A CASE STUDY OF CHEGUTU DISTRICT WARD 15.

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RELEASE FORM

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DEDICATION

This dissertation is dedicated to my supervisor, my parents, friends and siblings. Your love and support made the journey easier for me.

DECLARATION

At this time, I am formally declaring that the research project titled, "Strategies to improve tobacco profitability in tobacco production among smallholder farmers. A case study of Chegutu District ward 15," which has been submitted to the Bindura University of Science Education, Department of Agricultural Economics, Education and Extension, has been completed by Ropafadzo Makanaka Mhute and is being submitted for the partial attainment of the Bachelor of Agricultural Science Honours Degree in Agricultural Economics and Management. The findings of this dissertation are entirely original and have not been submitted for the attainment of a degree or diploma to any other university.

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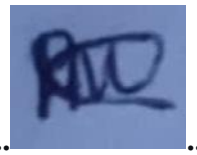
Signature.....**.....**

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ABSTRACT

This research aimed to investigate strategies to make tobacco farming more profitable for smallholder farmers in Chegutu District Ward 15, Zimbabwe. The study assessed tobacco profitability, identified factors affecting profitability, and examined strategies to enhance profitability. A mixed research methodology was employed, utilising structured questionnaires distributed to 194 smallholder tobacco farmers (175 returned, 90% response rate) and semi-structured interviews with 15 key informants including AGRITEX officers, tobacco contractors, and local agricultural leaders. Gross margin analysis, break-even analysis, and multiple linear regression were applied to determine profitability levels and influencing factors. The research found that tobacco farming was profitable, with farmers earning an average gross margin of USD 1,531 per hectare. The average tobacco output was 2,062 kg per hectare, with prices ranging from USD 1.10 to USD 4.63 per kg, and an average price of USD 2.55 per kg. The break-even price was USD 1.81 per kg, and the break-even output was 1,461.52 kg, indicating that most farmers produced above the minimum viable level. However, the gross margin per kilogram was low (USD 0.74), suggesting profitability is highly sensitive to input costs and price fluctuations. The study identified that education level (B = 145.67, p = 0.013), farming experience (B = 64.58, p = 0.004), farm size (B = 122.84, p = 0.001), access to credit (B = 218.44, p = 0.002), and extension services (B = 28.15, p = 0.007) positively and significantly influenced profitability. In contrast, input costs negatively and significantly influenced profitability (B = -211.73, p = 0.002). These findings align with the Theory of Profit Maximisation, indicating that profitability can be enhanced by optimising output and reducing input costs. The study also revealed that contract farming, access to credit, and market information were the most preferred strategies for improving profitability, while farmer cooperatives were perceived as less effective due to weak institutional structures. The research concludes that improving financial access, strengthening institutional support, and reducing production costs are critical for enhancing smallholder tobacco farmers' profitability in Chegutu District Ward 15.

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LIST OF ACRYNOMS

AGRITEX – Department of Agricultural, Technical and Extension Services

BEP – Break-Even Price

BEO – Break-Even Output

GM – Gross Margin

GDP – Gross Domestic Product

ha – Hectare

OLS – Ordinary Least Squares

SPSS – Statistical Package for the Social Sciences

TIMB – Tobacco Industry and Marketing Board

TR – Total Revenue

TVC – Total Variable Costs

USD – United States Dollar

ZIMSTAT – Zimbabwe National Statistics Agency

FAO – Food and Agriculture Organization

NDS1 – National Development Strategy 1

kg – Kilogram

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

Due to its reputation as the number one exporter of Zimbabwean tobacco, tobacco is irreplaceable in the Zimbabwean economy as a main supplier of foreign currency earnings (ZimStat, 2023). Formerly, Zimbabwe's small-scale tobacco farmers produced the bulk of the tobacco grown in the country (TIMB, 2024). Zimbabwe's transformations in the tobacco farming division of agriculture have meant that the bulk of the tobacco grown in Zimbabwe is now produced by smallholder farmers (TIMB, 2024). Farmers in Zimbabwe have led the world in the production of flue-cured Virginia tobacco (Ministry of Finance, 2021). The unprofitable nature of the tobacco grown by the smallholder farmers of Zimbabwe has been described as the most difficult challenge of the Zimbabwean tobacco farming economy (Ruckert et al, 2022). The majority of small-scale farmers in Zimbabwe do not earn a profit from the tobacco they grow and sell (Akpa et al., 2026). This lack of profitability threatens the sustainability of Zimbabwe's tobacco farming value chain (Koloma et al, 2024). Furthermore, the Tobacco Value Chain Transformation Strategy (TVCTP) (Ministry of Finance, 2021) shows that the Government of Zimbabwe intends to create a $5 billion industry by 2025. In order to realize this aim, the Government of Zimbabwe must explore the means by which small-scale tobacco farmers can earn greater profits.

The Contribution of Tobacco to the Zimbabwean Economy

Zimbabwe earns over US$800 million from tobacco leaf exports (ZimStat, 2023). These revenues allow for the purchase of other necessary economic imports. The tobacco farms also support the livelihoods of over 140,000 families. The demand for tobacco leaves continues to grow with the populations of the world that are consuming and using more tobacco products (TIMB, 2024). The Zimbabwean Ministry of Finance continues to show the importance of tobacco earnings to the Zimbabwean economy and its growth, and the necessity to increase those earnings from the tobacco grown by Zimbabwean Farmers (Ministry of Finance, 2021). Therefore, the tobacco crop and its earnings are very important for the Zimbabwe

government and its people to provide stability to the local economy (Ogbeide-Osaretin et al, 2025).

Factors That Affect the Profitability of Small-Scale Tobacco Farmers

Numerous elements hinder the potential profits of small-scale tobacco farmers in Zimbabwe.

One of the main drivers of low profitability is the high cost of inputs needed to grow tobacco leaves, such as fertilizers and the energy needed for the curing process. These costs account for most of the income of Zimbabwean tobacco farmers (Chazovachii et al., 2021; Tevera, 2023). Another of the major drivers is the fact that contract smallholder farmers make up more than 95% of Zimbabwean tobacco farmers (TIMB, 2024; Moyo & Sithole, 2020). These companies make the farmers meet the costs of the contract, which leads to smallholder contract farmers becoming reliant on those companies for most of their income (TIMB, 2024; Moyo & Sithole, 2020). Another major driver of low profitability of tobacco farmers is the tobacco prices, which are determined based on the level of control the farmers have in deciding the selling price of tobacco (Ncube, 2021). Smallholder farmers also lack the means to process their tobacco leaves (Ministry of Finance, 2021). Finally, the profitability of smallholder tobacco farmers is also impacted by the adverse weather conditions which affect tobacco farming of Zimbabwe (Chisoro, 2022).

1.2 Research Problem

Low productivity of tobacco farms is one of the primary problems faced by small-scale tobacco farmers in Zimbabwe (Makore, 2020). It affects their ability to derive income from tobacco farming (Makore, 2020). Farmers are not capturing the full potential of tobacco which can yield 7,000 kg of leaves per hectare (TIMB, 2024). Small-scale farmers in Zimbabwe, on the other hand, have an average yield of only 2,052 kg of tobacco per hectare (Chiminya, 2021). This represents an unexplained yield gap of 4,948 kg of tobacco leaves per hectare. Moreover, the Government of Zimbabwe has a target of increasing tobacco production by smallholder farmers to 300 million kg by 2025 (Ministry of Agriculture, 2020). The inability of smallholder farmers in Zimbabwe to achieve the targeted production levels directly affects their participation in the economy (Makore, 2020).

Multiple reports from the Zimbabwean government have highlighted some reasons for the poor productivity of the country's small-scale tobacco farmers. For example, small-scale farmers account for more than 80% of the tobacco produced in Zimbabwe (Mavhunga, 2023). These farmers receive basic funding to grow the crop through their contract with the tobacco companies of Zimbabwe. However, one of the small-scale farmers' problems is that 60% of these farmers contract with these tobacco companies owing to debt (Gono, 2022). Additionally, the costs of the chemicals and other resources to grow tobacco remain an issue for these farmers. These companies insist that the farmers buy chemicals that protect the leaves, but the costs of these chemicals are higher than those paid by other farmers who rely on the same protection (Makore, 2020). Moreover, the government of Zimbabwe is a contributor to the low productivity from small-scale farms. The government is trying to help small-scale farmers by providing funding to buy these chemicals. However, the government has indicated in various publications its target is to enable these small-scale farmers to obtain funding for 70% of the costs of tobacco farming by 2025 (Ministry of Agriculture, 2020).

1.3 Aim of the Study

The aim of the research that will be performed within this paper is to investigate the different strategies that can be utilized to increase the profitability of small-scale tobacco farmers within the Chegutu District Ward 15.

1.4 Research Objectives

1. To analyze the profitability of tobacco farming in Chegutu District Ward 15.
2. To identify the factors that impact the profitability of tobacco farming in Chegutu District Ward 15.
3. To examine the different strategies that can increase the profitability of tobacco farming in Chegutu District Ward 15.

1.5 Research Questions

1. What is the profitability of tobacco farming in Chegutu District Ward 15?
2. What are the factors that impact the profitability of tobacco farming in Chegutu District Ward 15?

3. What strategies can increase the profitability of tobacco farming in Chegutu District Ward 15?

1.6 Justification of Study

This study will benefit various groups in Zimbabwe for many different reasons.

1.6.1 Government of Zimbabwe

The government of Zimbabwe believes it will be able to study the profitability of small scale tobacco farmers. From this, the government will be able to determine how to maximize the revenue coming from the tobacco crop. Revenue from tobacco is used to procure many goods and services that Zimbabwean economy require (ZimStat, 2023). The revenue is also used by the government to design and implement various programs and policies. One of the programs that is described in the Tobacco Value Chain Transformation Strategy (TVCTP) is the goal of Zimbabwe's government to grow the Zimbabwean tobacco industry to a value of US$5 billion by 2025 (Cunguara et al, 2026). One of the strategies to grow the revenue from smallholder farmers is the development of tobacco processing industries, including the production of cigarettes and cut rags, from the tobacco grown by smallholder farmers (Magati et al, 2019). Lastly, the government of Zimbabwe will study the profitability of smallholder farmers to design and implement tobacco industry related policies. Tobacco companies employ various strategies in order to minimize the taxes paid to the government (Economics for Health, 2025).

1.6.2 Farmers

Small-scale tobacco farmers are one of the most important stakeholder groups in Zimbabwe likely to benefit from the findings of the study. Tobacco farmers in Zimbabwe have a number of challenges related to the contracts they are required to enter into. Tobacco farmers in Zimbabwe for example are required to buy fertilizers to use on their tobacco plants, but the costs of those fertilizers is significantly high (RSIS International, 2025). There is therefore benefit to the farmers from gaining knowledge on the possible strategies to optimize the

number of tobacco crops on each hectare of their land (Equity Axis, 2025). The tobacco farmers of Zimbabwe also want to increase the amount of tobacco that they are able to produce from each hectare of land, with small scale farmers targeting 3,000 kg of tobacco per hectare in the period between 2023 and 2025 (Gumbo et al, 2025). Lastly, another reason why small scale farmers will likely benefit from this study is based on the assumption that they will be able to

evaluate whether they should keep investing their land and resources to tobacco farming, or to switch to other farming activities like maize or soya (ATCA, 2023).

1.6.3 Private Sector

Other beneficiaries of this study is the private sector participants in the Zimbabwean economy. Zimbabwe private sector participants are looking to develop different approaches to maximize their profit from the tobacco farming industry. Furthermore, the income of these persons and companies is used to carry out various activities in the small-scale farming and tobacco industry of the country, and enhancing the profitability of small-scale farmers will help these companies and their capability to provide tobacco to the farmers and to buy from the farmers the required agricultural inputs (FAO, 2023). Also, the other aim of the small-scale farming and tobacco companies in Zimbabwe is to attain 70% of the funding of their small-scale farms from local sources, therefore, the profitability of small-scale farmers will assist these companies in achieving their objective of being fully funded for their farming activities (Bandara et al,2025).

1.6.4 Farmer Organisations

This research will also benefit Zimbabwe's diverse array of farmer organizations. A primary goal of these organizations is to provide advocacy and support for their small-scale farming members in the Zimbabwe tobacco industry. These farmer organizations will especially benefit from research related to the profitability for small-scale farmers in Zimbabwe. For example, Gumbo and colleagues suggest that this type of research will empower such organizations to advocate for an increase in the prices of key farming inputs as well as the selling prices for the tobacco produced by those small-scale farmers (Gumbo et al, 2025). These farmer organizations will also benefit from being able to use the information related to

the profitability of their members to lobby the government of Zimbabwe on their behalf. The Tobacco Association of Zimbabwe, for example, has indicated in its publications that one of its goals is to improve the foreign exchange position of small-scale farmers by advocating for changes to government policy in the tobacco industry (Equity Axis, 2025). Furthermore, Zimbabwe small-scale farmer organizations will benefit the small-scale farmers due to small-scale tobacco farming related publications that suggest the Zimbabwe small-scale tobacco farmer organizations will provide extension services to those small-scale farmers regarding the methods of curing the tobacco that they grow (Mango & Kugedera, 2022).

1.6.5 Academia

Zimbabwean academic researchers are among the stakeholders impacted by this research. Zimbabwean academics can benefit from this research study in that they can research the profitability strategies of small-scale farming and strategies regarding tobacco farming in the Zimbabwean context. Moreover, these academics can benefit from this research regarding the profitability strategies and the impact of deforestation land for farming on strategies.

1.7 Limitations of the Study

The project objective is to develop a set of methods for the small-scale tobacco farmers of Zimbabwe that will improve their ability to market tobacco and increase profitability. This project has a number of limitations. The most notable is the analysis of tobacco farmers' profitability, which relies on the farmers' financial data. Profitability calculations will be inaccurate if the financial reports are not complete. Self-reporting profit is another limitation of this project. If the reports are inaccurate, the research will be flawed. Furthermore, the research findings are only valid for the small-scale farmers in Chegutu District Ward 15. It is likely that the farmers' operations are different from one another.

For example, soil quality among small-scale farmers, the quality of the soil among small-scale farmers and the quality of the market for the tobacco leaves will affect the profitability of the small-scale farmers (ResearchGate, 2025). The quality of the soil among small-scale farmers, the quality of the leaves and other tobacco products, and the state of the economy and the tobacco trade in Zimbabwe and its agricultural trading partners will also impact profitability; however, they will not be included in this study (ResearchGate, 2025). The

other limits of the study will be the amount of time available for the study. If the study can be performed over a longer time period, the study will be able to include many of the long-term profitability trends of the participants (ResearchGate, 2025). The long-term profitability trends of small-scale tobacco farmers in Zimbabwe will not be included in this study.

1.8 Organization of the Research Project

There will be five main chapters in this project. Background and introduction to the other chapters and studies will be in chapter one. This chapter will also include the objectives and questions of the study, as well as the justification and limitations of the study. The second chapter will include the review of the literature pertaining to the tobacco farming industry. The presentation and analysis of the research will be included in the third chapter. The last chapter will include a review of the research study, the conclusions of the research and the recommendations based on the research regarding the profitability of small scale tobacco farmers in Chegutu District Ward 15.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Chapter Two examines relevant literature. First, it addresses how the study's key terms will be defined. Then, it offers relevant theories and factors pertaining to the study's objectives, and examines existing literature to identify gaps.

