Livelihood Effects of Smallholder Tobacco Contract Financing Schemes in Mutoko District, Zimbabwe

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ABSTRACT

The global tobacco production has experienced significant fluctuations over the past two decades. Consequently, tobacco farmers in Malawi, Zambia, and Zimbabwe have received stagnant or decreasing crop prices since 2013. Smallholder tobacco farmers under contract farming schemes in Zimbabwe have been consistently in debt due to unfavourable economic conditions and contractual issues. As such, concerns about the impacts of contract farming on the welfare of these farmers have risen. Therefore, this study aimed to determine the livelihood effects of contract farming schemes on tobacco farmers in Mutoko district, Zimbabwe. A questionnaire was used as the main data collection tool. Data were analysed using descriptive statistics. The study results indicated that since the farmers joined tobacco contract farming, their access to inputs, income, food security, education level, asset ownership, vulnerability, and debt increased. Therefore, the study concluded that tobacco contract farming positively affects income, food security, health, education level, asset ownership, and input access, as well as negatively affects vulnerability and debt. The study suggests that the government and tobacco contracting companies should consider enhancing extension support for tobacco farmers, focusing on women, to boost household incomes and support rural livelihoods.

Keywords: Livelihoods, Contract-Financing, Smallholder farmers, Tobacco

INTRODUCTION

Global tobacco production has fluctuated significantly over the past two decades. According to the Food and Agriculture Organization (FAO) of the United Nations (2020), global tobacco production increased from 4.3 million tonnes in 1970 to 8.1 million tonnes in 1997, a nearly 90% increase. However, production has since declined by 7.6% over the last two decades. Shahbandeh (2024) reports that global tobacco production decreased from 1990 to 2022, reaching approximately 5.78 million metric tons in 2022. The peak production during this period was 7.60 million metric tons in 2013.

Globally, an average of 6.3 million tons of green tobacco is produced annually, with over 60% originating from Asia (Philip Morris International, 2024). Between 2012 and 2022, China, India, and Brazil were the top three tobacco leaf producers (Philip Morris International, 2024). Tobacco leaf production is decreasing in developed countries but rising in developing nations (FAO, 2003). According to the WHO (2010), this shift is driven by several factors, including government regulations (such as tobacco taxes), increased awareness of the health risks of smoking, and the labor-intensive nature of tobacco cultivation, which is more costly in developed countries (Hu and Lee, 2015). The tobacco industry, with support from governments through economic incentives and export encouragement, is actively recruiting more farmers in developing countries (Drope et al. (2023); Lencucha et al., 2016).

Agriculture in sub-Saharan Africa accounts for an average of 34% of the region's gross domestic product (GDP) and 64% of its employment, highlighting the sector's low productivity (World Bank, 2013). By 2020,

the region had become one of the leading tobacco producers worldwide, with countries such as Zimbabwe, Mozambique, Malawi, and Tanzania playing key roles in the industry (WHO, 2024).

A report by Drope et al. (2023), found that tobacco farmers in Malawi, Zambia, and Zimbabwe have been receiving stagnant or decreasing prices for their crops since 2013. The report found that the average price of tobacco leaf in these countries fell by 15% between 2013 and 2019. The report highlighted several key factors, including high production costs that reduce their competitive edge, limited bargaining power that hinders their ability to secure favorable prices for their crops, and government policies. As price takers, they have to accept the prevailing global price or a lower local price. According to Hu and Lee (2015), this is a common situation for farmers. The contribution of tobacco growth to GDP is generally quite small, even in large tobacco-producing countries like Brazil and Indonesia. The gross value of unfinished tobacco only accounts for less than one-half percent of GDP in most countries, except for a few such as Burundi, Lao PDR, Lebanon, Mozambique, North Macedonia, and Zimbabwe (World Bank, 2023).