2.2 Conceptualisation of Key Terms

2.2.1 Small-scale Farmers

The term "small-scale farmers" tends to be defined along different lines in different places. In some regions, definitions are shaped by a country's agricultural laws. For example, Masuka et al. (2020) state smallholder farmers are those who cultivate small plots of land yet lack adequate resources to invest in the production necessary for subsistence. Moonsammy and Moonsammy (2020) observe that small-scale farmers grow produce to meet their own consumption needs, rather than engage in commercial farming for trade. Finally, Dilleen et al. (2025) state that small-scale farmers hold land under 2 hectares, and that small land holdings are typically used for subsistence or semi-commercial farming.

2.2.2 Profitability

Profitability is defined as the extent to which a group of farmers is able to make a profit from the tobacco that they cultivate after accounting for the total costs incurred from the cultivation. As such, profitability takes into account not just the sales earnings from tobacco, but also the cost incurred from the farming of the tobacco. Input costs incurred by the farmers, the volume of the tobacco harvested, the tobacco leaf grading, and the market value of the tobacco leaves are some of the factors that add to the profitability from smallholder tobacco farming.

2.2.3 Strategies

When analyzing tobacco farming, strategies are one of the research concepts. According to Kodani (2023), many strategies are employed by tobacco farming smallholders; particularly, they utilize particular farming practices to ensure that the maximum number of tobacco leaves grow on their farm. As per Mujeyi, Mudhara, and Mutenje (2021), many strategies employed by small-scale tobacco farmers are borne out of their finances and the growth of the tobacco farm and the management of the farm's tobacco leaves in relation to their farming activities. Strategies may involve the adoption of technologies in farming, such as the construction of irrigation systems for their farms or the formulation of strategies that enable tobacco farmers to engage in collective marketing of their tobacco products or the lobbying of tobacco farmers for reforms in the tobacco control laws. However, the leading strategy that all these smallholder tobacco farmers employ is the strategy that guarantees them the profitability of tobacco farming. Thus, strategies to maximize profitability may, for instance, involve cost-cutting in farming, or optimizing the tobacco farming output in terms of quality and quantity of the tobacco leaves.

2.3.1 Global Perspective on the Profitability of Tobacco

Profitability of Tobacco in China

Of all countries, China could be regarded as one of the most profitable countries on tobacco. Because China has a state monopoly on tobacco products, it is able to make sure that tobacco

farmers in China grow enough tobacco for the Chinese people, as well as for the other tobacco-related industries in China. Growing tobacco is beneficial for government revenues, for farmers, and for other industries as well. Although tobacco is one of the most profitable industries in China, this does not mean tobacco does not face challenges in China. Like anywhere else in the world, China has to deal with the health effects of tobacco for the consumers of China, and with the sustainability of the industry itself.

The central reason for the lucrative nature of tobacco in China is that tobacco is a state-controlled monopoly. The government can raise the price of tobacco, ensuring income for the farmers through government-supported tobacco purchases. The benefit for the farmers comes from the farmers, tobacco companies, and the taxes provided to the government. The government is also a tobacco revenue beneficiary. Tobacco is generally more lucrative than the other crops in China. A study conducted in the Yunnan Province of China shows that tobacco has generated a large portion of the farmers' revenue and that growth in tobacco farming improves the living conditions of the farmers in that area (Zi et al, 2025). A major reason for the profitable nature of tobacco in China is also the high demand for tobacco products in the country. Since the world smoking population is the largest in China, the demand for products is high, and this does not change even with the tax increases and the anti-smoking campaigns in China (Liu et al, 2025).

Even with how lucrative the tobacco industry is in China, the industry still faces hurdles. One of the challenges the industry faces related to environmental sustainability is the energy needed to produce and cure the tobacco leaves. Curing tobacco requires a lot of energy, including burning coal to create steam and other processes involved in tobacco curing. Because of this, the tobacco industry is one of the main contributors to carbon emissions in China (Wang et al,2024; Zhu et al,2026). Environmental concerns are not the only challenges the tobacco industry faces in China. The health impacts of tobacco decrease the tobacco industry's long-term profitability. There is evidence to support that smoking cigarettes has real costs to the country's health and indirectly impacts the productivity of people in the country who smoke (Zheng et al,2025). With smokers increasing the burden on the country's health care system, this also impacts the profitability of the tobacco industry.

There is still much controversy about the effects of tobacco on health, but the industry is immensely profitable. The Indian tobacco industry is no exception. It is the second largest producer of tobacco leaves and the largest producer of tobacco products in the world.

Tobacco-based industries are a major source of revenue for the farmers, industries, and the government of India. The profitability of tobacco in India considers the health effects of tobacco, the demand of the domestic and international tobacco consumers, the prices of tobacco products in other countries, and the profitability of other crops compared to tobacco, and the concerns of health caused by the use of tobacco products.

India's tobacco industry is immensely profitable and important. Tobacco is one of India's most valuable and most profitable crops offered to the international market. Tobacco Leaves are exported at a premium compared to the other crops offered by India. There is also a considerable demand of Indian tobacco products in the international market compared to other farming products of India (Reddy et al., 2024).

Being one of the largest producers of raw tobacco in the world also makes India's tobacco industry one of the most profitable in the world. Due to the needs of other countries, India has earned abundant foreign exchange for its tobacco products and trade (Reddy et al, 2024). India's domestic market provides much business for India's tobacco industry. Though tobacco taxation has increased in the history of modern India, many studies have shown that demand for the product has remained more or less constant (John et al, 2021). Due to the international and domestic demand for tobacco, India's tobacco farmers and industries have earned abundant wealth. Additional profitability for the tobacco industry has come, and continues to come, from the substantial revenue that the Government of India earns from the tobacco industry. Billions of Indian Rupees are earned by the Government of India from tobacco products in a given year (Times of India, 2025).

While India's tobacco-based industries are profitable, they aren't without challenges. Reports regarding Indian tobacco farms reveal that the price of tobacco leaves can drop if there is an oversupply of farmers growing tobacco. Karnataka and Andhra Pradesh, India's major tobacco-producing states, have seen considerable drops in tobacco prices for years (Mapuwei et al, 2022). Additionally, the tobacco control measures that India is increasingly adopting spread threat to the profitability of tobacco in India. For example, international health organizations along with the government of India are raising the prices of tobacco products, introducing restrictions to reduce tobacco use in India, and working to reduce the incidence of smoking-related diseases in the Indian population. If the tobacco control measures are escalated, the demand for tobacco products in India will likely drop and the profitability of the tobacco industry in India will likely be negatively affected (Jain et al, 2024).

One of the World's Largest Tobacco Producers - Brazil

Brazil is a top tier producer of tobacco leaves, and also leads in exportation of tobacco leaves from Latin America. There is great profitability from the sale of tobacco for the Brazilian government, the farmers, and the industries. The major contributor to the profitability for the tobacco based industries in Brazil is the high international demand for tobacco based products. Brazil is also in a good geographic location for the farming of tobacco leaves, and the tobacco leaves add a good deal of revenue to the Brazilian government, farmers and the tobacco industry. The profitability of the tobacco industry from the leaves grown in Brazil is also due to the tobacco industry being one of the most profitable agricultural based industries in Brazil, despite the increasing anti-smoking policies of the country (Nyambara & Nyandoro, 2019).

One of the main things contributing to the tobacco industry in Brazil being very profitable is the high demand for tobacco products that is present in many countries of the world. Because of that, the tobacco farmers in Brazil and the tobacco based product industry in Brazil are doing well due to the tobacco industry exports (Ahmad et al., 2022).

Additionally, there is evidence that tobacco is one of the easiest crops to grow profitably in Brazil. Even with high input costs, tobacco farmers in Brazil are likely to see good profits. Research carried out in the southern regions of Brazil shows that profits from tobacco there stand at 17% of the total income earned from the tobacco farms (Becker et al, 2020). This means that farmers in Brazil are likely to earn good profits from tobacco sales.

Also, there is tobacco contract farming in Brazil. This means that tobacco farming companies and tobacco farmers form a partnership of sorts. The farming companies finance the tobacco farmers, and in turn, the farming companies purchase the tobacco from the farmers post-harvest. Lopes and Deponti (2024) state that Brazil tobacco farming is the dominant form of farming in Brazil, and earns good income for the farmers. Therefore, farmers in Brazil earn good profits from tobacco sales.

Finally, the Brazilian tobacco manufacturing industry is quite lucrative. Brazil is the largest tobacco product market in Latin America, meaning the industry reaps substantial revenue and contributes significantly to the economy. Furthermore, reports on the profitability of tobacco-based industries in Brazil claim that the country reached 15.8% profitability in the tobacco-

based manufacturing industry (Lopes & Deponti, 2024). The country also generates substantial income from its tobacco-related businesses and tobacco tax (Pezco et al, 2024).

There are also multiple issues inhibiting tobacco profitability in Brazil. Overall, the cost of labor in Brazil has increased, and this has led to higher costs for tobacco farmers. Research on the production cost of tobacco claims labor costs are among the highest for the farming structure, which negatively impacts the profit margin (Becker et al., 2020). In addition to increasing costs of labor, tobacco farming raises ethical and environmental issues. Tobacco farming and curing also result in emissions of Greenhouse gases, which negatively impact climate change and the environment. Research has shown that tobacco farming and processing in Southern Brazil, for example, results in major environmental impacts. Finally, climate change and greenhouse gas emissions have led Brazilian farming and processing further to negatively impact profitability in Brazilian tobacco farming and processing (Figueiredo et al, 2020).

A challenge to public tobacco sales in Brazil is the decline in consumption as health campaigns across the world seek to mitigate the public health issues of tobacco consumption. Current studies of health and tobacco in Brazil show consuming legal cigarettes is on the decline due to the introduction of tobacco control policies in Brazil (Steingraber, 2025). While the exports of Brazil's tobacco products still bring a profit to Brazil's tobacco farms, they further inhibit the industry's potential.

A recent growing concern, related to the declining legal tobacco sales in Brazil, is illicit tobacco trade in Brazil. Studies show trade of tobacco products legally from Brazil is being undercut by the illicit trade of tobacco from countries like Angola, Mozambique, and Zimbabwe. This is reducing profits for legal tobacco trade in Brazil and furthering the negative impact of taxation of the trade on Brazil's economy (Ribeiro & Pinto, 2020; Pezco et al,2024).

2.3.2 An Analysis of Tobacco Profitability in the Sub-Saharan Region

Sub-Saharan Africa exemplifies the dichotomy of tobacco profitability. Zimbabwe, Zambia, and Mozambique provide profitable markets for tobacco, and Sub-Saharan African governments profit significantly from the tobacco farming practices in their countries. However, the practice does not benefit local farmers and small farming communities (FAO,

2024). Consequently, the smallholder farmers of Southern African countries report declining profits over time, despite the significant profits realized from the governments of Southern African countries.

The Sub-Saharan governments are seen as profitable largely due to their tobacco farming where they harvest crops and earn taxes. Zimbabwe earned more than 1 billion US dollars in tobacco during the 2025 growing and marketing season (Equity Axis, 2025). Additionally, Malawi saw a 35% increase in tobacco revenues in 2024 compared to 2023, and described the tobacco farming sector as the backbone of the country's economy (The Nation, 2024). Overall, these governments profit from the farming of tobacco and the taxes and levies of the tobacco grown in their countries. The profits gained from the farming of tobacco are most of the time utilized in these countries to frame policies in these countries regarding the farming of tobacco, such as the 75/25 profit split in Zimbabwe on tobacco farming between the smallholder farmers and the government (The Zimbabwe Independent, 2024). Also, Smallholder tobacco farmers in these countries are most of the time obligated to use the profits from the farming of tobacco to fund policies regarding smallholder farmers.

For instance, Zimbabwe put the Tobacco Value Chain Transformation Plan (TVCTP) into action and established that by 2025, 30% of the nation's total tobacco production should be processed in Zimbabwe, because the profits earned through the sale of processed cuts and cigarettes should be greater than those earned from the sales of raw tobacco leaves (The Herald, 2025). Additionally, 95% of all tobacco production is in the hands of smallholder farmers, and the income that these farmers earn is frequently allocated to finance the expenses of related farmer support services, such as providing expensive loans to farmers (The Zimbabwe Independent, 2024).

Though tobacco farming is typically very profitable, for the small scale farmers in the Sub-Saharan region, it is not. Farming costs for countries like Zimbabwe and Zambia have seen increased costs from 2022 to 2025 as a result of the increased costs of fuel and fertilizer used to process tobacco leaves that small scale farmers grow (Tobacco Reporter, 2025). Contrary to the high profits that the regional governments earn from tobacco farming, the price paid for tobacco leaves in countries like Zimbabwe and Zambia is about $3.03 per kilogram, which greatly limits profitability of the tobacco farming industry for small scale farmers (Tobacco Reporter, 2025). In addition, studies which analyze the profits of small scale farmers show that not only do the countries have high profits, but also that the profits from tobacco farming

are less than the profits earned from growing other crops, such as legumes or maize (Tobacco Control Data, 2024). Within the region, there are numerous reasons that small scale farmers continue to grow tobacco.

Private companies in Sub-Saharan Africa make high earnings on the tobacco cultivated by smallholder farmers. For example, since the prices for the developed tobacco are lower than other areas of the world, the private companies are able to sell their tobacco leaves to the tobacco farming countries, like Zimbabwe, Zambia and many others (Tobacco Journal International, 2024). Also, tobacco companies' profits are guaranteed. For example, some governments of Zimbabwe and Zambia have set up their own cutting and rag tobacco processing system coupled with cigarette manufacturing. The private companies that own these systems are able to make profits from the countries due to the exports (Business Weekly, 2024). Also, the mentioned private companies have more chances to makes profits when they run the tobacco business and implement the tobacco taxes in their countries.

Furthermore, due to the foreign exchange rates, profits made by companies farming tobacco in Sub-Saharan countries are safe. The prices of the goods bought by smallholder farmers, which governments require them to purchase, depend on the foreign exchange rates. This situation forces governments to sell their tobacco at prices higher than what they pay smallholder farmers to buy the tobacco leaves (Financial Gazette, 2023). The other countries that grow tobacco such as Malawi, and the Tobacco Association of Malawi (TAMA), protect tobacco farmers' profits by establishing cost models for farmers. For instance, TAMA's lobbying for the increase of the tobacco prices to $2.50 per kilogram, or more, for the best grades of tobacco in the region, resulted in improved profits for the farmers in the region (Nyasa Times, 2024). In addition, tobacco farmer unions in the region have been seeking the modification of the payment systems for farmers. They have claimed that the prices of fertilizers and farm chemicals for smallholder farmers are unreasonably high and that the tobacco companies in the region can easily modify these costs (Chronicle, 2025). Lastly, while the profits from farming tobacco may seem significant to smallholder farmers, a study on the profitability of tobacco farming concluded that restoring the region's environment will require a lot of money.

The reforestation of Miombo woodlands contributes to the negative profits of tobacco farming in the region (MDPI, 2024). Furthermore, tobacco-related illnesses are detrimental to the tobacco farmers of the region because they increase the cost of healthcare. Research

suggests that in the countries of sub-Saharan Africa, the cost of healthcare for tobacco-related illnesses will exceed the profits from the region's tobacco farming (Tobacco Induced Diseases, 2025). In addition, a cost to tobacco farmers in the region is the illicit tobacco trade in Zambia and Zimbabwe. The farmers of these countries are forced to sell their tobacco to traders at prices lower than what the legal buyers are willing to pay (Journal of Illicit Economies and Development, 2023).

Tobacco profitability in Mozambique

Tobacco farming is one of the most important agricultural activities in Mozambique. For many smallholder farmers, tobacco farming is becoming a dependable source of income due to the sales of tobacco throughout the rural areas of the country. Although tobacco farming is profitable, there are many elements that affect the profitability of tobacco farming in Mozambique and the surrounding region (Lencucha et al, 2024).

A major reason driving tobacco farming profitability in Mozambique is their exports. Tobacco is an important export for Mozambique. With trade, Mozambique earns money from other nations, improving their economy. Also, reports show that tobacco revenue is one of the main estimates for the nation's revenue (Bank of Mozambique, 2025).

Part of the profitability of tobacco farming in Mozambique is that most of the farmers are in contract farming partnerships with tobacco companies. These companies finance farmers to buy seeds, fertilizers, and pesticides, and even pay for labor for the tobacco farming process. Also, companies buy the tobacco that these farmers grow. Research done for tobacco farming households in Mozambique show that these contract farming partnerships enable the region's tobacco farmers to earn high profits from their tobacco farms (Cunguara et al,2025).

Moreover, selling prices of tobacco to international markets is another element that can affect tobacco farming profitability. Smallholder farmers are able to reap a bigger return from their harvest if prices of tobacco leaf are higher. Farming communities and individual farmers of tobacco benefit from higher prices. Accordingly, profitability depends on the prices of tobacco leaf sold abroad and the price stability in the tobacco markets (Lencucha et al, 2024).

Pricing of farming inputs is another element that can affect profitability of tobacco farming in Mozambique. Cultivating tobacco is associated with high costs to smallholder farmers. Some of the costs incurred on tobacco farming in Mozambique include fertilizers, pesticides, farm

labor, and the transport of tobacco leaves to the auction floors. Studies of tobacco farming households in Mozambique also indicate that tobacco farming is associated with high costs and that profitability is only attainable by farmers if they manage to keep their production costs low (Cunguara et al,2025).

Labor availability for smallholder farmers is another item that can have an effect on the profitability of tobacco farming in Mozambique. Tobacco farming has a high demand for labor, which presents a challenge for smallholder farmers. Many, if not all, of the processes that make up tobacco farming demand the labor of smallholder farmers. Research has been done on tobacco farming communities in Mozambique and has revealed that most of the region's smallholder farmers depend on the labor of their farming families to perform the processes of tobacco farming. The use and reliance on family labor brings down the costs of farming to the tobacco farming families (Clark et al, 2023).

Profitability is also affected by the size of the land allocated to tobacco farming by each smallholder farmer. Smallholder farmers that allocate more of their land to tobacco farming can harvest and sell more tobacco and, as a result, make more income. Additionally, more land allows smallholder farmers to achieve economies of scale and to optimize the costs associated with such purchasing and applying fertilizers. Yet the more land smallholder farmers allocate to tobacco farming, the more costs they incur to purchase the labor to work those additional plots of land (Cunguara et al,2025).

The environmental conditions in Mozambique have varying impacts on the profitability of tobacco farming. There is a demand for specific environmental conditions in every region where tobacco farming occurs. Various conditions influence the profitability of tobacco farming, including the amount of rainfall (and how much of it is excess rainfall), the temperature (and how extreme it is), and soil fertility. Any adverse change in the environmental conditions of Mozambique impacts the profitability of the country's tobacco farming (Lencucha et al,2024).

Also related to the profitability of smallholder tobacco farming is the quality of the tobacco that is grown. Tobacco farming communities where regions and countries are capable of growing high quality tobacco can sell their tobacco to foreign countries at significantly higher prices, and as such, have more profitable tobacco farming. As such, it is the smallholder

farmer's ability to grow high quality tobacco that impacts the profitability of tobacco farming (Cunguara et al,2025).

The profitability of tobacco farming in Mozambique is also impacted by the smallholder tobacco farmers' access to technical assistance provided by tobacco companies. Most tobacco companies provide smallholder tobacco farmers with technical assistance and training on how to perform various tasks related tobacco farming, and tobacco farmers that receive this type of assistance and training from the tobacco companies sell their tobacco to earn a profit as a result of the improved quality and increased quantity of their tobacco leaves (Clark et al, 2023).

Additionally, various factors that affect the profitability of tobacco farming in Mozambique relate to government policies concerning the tobacco industry. While the government has offered support for the development of tobacco farming, they have also invested effort in control policies of tobacco such as the WHO FCTC, to limit tobacco use in Mozambique (Lencucha et al, 2024).

Although the tobacco industry in Mozambique has the potential to be highly profitable and generate revenue for the country, a large-scale, recent study on smallholder farmers in the region, showed that for an average farmer, the revenue from tobacco farming was not as high compared to farming other crops in the region. For example, studies on former tobacco farmers and non-tobacco farmers, showed that tobacco farmers had the greatest net income. However, when the farming costs and the costs of tobacco that was sold to farmers were considered, the income from tobacco farming was relatively more profitable compared to other farming sectors in Mozambique (Cunguara et al,2025). Additionally, the absence of credit markets for alternative forms of farming is one of the other reasons that smallholder farmers grow tobacco (Tobacco Control Data, 2024).

Tobacco Profitability in Malawi

Tobacco has long been the backbone of the Malawian economy. As a top 5 tobacco producing country in Africa, Malawi's economy is largely supported by the export of the crop. Tobacco is even nicknamed Malawi's "green gold." Though there is little debate over the economic importance of tobacco, there are many factors that impact the profitability of the crop. A recent study published in 2023 explored the profitability of tobacco farming in Malawi, and indicated that there are many obstacles to the profitability of the crop, despite

the revenue the crop brings to the country (Makoka et al,2023). These obstacles include the farming community's choice of crops, tobacco leaf production costs, the quality of tobacco leaves produced, the availability of labor, the international demand for tobacco leaves, the auction marketing system for tobacco, climate change, the government's policies toward farming tobacco, farming tobacco on contract, access to financial services for farming tobacco, the adoption of alternative crops by farming communities, and the global tobacco control policies.

Malawi's export of tobacco positively impacts the country's tobacco farming profitability. Malawi's tobacco exports are a leading source of foreign exchange. The rural tobacco farmers of Malawi are able to sell their tobacco leaves because of the foreign exchange earned from tobacco. As noted in a 2022 study, Malawi's tobacco exports are important to the country's foreign exchange balance despite international initiatives aimed at reducing tobacco consumption (Lencucha et al,2022).

There are more factors that impact the profitability of tobacco farming in Malawi, such as the auction system of tobacco marketing. Malawi has the largest tobacco auction marketing system in Africa. The system enables the sale of tobacco to buying companies via an auction. The price of tobacco is determined by its quality and the demand from the industries that consume tobacco. In this regard, tobacco farmers in Malawi stand to realize better returns for their crop within a high demand environment (Mvula and Gausi, 2021). In a contrary regard, the demand for tobacco can impact the profitability of the farmers due to a potential reduction in the price of tobacco.

Demand for tobacco leaves by other countries is another factor that impacts the profitability of tobacco in Malawi. Since Malawi primarily cultivates tobacco leaves to sell to other countries, the profitability of tobacco farming is reliant on the demand for tobacco products from other countries. The demand for tobacco leaves by multinational tobacco companies and other countries that practice tobacco farming determines, to a large extent, the price that tobacco farmers will be offered by the tobacco buying companies in Malawi (Lencucha et al,2022).

The profitability that tobacco farmers derive from the farming of tobacco leaves in Malawi is also dependent on the production costs of the tobacco leaves. Because of the specifics that are involved in the farming of tobacco leaves, farmers are required to spend a lot of money on

buying farming inputs such as fertilizers, specialized seeds and farming chemicals, as well as hiring labor and acquiring land for the farming of tobacco. The significant increase in the costs of these farming inputs has resulted in the profit margins of tobacco farmers being adversely affected, despite the fact that these farmers have a high and consistent income from tobacco farming (Makoka et al, 2023).

Availability of laborers is another major determinant of profitability of tobacco farming. Tobacco is very labor intensive and requires a large number of farmers to be involved at a number of stages in farming activities. Some farming communities engage their family members and hence cut down the labor cost of farming tobacco. However farming tobacco becomes unprofitable with increasing cost of labor and availability of laborers (Otanez et al,2020).

Another important determinant of profitability of farming tobacco in Malawi is the quality of tobacco leaves grown in Malawi. The better the quality of the tobacco leaves grown in Malawi, the better the income of the Malawi farmers growing tobacco leaves as they are able to sell their tobacco in the international markets (Mvula and Gausi,2021). The quality of leaves of tobacco cultivated in the country are impacted by a number of factors including the fertility of the soil, the rainfall, and the curing and fertilizing methods of the leaves of tobacco.

Another determinant of profitability of farming tobacco in Malawi is the use of contract farming by tobacco farmers. A lot of tobacco farmers have started growing tobacco under contracts with tobacco farming and manufacturing firms (Makoka et al,2023). These firms finance the farming of tobacco and provide these farmers a market for their tobacco.

The effects of climate change on Malawi tobacco farming can be assessed by evaluating profitability. Tobacco farming is very sensitive to specific weather patterns due to the effects of climate on certain crops. The effects climate change is having on Malawi has negatively impacted the farming of tobacco and has led to lower yields of tobacco leaves in the country (Nkhoma et al,2024).

The availability of credit to tobacco farmers has a direct influence on the profitability of tobacco farming in the country. As is true for all other agricultural products, tobacco farming requires a lot of money for the purchase of farming and operational inputs. If there is credit available for tobacco farmers, these inputs can be purchased in a timely manner. The

availability of credit to tobacco farmers directly constrains their ability to produce tobacco and earn a reasonable amount of money from farming (Makoka et al,2023).

The profitability of tobacco farming is very much dependent on the policy of the Malawian government. The government of Malawi, for its part, has a lot of interest in the positive development and profitability of tobacco farming in Malawi. Malawi's tobacco policies are made in the context of the export of tobacco leaves and the earnings from these exports. However, the international policies of Malawi's trading partners, which regulate the production and consumption of tobacco, handle the government of Malawi's support of tobacco farming in the near future (Lencucha et al, 2022).

One thing that may impact the profitability of tobacco in Malawi is the increased development of alternative crops to tobacco. Many rural farming communities in Malawi rely on tobacco as they main source of income, but there are a number of developed alternative crops to tobacco. These crops include soya beans, groundnuts, sunflowers, and legumes, and may provide tobacco farmers with alternative sources of income (Makoka et al, 2023).

Another thing that may impact tobacco farming profitability in Malawi is the increasing number of global tobacco control policies. In the world, the WHO FCTC is a leading example of a framework that promotes the reduction of tobacco use. As the consumption of tobacco products declines in different countries, it also impacts the reduction of tobacco product exports from Malawi (Lencucha et al., 2022).

Despite the challenges that tobacco farming may have in Malawi, it offers farming communities income generating opportunities in Malawi. A study published in 2020, noted that tobacco was one of the few commercially viable crops in the rural farming communities in Malawi (Otanez et al, 2020).

2.3.3 Analysis of Tobacco Profitability in Zimbabwe

Between 2020 and 2025, the profitability analysis of tobacco farming in Zimbabwe suggested a divided nation. The government amassed large profits from the farming, whereas smallholder farmers, who are the majority of the tobacco farmers, experienced dim profitability.

Factors Influencing Tobacco Profitability in Zimbabwe

Increased Production and Yield

The profitability of Zimbabwe depends on the ability to grow large quantities of tobacco leaves. Zimbabwe experienced a 37% increase in tobacco production in 2023 and surpassed South Africa as the largest producer of tobacco in Africa. In 2023 Zimbabwe produced 296 million kg of tobacco leaves, the most ever produced in Zimbabwe and Africa (Tobacco Industry and Marketing Board 2023). Additionally, Zimbabwe has implemented the Tobacco Value Chain Transformation Plan, a government program aimed at increasing Zimbabwe's tobacco leaf production to 300 million kg by 2025 (Ministry of Lands, Agriculture, Fisheries, Water and Rural Development 2021).

Global Pricing and the "China Premium"

The Zimbabwean tobacco growing and agricultural sector reaps the rewards of increased global prices for both finished tobacco products and tobacco leaves. In particular, Zimbabwe has benefited from the "China premium". With China being the largest producer and exporter of tobacco leaves and products in the world, its pricing of finished tobacco products directly affects the pricing of tobacco in other markets (Cao, 2020). While China may incur high production costs of tobacco leaves, it sells its tobacco products at very low costs to other countries and encourages the use of tobacco in their economies. Because of this system, Zimbabwe's tobacco sector enjoys high levels of profitability. Additionally, pricing of other tobacco products around the world may be influenced and determined by China's pricing of its tobacco products (Cao, 2020).

Competition from Alternative Crops

Like most of the African tobacco farming countries, Zimbabwe's tobacco sector is also affected by alternative crop cultivation. The FAO has promoted alternative crop cultivation in Zimbabwe such as soybean, millet, maize, and fruits (FAO, 2021). If Zimbabwe's tobacco farmers divert to the production of these alternative crops, the tobacco sector's profitability and growth may be further affected.

Another factor that influences tobacco farming profitability in Zimbabwe is the foreign sale price of their leaves. In 2024, Zimbabwean tobacco leaf price was $3.48 per kg, $0.47 per kg higher compared to 2023 (Zimbabwe Independent, 2024). Price setting is strongly influenced

by the demand for tobacco products in China. Annually, Zimbabwe exports 40% of its tobacco leaves to China (Business Weekly, 2024).

The Contract Farming Model and Debt Cycles

95% of Zimbabwean tobacco is produced under contracts between smallholder farmers and tobacco companies (The Herald 2024). In order to buy the seeds and fertilizers that are needed to prepare the land for the growth of tobacco plants, farmers are required to take loans from the tobacco company. Fertilizer and seeds coupled with high interest loans from the company result in profits from tobacco farming that are inadequate for meeting the farmers' basic living needs (Chisita et al, 2022).

The Profits of Tobacco Farmers and the Effects of Currency Policies

In Zimbabwe, the profits of tobacco smallholder farmers are largely impacted by government controls on these farmers' profits. For instance, the Reserve Bank of Zimbabwe (RBZ) allows tobacco farmers to keep 75% of their profits in US Dollars, the currency used to sell tobacco; the remaining 25% of the RBZ payments are paid in the Zimbabwe currency (ZiG) (NewsDay 2024). The dramatic depreciation of ZiG against the US Dollar in recent years means the 25% of tobacco farmers' profits paid to RBZ loses value in US Dollars by the time the farmers spend the money to buy inputs to grow the tobacco crop for the next season (The Zimbabwe Situation 2024).

The Effect of Climate Change and the El Nino Climate Phenomenon

The negative effects of climate change on El Niño impact on droughts affect tobacco farmers in Zimbabwe. El Nino caused drought in Zimbabwe during the 2023 and 2024 tobacco growing seasons. Droughts caused Zimbabwe tobacco farmers to receive less rainfall to nourish the soil. In 2024, Zimbabwe farmers reported growing 20% less tobacco than in prior years (The Sunday Mail, 2024). Zimbabwe still lacks irrigation in the tobacco fields, and rain in droughts means a loss of profits for farmers. These conditions caused losses in profit during the drought of 2024 (CNBC Africa 2024).

The Effect of Increasing Costs of Agricultural Inputs

The increase in costs of agricultural inputs needed for tobacco production impacts the profitability of Zimbabwe's tobacco farming industry. For example, the costs of fertilizers

increased by 15 to 20% in Zimbabwe from 2023 to 2024 to prepare the soil for growing tobacco (Tobacco Reporter 2023). Also, the costs of coal used to cure the tobacco leaves increased for the same time period of 2023 to 2024 (Tobacco Reporter 2023). In addition, Zimbabwe has a power shortage and this has increased the costs of diesel generators for farms to have power for the irrigation and the curing processes. The increased costs of diesel generators has cut the profits for the largest tobacco farms in Zimbabwe (The Chronicle, 2023).