The WHO (2024) reports that between 2005 and 2020, the global area under tobacco cultivation declined by 15.8%, while it grew by 19.8% in Africa. Similarly, global tobacco leaf production dropped by 4.6%, but in Africa, it rose by 35.7%. This information demonstrates the significant role that tobacco plays in people's livelihoods. The majority of tobacco farmers, workers, and their families are located in Malawi and Zimbabwe. These two countries are the main producers and exporters of leaf tobacco in the region, despite being among the poorest nations in the area. This trend is also apparent in other developed countries that are major producers of tobacco, such as Brazil (FAO 2003).

Tobacco farming is expanding in developing economies, with the tobacco industry and governments promoting it as a lucrative venture that can improve farmers' livelihoods. In Zimbabwe, both the government and tobacco companies actively support tobacco farming. The Fast-Track Land Reform Program (FTLRP) transformed the tobacco farming landscape by redistributing land from predominantly white-owned farms to small- and medium-scale farms managed by black peasants and working-class individuals (Moyo, 2013). Under the FTLRP, beneficiaries were categorized based on land size into two distinct farming models, known as A1 and A2 (Chigunhah et al., 2018). Zimbabwe adopted contract farming in 2004 as a financing model to increase agriculture production (Anseeuw, Kapuya, and Saruchera 2012). Zimbabwe is now one of the biggest tobacco production countries, ranking fourth in the world in 2020. According to RBZ, (2022), tobacco output increased by 14.6% to 211 million kilograms in 2021, from 184.04 million kilograms in 2020. There were 8,500 growers in 2000 and now over 140,000 farmers are growing tobacco as of 2023 (TIMB, 2023). The industry is valued at over USD 1 billion and Zimbabwe exports tobacco leaf of over 180 million kilograms annually (TIMB, 2023).

A significant portion of the world's impoverished population depends on agriculture, either directly or indirectly, for their survival (Fischer, Elisabeth, and Qaim, 2012). The World Bank (2008) notes that most of the world's poor reside in rural areas, relying on agriculture for their income and livelihoods. Sub-Saharan Africa, one of the poorest regions globally, has an average per capita income of $1,210 (World Bank, 2023). Rural areas struggle with food security and poverty due to low agricultural productivity. Small-scale farmers lack access to important resources that are essential to agricultural performance, such as markets, credits, inputs, and basic infrastructure (Food and Agriculture Organization, 2021).

According to the Finscope Consumer Survey Report by Chamboko and Kingstone (2022), approximately 17% of adults in Zimbabwe rely on farming for their livelihoods, while 58% of households are engaged in farming activities. The 2000 Fast-Track Land Reform Program (FTLRP) not only restructured land ownership but also reshaped agricultural financing, shifting from bank-based funding to contract finance schemes (Mkodzongi & Lawrence, 2019). However, the permits granted to new landowners were inadequate for accessing private bank credit previously available to large-scale commercial farmers with land titles. Since the land reform, financing agriculture has remained a persistent challenge. Small-scale farmers in remote areas, often hindered by poor infrastructure and other obstacles, face difficulties in capitalizing on market opportunities (Ha, Bosch, and

Nguyen, 2015).The evolving agricultural landscape has created new technical requirements and compliance costs that make it challenging for these farmers to access modern market channels.

Contract farming has emerged as an institutional mechanism to tackle this challenge.Tobacco-purchasing companies have been shifting their focus towards lower-middle-income countries due to their lower land and labour costs (World Bank, 2023). The World Bank (2008) highlights contract farming as a strategy to improve smallholders' access to resources. In Africa, small-scale tobacco farmers often opt to partner with tobacco companies as contract farmers (Ruckert et al., 2022). This partnership enables them to access inputs and agricultural extension services provided by the companies, with the input costs later deducted from their earnings upon selling the tobacco leaf (Moyo et al., 2020). Zimbabwe Tobacco Association (2023) reported that most tobacco contract farmers still find themselves trapped in a cycle of debt, as they use their earnings to repay previous years' debts to Leaf contracting companies. This is due to several factors, including the low prices that tobacco farmers are paid for their crops, the high cost of production, including the cost of inputs, such as pesticides, fertilizers and high interest rates on loans that tobacco farmers take out to finance their production. As a result of these factors, many tobacco contract farmers are unable to make a profit from their farming and are forced to take on more debt each year. This can create a debt cycle that is hard to escape. Furthermore, when family labor is included in the profit calculation, nearly all farmers are operating at a substantial economic loss, even under the most basic conditions.