The Effects of Changes in the Zimbabwean Supply Chain

One of the factors that can influence the level of profitability in Zimbabwe's agricultural tobacco industry is the supply chain changes of the tobacco leaves that are grown in Zimbabwe. Presently, more than 98% of the tobacco leaves grown in Zimbabwe are exported in their raw form to the tobacco consuming countries in Asia and Europe. However, the government of Zimbabwe put into effect a strategic approach of supplying these leaves for domestic production of cigarettes; the aim of the government is to increase the number of domestically produced Zimbabwean cigarettes to 30% of the total cigarette production of the country by 2025 (Ministry of Lands, Agriculture, Fisheries, Water and Rural Development 2021; The Sunday Mail 2023).

Side-marketing in Zimbabwe

Outside of what immigration rates do to Zimbabwe's profitability of tobacco farming, one other aspect seen in Zimbabwe that has impacted how profitable tobacco farmers in Zimbabwe are is side-marketing. In Zimbabwe, farmers begin to grow tobacco illegally after using the agricultural inputs from tobacco companies. Then, they sell those tobacco leaves to different tobacco companies in Zimbabwe (TIMB Bulletin 2024). To counteract the loss of profits that the farmers' actions bring to the farming companies in Zimbabwe, the Tobacco Industry and Marketing Board (TIMB) set out in press releases in 2024 and 2025 explaining how they will implement harsher punishments for farmers of such actions (TIMB Bulletin, 2024).

2.4.1 Tobacco Profitability Drivers in Sub-Saharan Countries

Tobacco Profitability Drivers in Mozambique

Along with other cash crops, tobacco remains one of the most important crops for Mozambique. Moreover, most of the tobacco grown within the country is exported to countries outside of the African continent. Although tobacco constitutes an important crop to the economy of Mozambique, there are several factors that affect the profitability of tobacco farming in Mozambique.

One major factor affecting the profitability of tobacco within Mozambique is the variety of climatic changes the country suffers from every year. These changes cause Mozambican tobacco farmers to suffer from droughts, floods, cyclones, and erratic rainfall. All of these weather-related phenomena are likely to be detrimental to the profitability of tobacco farms, as it is often very costly to produce tobacco and these phenomena may bring about very low yields on the farms, if any yields occur at all.

Another factor affecting the profitability of tobacco farming in Mozambique is the cost of producing the tobacco leaves. Due to high costs of pesticides, fertilizers, labor, fuel, and other costs of the tobacco-specific farming, Mozambican farmers incur some of the highest costs of tobacco production in the region. This has a direct impact on the profitability of tobacco farming in the country.

Beyond the cost of farming tobacco in Mozambique, the other factor that impacts the profitability of the tobacco farming sector is the international cost of tobacco leaves. Since Mozambique exports most of its tobacco production, the price of tobacco in Mozambique is determined by the global demand for tobacco and tobacco products and the pricing of other international markets (Nguenha et al., 2021).

Quality of tobacco leaves in Mozambique also shapes potential income from tobacco farming. In a fashion similar to many other products and crops, there is a grading system for tobacco leaves. In general, the better the quality, the higher the price. Consequently, tobacco farms that produce better quality leaves are likely to earn higher profits in the tobacco sector compared to those farms that produce inferior quality tobacco leaves.

The nature of the contractual relationships of tobacco farms with the tobacco leaf-buying companies can also impact profitability in the country. Given that most tobacco farms in Mozambique are set up and run under contract farming arrangements with other companies, the profitability of the companies selling tobacco leaves is likely to be related to the tobacco farming company. Furthermore, the companies may require the farmers to purchase inputs

from the tobacco company, and the farmers may rely on the leaf-buying company for their profits in the tobacco sector (Cunguara et al., 2026).

Having a dual impact on Mozambique tobacco farming is the cost of labor. Tobacco farming is labor intensive for all its processes (growing, harvesting, curing, and processing of leaves). Therefore, labor costs can increase the overall cost for tobacco farming. Cunguara et al. (2026) also cite the costs of hired labor as one of the factors affecting tobacco farming profitability in Mozambique.

Access to financial services and credit facilities is another consideration regarding tobacco farming profitability in Mozambique. Farmers must obtain loans to cover costs related to tobacco farming. In Mozambique, tobacco farmers lack access to financial resources. As a result, their farming activities are not as profitable (African Development Bank, 2021).

The cost of tobacco leaves in the international market impacts overall profitability in the country. Tobacco is the main export of Malawi, which means the profitability of tobacco farming in the country relies on the international demand for tobacco leaves (Reserve Bank of Malawi, 2023).

Another key determinant of profitability of tobacco farming is the quality of tobacco leaves. Tobacco leaves that are higher quality are sold at higher prices in both the domestic and global markets, and therefore the tobacco farming sector in Malawi becomes more profitable if there is demand for and greater production of higher quality tobacco leaves (Katengeza, Mangisoni & Kassie, 2020).

The availability of financial and credit services in the country is also a key determinant of the profitability of tobacco farming in Malawi. Given the high cost of tobacco farming in Malawi, farmers need access to the country's financial services to cover the costs of farming tobacco before the leaves are harvested, yet the majority of farmers are unable to access these services and it negatively impacts profitability (African Development Bank, 2021).

The profitability of tobacco farming in the country is also influenced by a number of the policies of the Malawian government. For example, the policies of the Tobacco Commission, tax policies for tobacco products and export policies impact the profitability of tobacco farming in the country (Tobacco Commission of Malawi, 2024).

Global demand for tobacco products directly affects the profitability of tobacco farming in Malawi. Demand for tobacco products is decreasing because of the anti-smoking campaigns and tobacco control measures in different countries (World Health Organization, 2023).

The availability of labor in Malawi is another relevant factor. Tobacco farming is labor-intensive. Therefore, both the costs and availability of labor affect the profitability of tobacco farming in the country. Costs associated with labor in Malawi, which are relatively high, is believed to affect profitability (Manda, Alene & Gardebroek, 2021).

The technology employed in the farming business affects profitability of tobacco farming Malawi as well. The adoption of advanced technology in tobacco farming (e.g. advanced tobacco farming varieties, curing and drying technologies, improved irrigation technologies and agronomic practices) can positively affect the profitability of tobacco farming in Malawi (Kassie et al, 2022).

The soil where tobacco is grown by farmers in Malawi is another factor affecting profitability of tobacco farming. Tobacco needs fertile soil, and many of Malawi's tobacco farms have soil that has become poor or depleted. To increase the profitability of tobacco farming in Malawi, the soil that is used to grow tobacco needs to be made more fertile (Katengeza, Mangisoni & Kassie, 2020).

There are also pests that help to reduce the profitability of tobacco farming in Malawi and they particularly affect tobacco plants. There are several pests that are of concern to tobacco plants, and include aphids, some caterpillars, and the tobacco mosaic virus, and the profitability of tobacco farming in Malawi can also decrease due to the costs of pesticides that are used to control the pests (FAO, 2021).

Another factor that affects the profitability of tobacco farming in Malawi is the infrastructure in Malawi. Poor infrastructure that affects transportation and access to the market from areas where tobacco is farmed is a factor that reduces the profitability of tobacco farming in Malawi (Zant, 2020).

The exchange rate of the Malawian currency also affects the profitability of tobacco farming in Malawi. The value of Malawian currency as compared to other nations and its value in the foreign exchange market also determines the foreign exchange dollars that Malawi earns from selling its tobacco (Reserve Bank of Malawi, 2023).

Another component related to the profitability of tobacco farming in Malawi is the establishment of contract farming between Malawian tobacco farming regions and tobacco companies. Just like Mozambican tobacco farms, the majority of Malawian tobacco farming regions are bound by contract farming to tobacco companies. Such contract farming arrangements enables the companies to provide the tobacco farming regions with the tobacco and assist the regions in fulfilling their production targets. It also, in effect, makes the farming regions buy the companies' goods and makes them reliant on the companies' profitability in the tobacco business (Makoka et al., 2020).

Similar to the tobacco farming sectors of Mozambique and Malawi, profitability in the business of tobacco farming in Malawi may also be affected by the issues of environmental sustainability (especially with the curing of tobacco with fuelwood) (World Bank, 2022).

Lastly, competition from other crops locally in Malawi can affect profitability in Malawi's tobacco farming. The FAO promotes the introduction of other crops in place of tobacco, such as soybean, sunflower, groundnuts, and other legumes. (FAO, 2021). If the small farmers in Malawi begin growing these other crops, tobacco farming in Malawi may become unprofitable.

Factors influencing tobacco profitability in Zimbabwe

Increased production and yield

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has benefited from the "China premium". With China being the largest producer and exporter of tobacco leaves and products in the world, its pricing of finished tobacco products directly affects the pricing of tobacco in other markets (Cao, 2020). While China may incur high production costs of tobacco leaves, it sells its tobacco products at very low costs to other countries and encourages the use of tobacco in their economies. Because of this system, Zimbabwe's tobacco sector enjoys high levels of profitability. Additionally, pricing of other tobacco products around the world may be influenced and determined by China's pricing of its tobacco products (Cao, 2020).

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Another factor that influences tobacco farming profitability in Zimbabwe is the foreign sale price of their leaves. In 2024, Zimbabwean tobacco leaf price was $3.48 per kg, $0.47 per kg higher compared to 2023 (Zimbabwe Independent,2024). Price setting is strongly influenced by the demand for tobacco products in China. Annually, Zimbabwe exports 40% of its tobacco leaves to China (Business Weekly, 2024).

The Contract Farming Model and Debt Cycles

95% of Zimbabwean tobacco is produced under contracts between smallholder farmers and tobacco companies (The Herald 2024). In order to buy the seeds and fertilizers that are needed to prepare the land for the growth of tobacco plants, farmers are required to take loans from the tobacco company. Fertilizer and seeds coupled with high interest loans from the company result in profits from tobacco farming that are inadequate for meeting the farmers' basic living needs (Chisita et al, 2022).

The Profits of Tobacco Farmers and the Effects of Currency Policies

In Zimbabwe, the profits of tobacco smallholder farmers are largely impacted by government controls on these farmers' profits. For instance, the Reserve Bank of Zimbabwe (RBZ) allows

tobacco farmers to keep 75% of their profits in US Dollars, the currency used to sell tobacco; the remaining 25% of the RBZ payments are paid in the Zimbabwe currency (ZiG) (NewsDay 2024). The dramatic depreciation of ZiG against the US Dollar in recent years means the 25% of tobacco farmers' profits paid to RBZ loses value in US Dollars by the time the farmers spend the money to buy inputs to grow the tobacco crop for the next season (The Zimbabwe Situation 2024).

The Effect of Climate Change and the El Nino climate Phenomenon

The negative effects of climate change on ElNiño impact on droughts affect tobacco farmers in Zimbabwe. El Nino caused drought in Zimbabwe during the 2023 and 2024 tobacco growing seasons. Droughts caused Zimbabwe tobacco farmers to receive less rainfall to nourish the soil. In 2024, Zimbabwe farmers reported growing 20% less tobacco than in prior years (The Sunday Mail,2024). Zimbabwe still lacks irrigation in the tobacco fields, and rain in droughts means a loss of profits for farmers. These conditions caused losses in profit during the drought of 2024 (CNBC Africa 2024).

The Effect of Increasing Costs of Agricultural Inputs

The increase in costs of agricultural inputs needed for tobacco production impacts the profitability of Zimbabwe's tobacco farming industry. For example, the costs of fertilizers increased by 15 to 20% in Zimbabwe from 2023 to 2024 to prepare the soil for growing tobacco (Tobacco Reporter 2023). Also, the costs of coal used to cure the tobacco leaves increased for the same time period of 2023 to 2024 (Tobacco Reporter 2023). In addition, Zimbabwe has a power shortage and this has increased the costs of diesel generators for farms to have power for the irrigation and the curing processes. The increased costs of diesel generators has cut the profits for the largest tobacco farms in Zimbabwe (The Chronicle, 2023).

The Effects of Changes in the Zimbabwean Supply Chain

One of the factors that can influence the level of profitability in Zimbabwe's agricultural tobacco industry is the supply chain changes of the tobacco leaves that are grown in

Zimbabwe. Presently, more than 98% of the tobacco leaves grown in Zimbabwe are exported in their raw form to the tobacco consuming countries in Asia and Europe. However, the government of Zimbabwe put into effect a strategic approach of supplying these leaves for domestic production of cigarettes; the aim of the government is to increase the number of domestically produced Zimbabwean cigarettes to 30% of the total cigarette production of the country by 2025 (Ministry of Lands, Agriculture, Fisheries, Water and Rural Development 2021; The Sunday Mail 2023).

Side-marketing in Zimbabwe

Outside of what immigration rates do to Zimbabwe's profitability of tobacco farming, one other aspect seen in Zimbabwe that has impacted how profitable tobacco farmers in Zimbabwe are is side-marketing. In Zimbabwe, farmers begin to grow tobacco illegally after using the agricultural inputs from tobacco companies. Then, they sell those tobacco leaves to different tobacco companies in Zimbabwe (TIMB Bulletin 2024). To counteract the loss of profits that the farmers' actions bring to the farming companies in Zimbabwe, the Tobacco Industry and Marketing Board (TIMB) set out in press releases in 2024 and 2025 explaining how they will implement harsher punishments for farmers of such actions (TIMB Bulletin, 2024).

2.5.1 Strategies to Boost Tobacco Profitability in Sub-Saharan Region

Increasing Tobacco Profitability in Mozambique

Tobacco is extremely important to Mozambique. It is extensively grown by individuals, and it is one of the nation's main export crops. The profitability of tobacco is influenced by a number of factors affecting the tobacco brands in the country. Increasing the profitability of tobacco brands in Mozambique will involve the implementation of various strategies aimed at addressing the various factors negating the profitability of tobacco brands.

One of the strategies that can be adopted is the use of improved tobacco varieties and the use of technologies in the farming of tobacco. The farming of tobacco in Mozambique can be significantly improved by the use of improved varieties of tobacco plants that have higher yields and are more resistant to the diseases that affect tobacco leaves. The farming of tobacco can also be improved by the use of farming technologies. For example, the use of

precision farming will ensure that tobacco farms can be managed in the most efficient and most profitable way; the use of mechanization will eliminate the burden of labor in the farming of the tobacco; and the farming of tobacco will become more profitable (Mango, Makate & Mapemba, 2021).

Another method to raise Mozambique's tobacco brand profitability would be to better enable smallholder tobacco customers with agricultural inputs. Lack of access to agricultural inputs such as tobacco seeds, subsidized fertilizers, and pesticides impacts brand profitability. Therefore, improving the availability of tobacco seeds and agricultural inputs to tobacco smallholder farmers will enable them to yield more and improve the quality of their tobacco leaves. It will also ensure that farmers achieve the quality of tobacco brands of Mozambique (FAO, 2021).

The third strategy would again be better enabling tobacco farmers in Mozambique, this time with agricultural extension services. Increasing educational services for tobacco farming will ensure the tobacco industry significantly increases the number of smallholder tobacco farmers, their yields, and the quality of their tobacco brands. Additionally, an extension service that provides farmers the knowledge of tobacco brand farming will minimize the overall production costs of the tobacco brands and consequently increase the profitability of the brands (Kassie et al., 2022).

The other tobacco brand profitability strategy for Mozambique would focus specifically on the improvement in the cultivation quality by the tobacco brand farmers of the country. With an increased emphasis on quality, the tobacco brands would be able to trade at a higher value and the farmers' profitability from their grown tobacco brands would also increase (World Bank, 2022).