The Zimbabwe land reform programme of 2000 brought about a significant change in the tobacco industry, resulting in the participation of more small-scale farmers. Unfortunately, most smallholder tobacco farmers cannot afford the necessary inputs for tobacco production which drives them into contract agreements with private companies as a means to accessing inputs on credit. However, most of these smallholder tobacco farmers find themselves caught in a debt spiral primarily concentrated among contract farmers. Consequently, the farmers exhibit persistent dissatisfaction with the financial returns of tobacco production, with nearly 60% of smallholder farmers in Zimbabwe being in debt (Chingosho, Dare, and Walbeek, 2021). The burden of debt forces farmers to cultivate tobacco in the following season in an attempt to repay previous debts, often with little success. This cycle repeats itself, trapping them in a debt cycle that perpetuates poverty. Additionally, farmers face unfavorable exchange rate policies, where only 60% of their payment is made in foreign currency, while the rest is paid in local currency. Since production costs are fully in foreign currency, farmers lose money when attempting to convert the local currency back into foreign currency due to unfavorable exchange rates. This raises concerns about the effectiveness of contract farming in improving the income and livelihoods of tobacco smallholder farmers in Zimbabwe.

LITERATURE REVIEW

Contract Farming

Watts (1994) describes contract farming as a relationship between farmers and private or state enterprises that replaces open market transactions by linking independent family farmers with a central unit (such as a processing, export, or purchasing unit) that controls price, production methods, product quality, and credit. The International Fund for Agricultural Development (IFAD) (2003) further defines it as agricultural production governed by an agreement between a buyer and a producer regarding the terms of production and marketing of agricultural products. Bijman (2008) notes that the US Department of Agriculture defines contract farming as the growing and marketing of farm products under specific terms related to quantity, grade, size, inspection, timing, or pricing, which are agreed upon by both the grower and the processor or shipper before production begins.

Baumann (2000) identifies three types of contract farming: market specification contracts, resource-providing contracts, and production management contracts. Market specification contracts guarantee a market for the farmer, provided the product meets certain standards, with limited contractor involvement, typically only in grading at the marketing stage. Resource-providing contracts offer the necessary credit, such as production inputs and sometimes working capital, which is repaid when the farmer sells their produce. These contracts

may also include extension services and facilitate technology transfer. Production and management contracts combine aspects of both.

Eaton and Shepherd (2001) and Bijman (2008) outline five types of contract farming models, categorized by the intensity of vertical coordination, the type of product, and the number of key actors involved. These models are: the informal model, intermediary model, nucleus estate model, multipartite model, and centralized model.

Theories of Contract Farming

Financial Market Imperfections

Contract financing arises due to imperfections in financial markets (Emery, 1984). These imperfections hinder financial markets from operating efficiently, leading to issues such as market failure, resource misallocation, and increased risks for investors. The information advantage theory suggests that contractors possess an informational edge over traditional financial intermediaries, allowing them to engage in financial intermediation at lower transaction costs (Akerlof, 1970). Contractors have better access to information about their clients due to their proximity and regular interactions (Petersen & Rajan, 1997), which makes it easier and cheaper for them to assess their clients' creditworthiness in advance and to monitor and enforce credit agreements after the fact (Emery, 1984). In cases of default, contractors are in a better position to determine whether the default was intentional or unintentional, guiding appropriate responses. Additionally, suppliers typically work with a more homogeneous group of customers, which makes it easier and less costly to gather information compared to the diverse client base of banks. The asset liquidation theory asserts that firms have an advantage over traditional financial intermediaries in seizing and liquidating the assets of defaulting borrowers at lower transaction costs (Emery, 1984).

Transaction Cost Economics

The theory, initially introduced by Coase in the 1930s and later expanded by Williamson in the mid-1970s, asserts that a firm's success is determined by managing a balance between transaction costs and internal production costs. The Transaction Cost Economics (TCE) theory, developed by Oliver Williamson (1981), highlights the significance of transaction costs in shaping contractual relationships. According to TCE, contract farming occurs when transaction costs related to market exchanges, such as monitoring, enforcement, and information asymmetry, are high. By entering into long-term contracts, agribusiness firms can reduce these costs and secure a consistent supply of agricultural produce. Williamson (1979) described transaction cost economics as an alternative approach to organizing transactions through governance structures like markets, hybrids, firms, and bureaus, all aimed at minimizing transaction costs. Williamson (1986) further posited that the most efficient organizational structure minimizes exchange costs to achieve economic efficiency. The theory suggests that every type of transaction incurs coordination costs for monitoring, controlling, and managing exchanges. It also argues that contracting is economically justified only under specific conditions: when the buyer is a large firm (such as a processor, exporter, or supermarket chain), when the product exhibits significant quality variations, perishability, technical complexity, or a high value-bulk ratio, when the destination market is willing to pay a premium for particular product attributes that require close coordination between farmers and buyers, and when the policy environment supports such arrangements.

Empirical Literature Review

The effects of contract farming on income and livelihoods have been debated since the 1970s, as noted by Glover (1984). Critics argue that large agribusinesses exploit cheap labor and shift production risks onto farmers. Furthermore, smallholders are often excluded from contract financing schemes, as companies prefer to work with medium and large-scale growers, thereby worsening rural inequality (Singh, 2002). On the other hand, Barrett et al. (2012) view contract farming positively, seeing it as a way to integrate small farmers into growing markets for processed goods and export commodities. This is because contracts often include provisions for seed, fertilizer, technical support on credit, and a guaranteed price at harvest. Porter and Phillips-

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Howard (1997), however, argue that the financial benefits of contract farming may not significantly improve farmers' overall welfare, as they may be forced to work longer hours and rely on children for cheap labor. Additionally, studies by Isager, L, Fold, and Nsindagi (2018) suggest that contract farming led to wealth concentration among a few individuals in Tanzania, while Michelson's (2013) research found that farmers with favorable land and water resources were more likely to participate in contract farming in Nicaragua. Finally, Ragasa et al. (2018) noted that the additional input costs in contract farming in Ghana often outweigh the benefits of increased yields.

A study by Chingosho, R., Dare, C., and van Walbeek (2021), found that numerous tobacco growers in Zimbabwe are struggling with debt, with contract farmers being hit the hardest. The survey, conducted in Manicaland, Zimbabwe, revealed that most contract farmers are incurring losses, leading to debt accumulating with the contracting company. As a result, they end up planting tobacco in the next farming season in an attempt to settle their loan, but this only perpetuates the cycle of debt. This vicious cycle of poverty caused by tobacco contracting is a common issue, as noted by Drope et al. (2017), Appau et al. (2019), Magati et al. (2019), and Makoka et al. (2017). Additionally, according to Fang et al. (2020), there have been multiple reported cases of suicide among Zimbabwean farmers who are unable to repay their loans at the end of the growing season.

Magati et al. (2020) studied the economics of tobacco farming in Kenya using both descriptive and multivariate analyses. The descriptive analysis provided an overview of the farmers' general characteristics, while the multivariate analysis examined the causality of key relationships. The study found that nearly 98% of households in the survey produce their own food. It also revealed that, despite producing food, both current and former tobacco farmers experienced similar challenges in food sustainability, as the quantity they produced did not last the entire year. Both groups indicated the need to purchase food for at least four months each year. This suggests that tobacco companies' efforts to increase production by pressuring farmers to allocate more land to tobacco farming negatively affect food security. Not only does this reduce land available for food crops, but increased tobacco production also often conflicts with the growing season for food crops, further increasing the risk of food insecurity among tobacco-growing households. The Food and Agriculture Organization (2003) also noted that contract farming threatens food security, as farmers shift their focus to cash crops.