An additional approach to enhancing the profitability of tobacco in Mozambique is to widen access of tobacco farmers to financial institutions. Extending access of tobacco farmers to crop loans and farm loans will enable them to buy farm inputs and enhance their profitability in the tobacco business.

Another of the measures would be the increase of irrigation and better use of water. The growing of tobacco, in Malawi for example, is very rain dependent, making it vulnerable to both drought and rain variability. Improvement of irrigation makes it possible for farmers to be more consistent in the production and the quality of the crops. The availability of water

positively impacts productivity and the losses due to climate change impacts can be mitigated (World Bank, 2022).

Another of the steps for profit improvement can be the provision of more control of pests and diseases. Tobacco crops can be impacted by pests such as aphids, caterpillars, and cutworms, and diseases such as tobacco mosaic virus and black shank disease. The application of integrated pest control can reduce loss of crops, and improve the yield and the quality of the leaves. This will achieve higher profits as the level of losses caused by production is greatly reduced (FAO, 2021).

Another of the options may be to use resources in such a way that the production costs are reduced. The tobacco grower may be more economical with fertilizer, energy saving curing barns, labor-saving farming methods, and improved farm management may help tobacco farming become more profitable. The reduction of production costs increases the profit margin, even in the case where there is no change to the costs of production (World Bank, 2022).

Export market opportunities can help drive profitability. Tobacco is almost wholly export dependent. While the international demand for tobacco directly impacts profitability, the demand for Malawian tobacco can increase export revenue by elevating the market access of Malawian tobacco, creating and strengthening trading agreements, and widening export markets. International market access is beneficial to farmers (Reserve Bank of Malawi, 2023).

One of the secondary strategies is creating a Management Information System (MIS). Farmer-focused data on pricing, market access, and buyer preferences and acceptance are structured as market information. Knowledge of market conditions that is reliable enables farmers to engage in production and marketing activities that reduce uncertainty and increase profitability. Information Systems that are structured efficiently improve the marketing activities of Farmer Based Organizations (Simwita, 2022).

Long-term profitability can include supporting sustainable management of the environment. Using fuel wood for curing can lead to deforestation. Adoption of energy efficient curing technologies, along with sustainable land management and reforestation, can reduce curing costs and increase environmental sustainability. International markets are prioritizing

environmental protection in order to maintain access and engagement. Meeting environmental standards is a market access requirement (WHO, 2023).

Another way to increase the profitability of local tobacco and value addition industries is to invest in processing. Malawi could have developed cigarette manufacturing (along with the processing and packaging of tobacco and other value added tobacco activities) instead of just exporting Malawi raw tobacco for extra profits. Value addition means higher revenues from exports, more jobs, and higher value addition across the tobacco value chain (UNCTAD, 2023).

In addition, to be more profitable, certain changes in government policy and institutions are also needed. Profitably producing tobacco in Malawi is possible when the government decides to improve the regulation of the market, invest more in agricultural research and development, improve rural infrastructure and increase the availability of financial resources and increase exports. With good institutions, more efficiency can be achieved in the tobacco value chain, allowing farmers to adapt to market needs and challenges to a greater extent (African Development Bank, 2021).

2.5.2 Strategies to Increase Tobacco Profitability in Zimbabwe

The Tobacco Value Chain Transformation Plan (TVCTP) is designed to help Zimbabwe's tobacco farmers increase their profitability. The TVCTP will help transform Zimbabwe's tobacco industry from one that produces an unprocessed raw tobacco leaf to one that offers tobacco leaf products that have been processed and packaged for sale at varying levels of value addition and thus a higher market price. As reported by the Ministry of Lands, Agriculture, Fisheries, Water and Rural Development (2021), the government of Zimbabwe seeks to uplift tobacco sales from $1 billion to $5 billion between 2023 and 2025. The plan estimates a production of 300 million kilograms of tobacco leaves and an increase in profits from the tobacco trade without exporting the leaves. Instead, tobacco trade will occur within Zimbabwe (The Sunday Mail, 2023).

Strategic Shift toward Local Value Addition

Cigarette production in Zimbabwe has increased significantly following the change from the practice of exporting raw leaves. Tobacco farmers in Zimbabwe have also benefitted from the

change. Zimbabwe exports 98% of its tobacco in its raw state at $5.00 per kg. The price of tobacco in the form of cigarettes is $60.00 in Zimbabwe (The Chronicle, 2023). The government has pledged that by 2025, 30% of the tobacco crop will be processed locally (The Sunday Mail 2023).

Contract Farming System has been adopted

Another potential option to increase the profitability of tobacco farmers in Zimbabwe is to expand tobacco production using the contract farming model in Zimbabwe. Farming tobacco has now transformed into a contract farming model that has become the most popular model in Zimbabwe, with over 95% of Zimbabwe's tobacco grown with contract farming (The Herald 2024). Since the contract farming model was established, the tobacco farming contractors are now able to provide tobacco farming seeds, fertilizers, and agricultural specialists to the tobacco farmers, resulting in better farming yields and better quality tobacco leaves grown by the tobacco farmers (Chisita et al, 2022).

Export Market Focus - China

There is another way tobacco farmers can increase their profits, and that is to focus their energy and sell tobacco to China. China is the largest market for Zimbabwe's tobacco products and is also the biggest buyer of Zimbabwe's flue-cured Virginia tobacco leaves. Tobacco leaves that are sold to China represent 40% of Zimbabwe's total tobacco production, and in this case, Zimbabwe earns $3.48 for every kilogram of tobacco sold to China, the biggest buyer of tobacco worldwide (Xinhua, 2024).

Incentive Policies for Keeping Foreign Currency

One of the ways the Zimbabwean government has sought to improve the financial situation of tobacco farmers has been to provide the farmers with 75% of the tobacco sale revenues in US dollars (NewsDay, 2024). This means tobacco farmers can use the US dollars to purchase agricultural inputs, which means the tobacco farmers are less affected financially by the negative impacts of the country's local currency (The Zimbabwe Situation, 2024).

Use of Sustainable and Efficient Curing Technologies

Another method to improve the financial situation of Zimbabwe's tobacco farmers is the use of sustainable methods for tobacco curing. This includes the use of solar curing barns as well

as high efficiency rocket barns curing tobacco which use significantly less wood and coal than the traditional curing barns (Tobacco Reporter, 2023). In addition, these sustainable methods of curing tobacco have also met the requirements of the Environmental, Social and Governance (ESG) Standards for the International market, which traditional curing barns have failed to meet, making them a significant step in gaining access to the international market for Zimbabwe tobacco (The Herald, 2024).

The Digitization and Eradication of Side Marketing

With the Tobacco Industry and Marketing Board (TIMB) new digital track and trace system, tobacco contractors in Zimbabwe will be able to lose less money from side marketing (TIMB Bulletin, 2024). Side marketing refers to the act of a tobacco farmer selling his tobacco to a third party, therefore the contractor is losing money as a result (Sunday Mail, 2024).

Utilization of Irrigation and Climate-Smart Agronomy

A further factor that has contributed to making Zimbabwean tobacco farming lucrative is the alteration of irrigation practices by tobacco farmers. Due to Zimbabwe's geographical situation on the continent, the effects of the El Niño Phenomenon are experienced by the farmers as drought, which has severely impacted the profitability of tobacco farmers. Nevertheless, tobacco farmers in Zimbabwe, within this adverse situation, have managed to maintain profitability and this has been made possible by the irrigation of their farms (Zimbabwe Independent, 2024).

2.6 Theoretical Framework

The profitability of the Zimbabwean tobacco farmers will be explained by various agricultural and economic theories. This will provide a basis for the analysis and the research to identify and assess the determinants of the profitability of Zimbabwean tobacco farmers and the extent to which the tobacco farmers in Zimbabwe are able to achieve profitability in the sector.

Profit Maximization Theory

According to the Profit Maximization Theory, profit has a significant motivating role in farmers' decisions to produce crops. As cited in Alfred Marshall (1890), it is asserted that in

order to make the most profit from the agricultural product, the cost of producing the agricultural product should be equal to the income gained from selling the product. Farmers produce agricultural goods until the income gained from selling the agricultural product equals the cost of producing it.

In the context of tobacco farming, the Profit Maximization Theory is applicable in that farmers would produce tobacco until the cost of farming tobacco equals the cost of the resources used to farm tobacco. To maximize the profits gained from farming tobacco, farmers would want to produce tobacco that yields large outputs, as large outputs translate to large profits. Farmers would also want to produce high quality tobacco because the better the tobacco, the more valuable it is (Agricultural Economics 2020).

In this research study, the Theory of Profit Maximization will help to analyze the profitability of tobacco farmers in the Chegutu District. This theory will articulate the researchers' line of thinking regarding the profitability of tobacco farmers with particular emphasis to the costs of agricultural production vis-a-vis the income from the sale of agricultural produce. Additionally, this theory will provide the researchers edge to understand the elements which enhance and/or constrict their profit margin.

2.7 Conceptual Framework

A conceptual model can represent a theoretical framework in this research study. The model will represent some of the constituents of profitability of tobacco farming in Chegutu District ward 15. Within this model, the constituents will include the following:

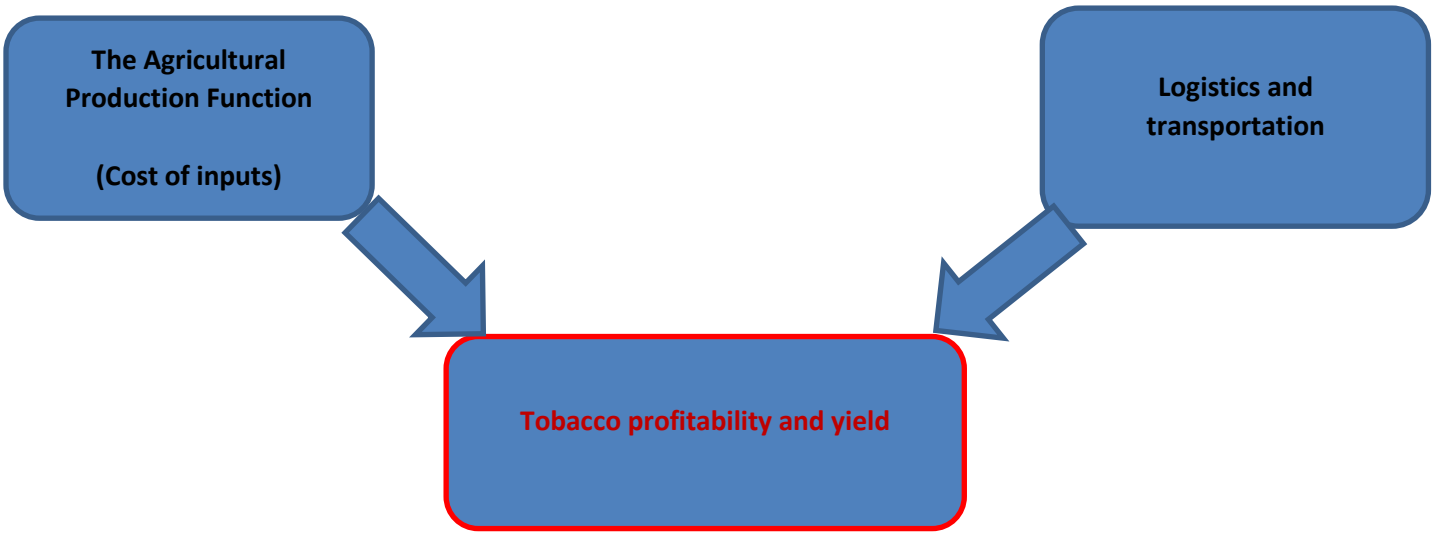



Figure 2.1 Conceptual Framework

The conceptual framework diagram of profitability and yield and the aspects that affects maximizing revenue from tobacco.

The profitability and yield of tobacco farming is affected by many factors which include the input costs, logistics and transportation, and the structure and pricing of the market as well as the availability of credit. An elaboration of these factors is described:

Input costs

Tobacco farmers are price takers for inputs to tobacco production. The availability of good quality seed and fertilizer can result in a better yield for farmers. The costs of these products are a consideration for the profits of tobacco farmers. The cost of labor for the cultivation of tobacco will be determined by the region in which the crop is cultivated. Labor costs can constrain the profitability of tobacco farming.

Logistics and transportation

The cost of transporting tobacco from the farm to the processing facility can create a gap in farm profitability. Also, tobacco products cannot be transported from the field until they are cured and are ready for storage. This can also affect tobacco farming profitability. Storage facilities on tobacco farms can lead to a loss of tobacco production if there are insufficient storage facilities for the cured tobacco products on the farm.

The structure and pricing of markets

Prices of tobacco products in the market are a consequence of the demand for the products. The profits in the farming of tobacco are a result of the market's demand for tobacco. The ability of tobacco farming operations to access the markets where they can sell their products can influence the profit of their operations.

Accessibility to Credit Facilities

The availability of credit facilities can enable tobacco farmers to make greater investments in the farming practices and technologies that can enhance the yields of their tobacco farms. Where there is little access to these facilities or the available loans have high rates, the tobacco farmers will likely suffer diminishing profits because of their inability to make these necessary investments.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This section explains the methodology. The study description presents the economic and environmental factors that allow for the production of tobacco. This section presents the sampling procedure as well as the data collection procedures, the use of interviews and research questionnaires. This is followed by the data analysis and the ethical considerations of the study.

3.2 Description of Study Area

The study was carried out in the Chegutu District in the Mashonaland West Province of Zimbabwe. It is about 100km west of Zimbabwe's Capital, Harare. It lies in the Agro ecologic zones II and III which favor the production of crops and livestock. It has warm summers and mild winters during the Tobacco growing season. It has a high rainfall pattern of between 700-900mm per year, mainly during the November to March rain season. It has climatic and soil conditions (soil type is sandy loam to clay loam which requires good soil management) that are favorable for the production of Tobacco. The smallholder farmers' tobacco farming system is mainly rain-fed and irrigation is practiced to some limited extent. Tobacco farming is also dominant in the district and is supported by contract farming and agriculture extension services. Being close to Harare and having good roads means it is easier to transport and sell produce to auction floors. The study is conducted in Ward 15, which is mainly rural, where most households earn their income and sustenance from tobacco from tobacco farming

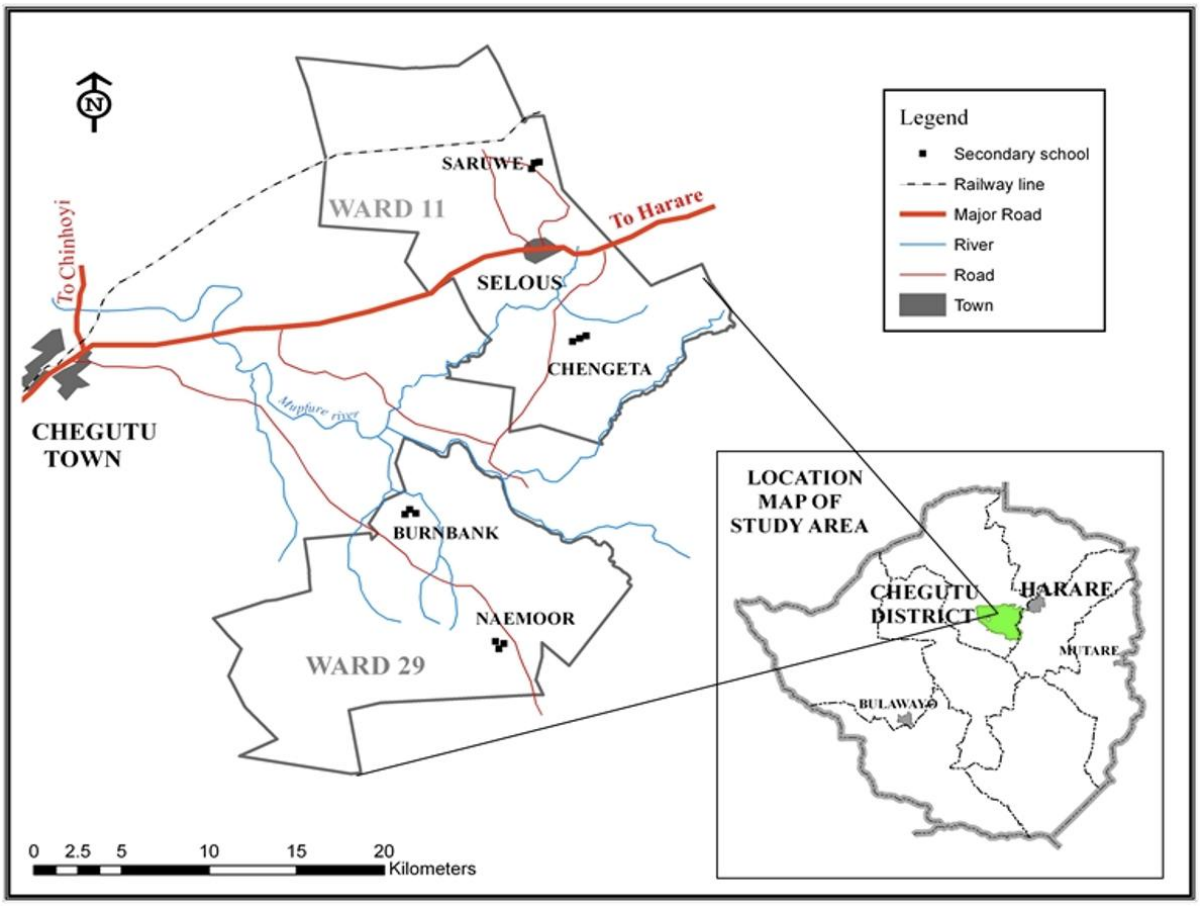

Figure 3.1 Map showing the study area

3.3 Research Design

A mixed-method design was justified as such approach integrates both quantitative and qualitative data collection and allows assessing and analyzing diverse data simultaneously. The case study is a research method employed to gain an in-depth and extensive understanding of a multifaceted social phenomenon in its natural context. It is a flexible method that is especially popular among social researchers. As part of the research, data on the costs and incomes of tobacco production were collected with the aid of a structured questionnaire. Alongside the questionnaire, an interview guide was employed to collect data on the factors influencing the profitability of tobacco production and potential strategies to enhance the profitability of the tobacco production sector. Research design is a blueprint of the researcher's work. As part of the design, the researcher outlines the logistics and the blueprints of data collection, measurement, and analysis (Khanday & Khanam, 2023).

3.4 Target Population

The target population for this study will be the 375 smallholder tobacco farmers located in Ward 15 of Chegutu District in Zimbabwe. The study population will include all tobacco farmers that were active throughout the duration of the study, regardless of whether they were farming under a contract farming system or as independent farmers.

These farmers had the necessary knowledge and experience on tobacco production as well as the challenges related to the availability of inputs and marketing. Agricultural Extension Officers (AGRITEX officers), tobacco contractors and local agricultural leaders are also included in the study. They provide technical and institutional services to farmers in the study area and will be able to shed light on some of the challenges on profitability and possible avenues of increasing tobacco production for small-scale farmers.

3.5 Sampling Procedure

Sampling involved use of the list of registered tobacco farmers from the District AGRITEX office in Chegutu district. The list had a total of 375 smallholder tobacco growers from Chegutu District Ward 15, who were registered and producing tobacco during the study period. This sampling frame was appropriate as it described the tobacco farmers of the study area of interest. The tobacco farmers of Chegutu were described in terms of the available data at the time of the study. The sample size was determined using the Yamane (1967) formula, which gave a sample of 194 tobacco farmers. The formula is illustrated as follows:

$n = 375 / (1 + 375(0.05)^2)$

$n = 194$

3.6 Data Type

Both primary and secondary data were used to examine the profitability of tobacco farming by the smallholder farmers of Chegutu District Ward 15. Primary data were obtained through direct contact with smallholder tobacco farmers, using a structured questionnaire and a semi-structured interview. These instruments were used to identify the production costs and income, profitability, the challenges faced, and potential ways of increasing the profitability of tobacco farmers. Production practices and available supports were described by AGRITEX

officers and tobacco contractors, who were the key informants. Secondary data were published and unpublished intergovernmental documents and reports, journal articles, books, dissertations, and internet sources.

Secondary data mainly aided literature review, background information, and comparison with previous studies.

3.7 Data Collection Framework

Collection of Data through Questionnaires

In the current study, the researcher opted to utilize the questionnaire as the main instrument of data collection due to its advantages in enabling the collection of standardized and quantifiable information, as well as the ability to apply the same research tool on a large population sample in a way that is logistically manageable for the researcher. This study utilized a questionnaire as a data collection tool to gather information of a demographic nature on formal education, tobacco farming, tobacco trading, and a host of variables to analyze break-even, cost/pricing/performance/farming/premium yield/gross margin, and profitability. The study also gathered information on the availability of credit, extension services, input costs, size of the labor force, and size of the farm that are likely to affect the profitability of tobacco farming. Additionally, the questionnaire sought to understand the profitability of tobacco contracting and the availability of new curing technologies and information on tobacco market research.

3.7.2 Data Collection through Interviews

Apart from the questionnaires, semi-structured interviews were the primary data collection method in this study. This method enabled the researcher to gather extensive data and knowledge from key informant participants of the tobacco production value chain. The interviews were conducted with 10 participants, comprising 3 AGRITEX officers, 3 tobacco contractors, and 4 local agricultural leaders. The interviews were meant to address the gaps in the questionnaire survey data. A qualitative data collection framework was used to understand the determinants of tobacco profitability, the challenges of tobacco production among smallholder farmers, and the available farmer input and credit services, extension services, marketing, contract farming, and proposed interventions to the tobacco profitability

challenge. The use of interviews, as a primary data collection method in this study, was justified as semi-structured interviews facilitate the collection of rich, deep, and meaningful survey data that is not easily provided by structured questionnaires (Easwaramoorthy, Zarinpoush and Canada, 2019). The main benefit from using interviews as a primary data collection method was that they provided a good compliment to the quantitative survey data collected using the structured questionnaires (Taherdoost, 2022). Also, it allowed the interviewer to rapidly shift from one topic to another at will.

3.7.3 Data Collection Response Rate

Two study instruments were used in the study: questionnaires and semi-structured interviews. The questionnaires were sent to 194 smallholder tobacco farmers and 175 were completed and returned. This resulted in a 90% response rate. This shows that the data was not only highly reliable, but also that the farmers had a high uptake.

The high response rate strengthens the statistical analysis. In the semi-structured interviews, 20 interview guides were sent to key informants, including AGRITEX officers and tobacco contractors. There was a 75% response rate. Interviews resulted in a slightly lower response rate compared to questionnaires, but still provided a rich qualitative description of the findings, which could be supported by quantitative findings. The response rates suggest sufficient data collection, and that the study's quantitative and qualitative information was adequate.

Table 3.1 Data Collection Response Rate

Data Collection Tool	Total tools disbursed	Total returned	Response Rate
Questionnaire	194	175	90%
Interview	20	15	75%

Source: (Primary Research Data, 2026)

3.7.4 Data Collection Procedure

The study began by requesting a list of smallholder tobacco farmers from the District AGRITEX office in Chegutu District. The researcher then developed and piloted the research tools which were formalized to include structured questionnaires and semi-structured

interview guides. Four AGRITEX officers were recruited to help with the data collection. As they were familiar with the farming community and had background knowledge in the production systems of tobacco, their participation helped provide better access to the respondents and offered support in the technical aspects of tobacco farming.

The main focus of data collection was to administer questionnaires and conduct interviews in the AGRITEX training sessions. The most conducive setting for data collection was in the training, group, or community agricultural meetings since these were the venues that had the most concentration of farmers. This strategy helped overcome the challenge of the researcher's time limit in collecting data from a large population and also helped overcome the challenge of low response rate. The researcher helped the respondents to fill in the questionnaires and suggested ways to improve tobacco production.

3.8 Data Analysis

The data analysis framework is shown below and includes the research questions, objectives, analysis techniques, and variables.

Table 3.2 Data Analysis Framework

Objectives	**Analytical tool**	**Variables**
To analyse the profitability of Tobacco production in Chegutu District ward 15.	Gross margin analysis	$\frac{\text{Revenue} - \text{Cost}}{\text{Revenue}} X\ 100$ Revenue Total cost
To identify factor affecting profitability of tobacco production in Chegutu District ward 15.	Multiple linear regression	Cost of production for tobacco production, seedlings, labor, inputs, transport costs, fuels and energy
To examine the strategies that can enhance the sustainability and profitability of tobacco farming in Chegutu District ward 15.	-SWOT analysis -Ranking analysis	-strategies -Ranking of challenges

3.9.2 Gross Margin (GM) Analysis

Gross margin is the percentage of every dollar of sales left over after providing customers with products or services (Vance, 2021). The equation below shows the gross margin formula.

Gross Margin = (Revenue - Cost) / Revenue X 100

This study analyzed the gross margin of tobacco production to appraise the level of profitability of smallholder farmers in Chegutu District Ward 15. For this analysis, gross tobacco sales were measured against the total of the production process' variable costs. Total sales were computed as the product of the total quantity of tobacco and the average price of tobacco per kg while the total variable costs were considered as costs of the major production inputs such as seeds, fertilizers, chemicals, labor, curing fuel, transport, and packaging among others. The gross margin was the difference between total sales and total variable costs. This gross margin was also considered as the net returns of the farmers after the costs of production. This method was the most appropriate for the study, as it provided a clear and direct estimate of profitability for the farmers of the crop production systems, especially in situations where the allocation of fixed costs at the level of the farm is particularly difficult.

3.9.3 Variables for Multi-linear Regression Analysis

The multiple linear regression model in the present study was designed to analyze the influences on the profitability of small-scale tobacco farming in Chegutu District Ward 15. Profitability, measured as the gross margin (USD per hectare), was the dependent variable. Age, education level, household size, farming experience, and tobacco farm size were treated as quantitative socio-economic and institutional variables and were the independent variables. Also included were the dummy variables for access to credit, access to extension services, and market price stability. Institutional and market factors influencing profitability were captured by the dummy variables. The inclusion of the cost of inputs and the availability of labor were justified as continuous explanatory variables. Based on literature and economic theory, the variables were formulated based on their likely relationships with profitability, with the cost of inputs assumed to negatively correlate with profitability and the rest of the variables positively correlating with profitability.

Multi-linear regression variables

Table 3. 3

Variable	Measurement Type	Expected Influence on Profitability
Profitability (Dependent Variable)	Quantitative (Gross margin in USD per hectare)	—
Age of farmer	Quantitative (Years)	Positive (+) / Negative (±)
Education level	Quantitative (Years of schooling)	Positive (+)
Household size	Quantitative (Number of members)	Positive (+) / Negative (±)
Farming experience	Quantitative (Years in tobacco farming)	Positive (+)
Farm size under tobacco	Quantitative (Hectares)	Positive (+)
Access to credit	Dummy (1 = Yes, 0 = No)	Positive (+)
Extension services access	Dummy (1 = Yes, 0 = No)	Positive (+)
Labour availability	Quantitative (Man-days)	Positive (+)
Market price stability	Dummy (1 = Stable, 0 = Unstable)	Positive (+)

Input cost	Quantitative (USD per season)	Negative (−)

3.10 Ethical Considerations

A variety of standards and norms were utilized in the study to ensure the research remained within ethical boundaries. One of the boundaries was the assurance of the protection in the anonymity and privacy of the survey participants. This meant that neither their name nor their ID number was captured. Approval to undertake the research was also granted by the Ministry of Agriculture and by the local leadership. In addition to the researcher, consent was given by the participants to undertake the survey, as well as to grant the participants the right to either continue or withdraw from the survey at any time during the process.

3.11 Chapter Summary

The research methodology is described in this chapter. This explains the research design and the rationale for the methods. It focuses on the study area and the target population for the survey. It also covers the rationale for the sample size and the target population. This chapter will also describe the research methods and the strategies for data collection and analysis. It will also cover the research ethics to enhance the validity of the study and the results

CHAPTER FOUR

RESULTS ANALYSIS AND DISCUSSION

4.1 Introduction

This chapter presents the results of the study and a discussion thereof. It begins with the demographic profile of the survey participants and follows with results regarding the profitability of tobacco production for smallholder farmers in Chegutu District. The next section addresses the profitability of the tobacco enterprise and smallholder farmers, followed by the results regarding the interventions that will increase the profitability of tobacco enterprise for smallholder farmers in the Chegutu District.

4.2 Demographic Characteristics

4.2.1 Sex

The respondents of the study, as shown in Figure 4.1, were predominantly male, at 60.9%. Female respondents were 39.1%. Given the nature of agricultural work, which is labor intensive and requires the use of physical strength, the results are consistent with Dube and Mugwagwa (2017), given that work that is physically intensive will predominantly attract a male workforce.

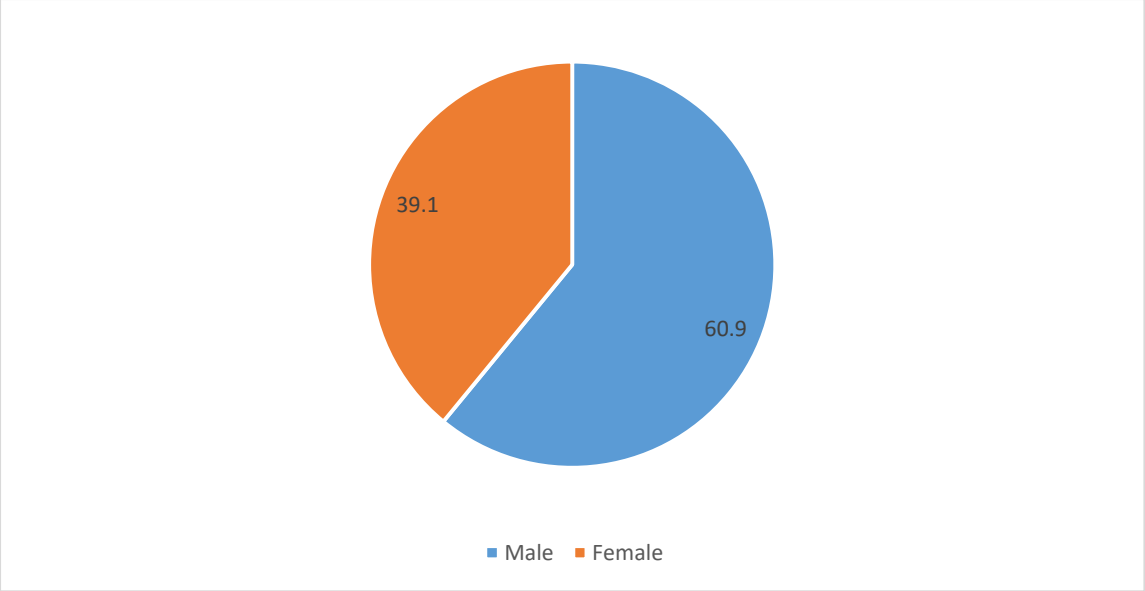

Figure 4.1 Sex aggregation of the respondents

Source: (Primary Research Data, 2026)

4.2.2 Age

According to the data in Figure 4.2, most respondents were between the ages of 25 to 35, followed in number by those aged 36-45. The respondents aged below 25 were 15% of the total. The numbers of respondents aged below 25 and aged 46-55 were about the same. The respondents aged above 55 only accounted for 9% of the total. These results indicate that the most active of the smallholder farmers in tobacco production are the middle aged. The elderly smallholder farmers are less active. The results of the study by Sajjad et al. (2022) are in agreement and state that the middle aged are more active in the tobacco production process compared to the elderly as the middle aged possess the menial skills lacking in the elderly.

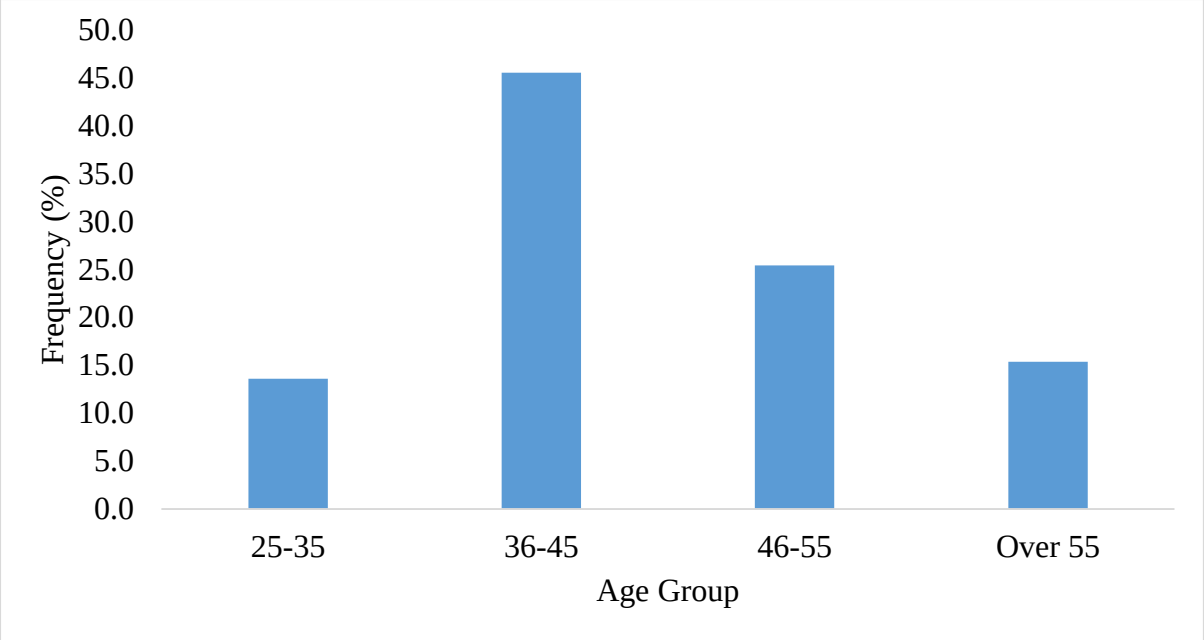

Figure 4.2 Age of respondents

Source: (Primary Research Data, 2026)

4.2.3 Educational Qualification

Table 4.1 shows that secondary school education was the highest education level attained among the study sample population at 47.9%. This was followed by those with primary education level at 26% and then tertiary education level at 16%. Those with no formal education were the least. This is an indication of high literacy, which is a requirement for tobacco farming, which at most needs people with higher comprehension.

Table 4.1 Educational Level of Respondents

Educational Level	Frequency	Percentage
None	17	10.1
Primary	44	26.0
Secondary	81	47.9
Tertiary	27	16.0

Source: (Primary Research Data, 2026)

4.2.4 Farming System

Results on the farming systems which the smallholder farmers participate in shows that, the majority of were affiliated both to their independent farming endeavours and contract farming with 52.1% of the respondents agreeing. This is followed by the farmers who are only doing contract (31.4%) whilst the least of the respondent were independent (16.6%).

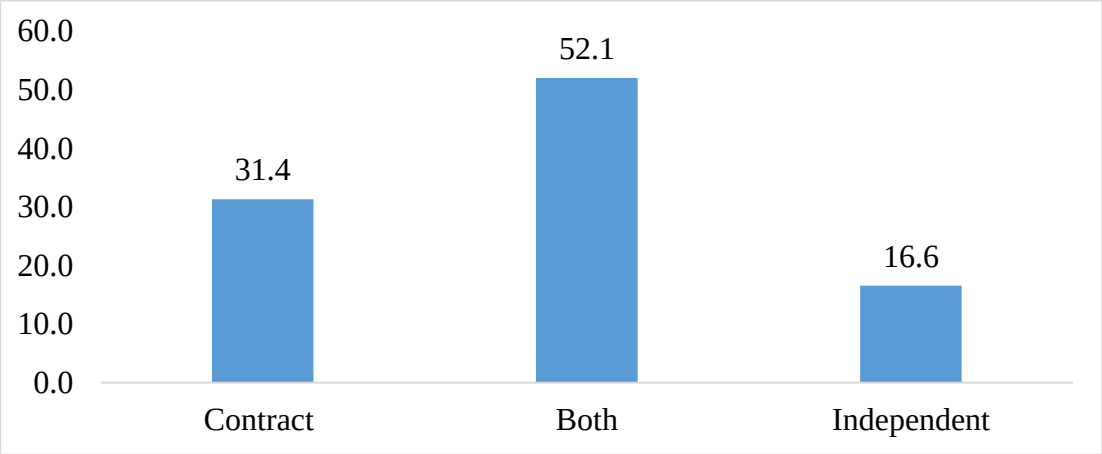

Figure 4.3 Tobacco Production Farming Systems

Source: (Primary Research Data, 2026)

4.2.5 Member of Farmer Club

The majority of the farmers in the study according to table 4.2 (72.8%) were affiliated to farmer clubs whilst only 27.2% were not affiliated to any clubs.

Table 4.2 Membership of Farmer Club

Member of farmer club	Frequency	Percentage
Yes	123	72.8
No	46	27.2

Source: (Primary Research Data, 2026)

4.2.6 Access to Extension

According to results in table 4.3 majority of the respondents who constituted 65.7% of the respondents had access to extension whilst only 34.3% did not have access to extension whether private or public.

Table 4.3 Access to Extension

Access to Extension	Frequency	Percentage
Yes	111	65.7
No	58	34.3

Source: (Primary Research Data, 2026)

4.2.7 Quantitative Variables

Table 4.4 show the quantitative demographic variables in the study. Results show that the average farming experience for the smallholder farmers is 5.2 years with a minimum of 0.5 years and a maximum of 27 years. Results on the household size shows that the average household size is almost six members with a minimum of 2 members and the largest family with 13 members. Results on farm size shows that the average is 2.6 hectares for the farmers showing that there are smallholder farmers. The average annual income from tobacco production for the farmers was $867.20 with a high of $7,500.00 and a low of $321.00.

Table 4.4 Quantitative socio-economic characteristics of the respondents

Variable	Minimum	Maximum	Mean
Farming Experience (years)	0.5	27	5.2
Household Size	2	13	5.9
Farm Size (hectares)	0.4	5.1	2.6
Average Annual Income ($)	321	7,500	867.20

Source: (Primary Research Data, 2026)

4.3 Profitability of Tobacco Production

Results presented in table 4.5 indicate that tobacco production amongst the smallholder farmers is generally profitable with an average revenue of $5,258.10 per hectare compared to total variable costs of $3,727, resulting in a gross margin of $1,531 per hectare. This shows that there is positive net income for the production with the income covering most of the production costs. This is similar to the findings of Ahmad et al. (2022) who had an average revenue of $5,123.51 which is close. The average cost for this research are relatively high compared to most of similar studies in other countries Atikah et al. (2024) Indonesia, Makoye et al. (2022) Tanzania. This shows that the cost of production in the country is relatively high because of the high cost of doing business, transportation and inputs. This leads to the gross margin being relatively lower than Chazovachii et al. (2021) and Mango & Kugedera (2022).

Table 4.5 Profitability Analysis of tobacco production for smallholder farmers per (hectare)

Item	**Min**	**Max**	**Mean**
Tobacco Output (Kgs)	210	3,761	2,062
Price/kg (USD)	1.10	4.63	$2.55
Total Revenue (TR) (USD)/hectare			**$5,258.10**
B. Variable Costs/hectare			
Seed (grams)	80	140	$119.69
Fertilizers (kg)	800	1,475	$1,205.61
Chemicals (liters/kg)	100	550	$341.90
Labour (man-days)	400	1,600	$1,099.50
Curing Fuel (tonnes)	200	1,200	$757.50
Transport (trips)	125	350	$210.50
Packaging materials	75	250	$150.60

Other variable costs	100	200	$183.50
Total Variable Costs (TVC)			**$3,727**
Indicator			**Value**
Total Revenue (TR)			$5,258
Total Variable Costs (TVC)			$3,727
Gross Margin (GM = TR − TVC)			**$1,531**
Gross Margin per kg (GM ÷ Output)			**0.74 USD/kg**
Break-even Price (Total Variable Cost÷Total Output)			**1.81 USD/kg**
Break-even Output (Total Variable Cost÷Price per unit)			**1,461.52 kg**

Source: Primary Data (2026)

There is a significant range in tobacco output from kg to kg per hectare which shows a difference in farmer productivity in the same region. It is not surprising that Magati et al. (2019) brought in the concept of input accessibility, extension services, and agronomic practices. The variation in the price of tobacco per kg ($1.10 to $4.63) shows the quality of the tobacco and the instability of the market, which also constitutes the instability of the tobacco income, as Zeller et al. (2018) stated.

The breakeven analysis shows that the breakeven price of $1.81/kg is lower than the average selling price of $2.55/kg. This is a bit more than the price of $1.53 of Magati et al. (2022), which shows the influence of price in this study. Although it is a bit more than the price of cost-recovery, it is a profitable activity. The breakeven output of 1,461.52 kg is also lower than the average yield of 2,062 kg. This is in line with the assertion of Chingosho et al. (2021), which stated that most farmers are producing above the minimum viable level of production, which shows that the production activity is profitable.

There is a relatively low gross margin per kilogram ($0.74/kg), indicating that production is only likely to be profitable if input prices are low. Even though tobacco is profitable, the study reveals that the variability of yields and revenues threatens that profitability. The sustainability of tobacco is likely to be threatened by variability of yields, the increased costs of production, and market prices that are likely to be more volatile.

4.4 Factors Affecting Profitability of Tobacco

4.4.1 Model Summary

Table 4.6 has a model summary of the study showing tobacco profitability of smallholder farmers has a strong correlation among independent variables with an R of 0.884. The study shows that 78.1% of the profitability of tobacco relates to the variables of the study indicating that the model has good fit for the profitability of tobacco. The study's focus was the Gross Margin of the farmers, the study's socio-economic variables were the complementary variables.

Table 4.6 Model summary for regression analysis

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.884	0.781	0.612	428.516

Source: (Primary Research Data, 2026)

4.4.2 ANOVA Analysis

The ANOVA results in table 4.7 indicate that the regression model is statistically significant, as shown by the F-value of 10.047 with a significance level (p = 0.000). This means that the independent variables, taken together, have a significant effect on tobacco profitability among smallholder farmers.

Table 4.7 ANOVA for regression analysis

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	18,456,231.4	10	1,845,623.14	10.047	0.000
Residual	9,514,738.6	52	182,975.742		
Total	27,970,970	62			

Source: (Primary Research Data, 2026

4.4.3 Multiple Regression Table

Table 4.8 shows that several socioeconomic and institutional factors significantly affect profitability of tobacco production amongst smallholder farmers. These factors include educational level, experience of the farmer, farm size, access to credit and the cost of input which were found to be statistically significant ($p < 0.05$). Most of these variables have a positive relationship with profitability, whilst input cost has a negative and significant effect, indicating that rising production costs reduce profitability. These findings are consistent with the Theory of Profit Maximization, which suggests that farmers seek to optimize output while minimizing costs to achieve higher returns. Non-significant variables such as age, household size, labor, and market price showed weaker influence on profitability within the model.

Table 4.8 Multiple regression analysis for factors affecting profitability of tobacco production

Variable	Unstandardized B	Std. Error	Standardized Beta	t	Sig.
(Constant)	-650.3	384.2		-1.82	0.073
Age	12.45	8.973	0.12	1.38	0.171
Education	145.67	56.321	0.24	2.58	**0.013***
Household size	-38.74	29.504	-0.09	-1.31	0.195
Farming experience	64.58	21.478	0.26	3.07	**0.004***
Farm size	122.84	118.25	0.41	4.42	**0.001***
Access to credit	218.44	97.32	0.27	3.27	**0.002***
Extension services access	28.15	102.48	0.28	2.79	0.128
Labour	96.412	73.81	0.07	1.36	0.197

Market price	154.86	131.21	0.16	1.93	0.057
Input cost	-211.73	126.54	-0.29	-3.25	**0.002***

Source: (Primary Research Data, 2026)

Education Level

In the study, having more education increases the profitability of tobacco for smallholder farmers. It shows that these farmers can make better decisions and adopt better practices that can improve farm yields. This finding is similar to that of Ul Haq et al. (2022) who stated that educated farmers can gain access to market and production information resulting in better analysis and thereby improved incomes and greater productivity.

Farming Experience

The study identified farming experience as one of the key determining factors on the profitability of tobacco. This is similar to the findings of Sheikh et al. (2023) who stated that experienced farmers are more knowledgeable on the production and risk management practices. Experienced farmers are more adept at managing risks such as climate change, pests and diseases and are able to effectively manage and optimize the use of farm inputs. Adesanya et al. (2020) stated that experienced farmers are able to improve the quality of tobacco and this translates to greater profitability for the farmer.

Farm Size

Farm size has a strong ($p = 0.001$) and positive influence on profitability, meaning that farmers that had larger farms were able to grow more tobacco and earn higher incomes. This is also the case for farmers in the findings of Atikah et al. (2024). Aside from that, these farmers are able to carry out diversified land use planning, such as staggered planting and diversification of long and short term varieties of tobacco. This is to counter the effects of climate change and other related challenges.

Access to Credit

Access to credit was found to be a statistically significant ($p=0.002$) variable that positively influences the profitability of smallholder tobacco farmers. This is due to the fact that credits,

especially those in contract farmer arrangements, provide the required inputs and necessary extension, thus positively impacting on productivity. This is also supported by Chazovachii et al. (2021) who was of the opinion that farmers who have access to credit lines are also able to get the necessary inputs for optimum production which in turn increases the quantity and quality of the production. Rweyemamu (2006) also argues that, farmers who have access to finance are more likely to use improved methods, and as a result achieve increases in production and enhanced quality of tobacco.

Input Cost

The other important factor that has a negative impact on smallholder tobacco farmers' profitability is the cost of inputs. It had a negative significant influence (p=0.002) in the study. This means that the more expensive the inputs the higher the variable cost, thus reducing the smallholder tobacco farmers' net returns. This is also supported by Keyser (2020) who stated that higher costs of inputs such as labour, fertilisers and chemicals, could adversely impact smallholder farmers' profit margins if the costs are not compensated with higher yields and improved market prices.

4.5 Strategies that can Enhance the Profitability of Tobacco Farming

According to the results for strategies on improving tobacco production presented on table 4.9, contract farming was top most preferred strategy (Mean=4.5). From the results, contract farming was perceived to be more advantageous to the farmers for it provided access to private extension, inputs and guaranteed markets at better prices. This was also noted in the findings by Sajjad et al. (2022) who mentioned that, individual farming was less beneficial, for in contract farming, production is controlled from land preparation to harvesting.

Table 4.9 Strategies for improvement of profitability of tobacco production amongst smallholder farmers

Strategy	Mean	St. Deviation	Mean Ranking
Improved seed varieties	4.1	1.09	4
Fertilizer application	3.7	1.12	6

Access to credit	4.2	1.04	2
Extension services	3.9	1.02	5
Farmer cooperatives	3.6	1.14	7
Improved curing technologies	4.1	1.19	4
Market information access	4.2	1.09	2
Contract Farming	4.5	1.05	1

Source: (Primary Research Data, 2026)

Closely related to contract farming and ranking at almost the same level is the availability of affordable credit lines which indicates that financing is almost the backbone for tobacco production. Appau et al. (2020) had similar findings that tobacco production is capital intensive especially for the curing and transportation of the produce and that efficient production is only possible with flexible affordable credit. Access to market information and access to credit have the same mean ranking which indicates that both are crucial for timely and informed decisions that would enhance profitability.

Mean ratings for other strategies for improved leaf curing and seed technologies (Mean = 4.1) show that production variables are critically important for improved yield and leaf quality. Increased quality and yield of leaf production improvements also positively impact profitability. Batani et al. (2019) also show that the adoption of improved certified varieties, energy efficient curing technologies within tobacco production, and curing can lead to great profit advancements for smallholder tobacco producers.

Furthermore, the mean rankings of fertilizer use (Mean = 3.7) and extension services (Mean = 3.9) show these also are important for yield, but may be limited by high costs or accessibility. The low mean rank of farmer Cooperatives (Mean = 3.6) may imply low participation, weak institutional structures, or lack of trust among farmers in collective systems.

The higher average standard deviation across all variables indicates some discrepancies in farmer perceptions. Based on this, it is plausible that the strategies discussed may work for different households.

4.6 Chapter Summary

This chapter presents the analysis and discussion of the study results. The results indicate that the majority of the studies' smallholder farmers' tobacco production is profitable with a positive gross margin. However, there is large discrepancy in yield and income and price per kg resulting in a large discrepancy in management and market prices. The education level and income and farm size and extension access of smallholder farmers are key factors for the profitability of smallholder farmers' tobacco farming. Regarding the strategies that enhance profitability, contract farming and access to credit and access to market information were the main strategies cited. Also, there were improved curing methods and improved seed varieties, which are production strategies.

CHAPTER FIVE

SUMMARY CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter contains the summary, conclusion and recommendations of the study on the profitability of tobacco production amongst smallholder farmers. The summary contains concise short and precise description of the results on the objectives of the study followed by the conclusion of the study. In addition, the chapter also contains the recommendations of the study which are practical and applicable to policy, research and community development. The chapter also contains a section on the areas for further study which explains the study as

a platform for other future studies along the tobacco profitability and sustainability amongst smallholder farmers.

5.2 Summary

The study aimed to determine the strategies to improve the profitability of tobacco production amongst smallholder farmers and included objectives such as to analyse the profitability of tobacco production and to analyse the factors affecting profitability of tobacco production amongst smallholder farmers. The third objective included finding strategies to improve the profitability of tobacco production amongst smallholder farmers.

On the objective of profitability, the study confirmed that, smallholder tobacco production enterprise was profitable with a positive gross margin of $1,531 per hectare, indicating that farmers get revenue which enables them to cover for their production costs. In addition, the study also found out significant variability in terms of production output per hectare (210 kg to 3,761 kg) revenue and production costs which shows that there is a huge difference in production management and market factors amongst the smallholder tobacco farmers. It is also important to note that there is generally high production cost in Zimbabwe compared to countries such as Zambia which suggest that Zimbabwean farmers often have high production costs and less productivity owing to expensive inputs compared to the region and transport and production related costs. Variations in tobacco prices ($1.10 to $4.63/kg) highlight issues of quality differences and market instability, which directly affect farmer income.

In addition, the findings on the break-even analysis shows that the breakeven price of $1.81/kg is lower compared to the average selling price of $2.55/kg indicating that production is viable and profitable. The break-even output (1,461.52 kg) is below the average output (2,062 kg), showing that most farmers produce above the minimum required level. The relatively low gross margin per kg ($0.74/kg) indicates that profitability is highly sensitive to rising input costs and price fluctuations.

According to the findings of the study profitability of tobacco production amongst smallholder farmers is greatly influenced by factors such as education, farming experience, farm size, access to credit, extension services, and input costs, with most having a positive effect except input costs. This supports the Theory of Profit Maximization which entails the

maximization of profits through increase in output and reduction of costs. Contract farming, access to credit, and market information were the most preferred strategies for the improvement of profits amongst the smallholder farmers, highlighting the importance of financial and institutional support. Lower-ranked strategies such as farmer cooperatives suggest weak institutional structures, while moderate strategies indicate challenges related to accessibility and cost.

5.3 Conclusion

The findings of the study confirm that tobacco production is a viable income generating activity amongst smallholder farmers which has the potential to transform their livelihoods. In addition, it can also be concluded that profitability is not uniform and there is high variability amongst the farmers in terms of yield revenue and market prices which indicate differences in access to productive inputs as well as extension services. Moreover, it is concluded that tobacco production viability is highly dependent on efficiency in production and market conditions showing the great need for performance improvement and consistency for farmers to attain equitable benefits.

According to the findings of the study it can also be concluded that production, socio-economic and institutional factors are important determinants of tobacco production profitability. The findings of the study indicate that profitability is influenced by farmer capacity, resource access and institutional support systems. Factors such as education level of the farmers, income, access to extension, farming experience and farm size all need to be taken into consideration since they affect profitability. It can therefore be concluded that, long-term sustainability is uncertain without interventions to stabilize production and markets. In addition, improving resilience in production systems is critical for maintaining profitability over time. A combination of efficient production practices and strong support structures is necessary to enhance profitability.

5.4 Recommendations

From the findings of the study, it is recommended that the government and stakeholders strengthen and effectively regulate contract farming arrangements to ensure that farmers receive fair pricing and production arrangements. In addition, there is also need for

monitoring mechanisms to be put in place that protect the farmers from exploitative contract terms whilst maintaining access to inputs and the market.

In addition to this, financial institutions and development partners should come up with innovative affordable credit products that are tailored to the needs of smallholder farmers. These credit services and products should be designed to reduce the dependence of the farmers on costly contract schemes enabling the farmers to be independent.

It is also recommended that the government introduce and strengthen subsidy scheme support program for smallholder farmers for inputs such as fertilizers, chemicals and seed to reduce the burden of high production costs faced by the farmers. This is also coupled with training for farmers on good agricultural practices which include efficient use of inputs and cost reduction management practices to improve productivity.

The research also recommends the strengthening of agricultural extension services so that they provide regular, relevant and practical capacity building and technical backstopping on good agronomic practice to the smallholder farmers. This includes capacitation of extension personnel with modern teaching resources as well as tools for ease of mobility. The capacity building should focus on improvement of farmer production knowledge, skills and decision making.

The study also recommends that government and private sector players develop accessible information platforms for the farmers so that they get real time market and production information. Efforts should be made to improve price transparency and grading systems to ensure farmers receive fair value for high-quality tobacco.

On recommendations for further study, the research suggests comparative studies between contract and independent farmers to determine which model yields better long-term sustainable profits. There is also need to study on the influence of climate change and weather variability on profitability of tobacco production amongst the smallholder farmers. Future research should investigate the role of alternative crops and diversification strategies in improving household income and reducing dependency on tobacco. Additional studies should assess the effectiveness of farmer cooperatives and collective marketing systems in enhancing bargaining power and profitability.

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APPENDICES

Appendix 1: Research Questionnaire

Introduction

My name is **Ropafadzo Makanaka Mhute** (Registration Number: **B224638B**), a final year student pursuing a **Bachelor of Agricultural Science Honours Degree in Agricultural Economics and Management** at **Bindura University of Science Education**. I am conducting a research study entitled:

"Strategies to Improve Tobacco Profitability in Tobacco Production Among Smallholder Farmers: A Case Study of Chegutu District Ward 15."

This study is being carried out as part of the requirements for the completion of my undergraduate dissertation. The purpose of this research is to examine the factors affecting tobacco profitability and to identify strategies that can enhance income and sustainability among smallholder tobacco farmers in Ward 15, Chegutu District. Your participation in this study is entirely voluntary. All information provided will be treated with **strict**

confidentiality and will be used **for academic purposes only**. Your responses will be analysed in aggregate form, and no individual names will be recorded or disclosed.

Kindly answer all questions honestly and to the best of your knowledge. The questionnaire will take approximately **15–20 minutes** to complete. Your cooperation and contribution are highly appreciated.

Section A: Demographic Characteristics

1. Sex: ☐ Male ☐ Female
2. Age: ☐ Below 25 ☐ 26–35 ☐ 36–45 ☐ 46–55 ☐ Above 55
3. Marital status: ☐ Single ☐ Married ☐ Widowed ☐ Divorced
4. Level of education: ☐ None ☐ Primary ☐ Secondary ☐ Tertiary
5. Household size: _____
6. Farming experience (years): ☐ Below 5 ☐ 5–10 ☐ 11–20 ☐ Above 20
7. Farm size under tobacco (hectares): _____

Section B: Tobacco Production Practices

1. Which tobacco variety do you grow? _____
2. What type of farming system do you use? ☐ Contract ☐ Independent ☐ Both
3. Average tobacco yield per season (kg): _____
4. Which inputs do you use? (Tick all that apply) ☐ Certified seed ☐ Fertilizers ☐ Chemicals ☐ Curing fuel (firewood/coal) ☐ Hired labour
5. Do you receive extension services? ☐ Yes ☐ No
6. If yes, how often? ☐ Monthly ☐ Quarterly ☐ Rarely

Section C: Profitability and Costs (Gross Margin Analysis Variables)

Instructions: Please provide approximate amounts in USD for the last completed tobacco season.

C1. Variable Input Costs

1. Cost of tobacco seed: $_____

2. Cost of fertilizers (basal + top dressing): $_____
3. Cost of chemicals (pesticides, herbicides, fungicides): $_____
4. Cost of hired labour: $_____
5. Cost of curing fuel (firewood, coal, gas, etc.): $_____
6. Cost of transport to auction floors / buyers: $_____
7. Cost of packaging materials (hessian, twine, bales): $_____
8. Other variable costs (specify): $_____

Total Variable Cost (TVC): $_____

C2. Output and Revenue

9. Total quantity of tobacco sold (kg): _____
10. Average price per kg (USD): _____
11. **Total Revenue (TR = Quantity × Price): $_____**

C3. Major Cost Drivers (Ranking)

12. Rank the following costs from **1 = highest** to **5 = lowest**:

Cost Item	Rank
Seed	_____
Fertilizer	_____
Labour	_____
Transport	_____
Curing fuel	_____

Section D - Factors Affecting Profitability

Table 1: Economic Factors Affecting Tobacco Profitability

Scale - 1 = Strongly Disagree | 2 = Disagree | 3 = Neutral | 4 = Agree | 5 = Strongly Agree

No.	Statement	1	2	3	4	5
E1	High cost of fertilizers reduces my profitability	☐	☐	☐	☐	☐
E2	High cost of seed affects my tobacco returns	☐	☐	☐	☐	☐
E3	Transport costs reduce my profits	☐	☐	☐	☐	☐
E4	Low tobacco prices reduce my income	☐	☐	☐	☐	☐
E5	Lack of affordable credit affects my production	☐	☐	☐	☐	☐

Table 2: Production & Environmental Factors

No.	Statement	1	2	3	4	5
P1	Climate variability affects my tobacco yields	☐	☐	☐	☐	☐
P2	Pests and diseases reduce my production	☐	☐	☐	☐	☐
P3	Poor curing facilities reduce leaf quality	☐	☐	☐	☐	☐
P4	Limited access to quality inputs affects productivity	☐	☐	☐	☐	☐

Table 3: Social Factors

No.	Statement	1	2	3	4	5
S1	Lack of farming skills affects my profitability	☐	☐	☐	☐	☐
S2	Household labour shortages affect production	☐	☐	☐	☐	☐
S3	Low education levels affect adoption of better	☐	☐	☐	☐	☐

No.	Statement	1	2	3	4	5
	practices					

Table 4: Institutional Factors

No.	Statement	1	2	3	4	5
I1	Limited access to extension services affects productivity	☐	☐	☐	☐	☐
I2	Contract farming terms reduce my profit	☐	☐	☐	☐	☐
I3	Lack of farmer cooperatives limits market access	☐	☐	☐	☐	☐
I4	Poor access to market information affects pricing	☐	☐	☐	☐	☐
I5	Government policies affect tobacco profitability	☐	☐	☐	☐	☐

Section E: Current Strategies Used

1. What strategies do you use to improve profitability? ☐ Use of improved seed ☐ Proper fertilizer application ☐ Group input purchasing ☐ Collective marketing ☐ Training/extension support ☐ Diversification
2. Are these strategies effective? ☐ Yes ☐ No
3. Why? _____

Appendix 2: Interview Guide

Introduction

My name is **Ropafadzo Makanaka Mhute** (Registration Number: **B224638B**), a final year student pursuing a **Bachelor of Agricultural Science Honours Degree in Agricultural**

Economics and Management at **Bindura University of Science Education**. I am conducting a research study entitled:

"Strategies to Improve Tobacco Profitability in Tobacco Production Among Smallholder Farmers: A Case Study of Chegutu District Ward 15."

This study is being carried out as part of the requirements for the completion of my undergraduate dissertation. The purpose of this research is to examine the factors affecting tobacco profitability and to identify strategies that can enhance income and sustainability among smallholder tobacco farmers in Chegutu District. Your participation in this study is entirely voluntary. All information provided will be treated with **strict confidentiality** and will be used **for academic purposes only**. Your responses will be analyzed in aggregate form, and no individual names will be recorded or disclosed.

Kindly answer all questions honestly and to the best of your knowledge. The interview will take approximately **30–45 minutes** to complete. Your cooperation and contribution are highly appreciated.

Section A: Background Information

1. Please state your position and role in relation to tobacco farmers in Chegutu District.
2. How long have you been working with tobacco farmers in this area?
3. What type of support do you provide to tobacco farmers?

Section B: Current State of Tobacco Production

4. How would you describe the current level of tobacco production and profitability among smallholder farmers in Chegutu District?
5. What major changes have you observed in tobacco farming over the past five years?
6. What are the main challenges farmers face in producing tobacco profitably?

Section C: Factors Affecting Profitability

7. In your view, what economic factors most affect farmers' tobacco profitability?
8. What production or environmental factors reduce tobacco yields or quality?

9. How do social factors (education, labour, household size) affect farmers' performance?
10. What institutional challenges (policies, contracts, extension access) limit profitability?

Section D: Existing Strategies

11. What strategies are currently used by farmers to improve tobacco profitability?
12. Which of these strategies are most effective, and why?
13. What role do farmer groups or cooperatives play in improving incomes?

Section E: Support Systems and Institutions

14. What support is currently available from government, NGOs, and private contractors?
15. How effective is the extension service in improving production and profitability?
16. How do tobacco marketing systems and contract arrangements affect farmer profits?

Section F: Recommendations and Improvements

17. What strategies would you recommend to improve tobacco profitability in Chegutu District?
18. What changes should be made to policies, contracts, or support systems?
19. How can farmers be better supported to adopt profitable practices?