Mugati et al. (2019) conducted an economic analysis of smallholder tobacco farming livelihoods in Kenya. The findings revealed that tobacco smallholder farmers generally have narrow profit margins per acre, with contract farmers operating at a loss. Even when family labor is excluded from income calculations, the earnings remain low. Contract farmers expressed considerable dissatisfaction with the prices they received for their tobacco, with fewer than one-third reporting that they were paid a fair price. The assignment of leaf grade and pricing is determined by an official from the tobacco companies at the leaf-buying centers, without input from the farmers or their representatives. The study suggested that tobacco companies in Kenya were exploiting farmers by downgrading the quality of the tobacco leaf and increasing their profit margins on inputs sold to contracted farmers.

Dube et al. (2017) examined the impact of tobacco contract farming on household income in Makoni District, Manicaland Province, Zimbabwe. The study utilized primary data collected through a structured questionnaire from a random sample of 98 smallholder tobacco farmers in the district. The findings revealed that although contract farmers sold, on average, 1.6 times the number of bales compared to non-contract farmers, their average income was only 1.4 times higher. Additionally, tobacco farming was found to be the primary source of income for farmers in Makoni District, contributing an average of 73% to the annual household income. Using the Tobit Regression Model, the study concluded that being a contract farmer did not significantly affect the proportion of tobacco income in total household income. However, factors such as the farmer's gender, access to tobacco production extension services and information, being a full-time farmer, total land area under cultivation, having at least secondary education, and individual land tenure were found to significantly and positively influence the share of tobacco income in total household income.

Chingosho, Dare, and Walbeek (2021) also observed that most tobacco farmers are burdened with debt, with tobacco-related indebtedness being particularly concentrated among contract farmers in Zimbabwe's Manicaland province. The study, which surveyed 381 farmers through face-to-face interviews using a questionnaire, found that many contract farmers experience financial losses, which contribute to their ongoing debt to the contracting companies. These farmers face inflated input costs, lack transparency in contracts, and often receive lower prices for their produce. As a result, contract farmers are frequently in a vulnerable financial position, worsened by their limited control over the grading and pricing of their tobacco. This leads to consistent losses, creating a cycle of debt. The debt forces them to continue growing tobacco in subsequent seasons, often in a futile attempt to repay their loans. This cycle of debt perpetuates a poverty trap. Similar findings were reported by Fang et al. (2020), who noted several suicides in Zimbabwe linked to farmers' inability to repay their debts at the end of the season. These results align with studies by Bobak et al. (2000) and Otanez (2020), who found that tobacco farming exacerbates poverty for farmers in developing countries. Additionally, they corroborate the findings of Makoka et al. (2017), who noted that tobacco farming has not improved the lives of contract farmers in Zambia, where most tobacco farmers are contract-based.

Insights from the Literature Review

Existing studies on tobacco contract farming in Zimbabwe, particularly in areas like Manicaland, highlight concerns about debt, unfair pricing, and exploitation, leading to a cycle of poverty for many farmers. What remains unclear is how these dynamics specifically affect farmers in Mutoko. While previous research provides valuable insights, this study addresses the gap by directly examining farmers' perspectives on contract farming in Mutoko. Through a descriptive analysis of survey responses, it aims to offer a localized understanding of the benefits and challenges of contract farming, contributing to a more nuanced picture of its impact on livelihoods in this specific context.

METHODOLOGY

Sampling and Data Collection

The study was conducted in Mutoko District, Mashonaland East Province, Zimbabwe, which is part of Natural Region two, where tobacco, maize, cotton, and groundnuts are primarily grown. Zimbabwe has about 70,000 communal growers and 50,000 small scale A1 growers the majority of which are based in natural regions two and three (Ruckert, 2022). Based on these, the study assumes that the population size of natural region two is about 60,000 tobacco growers. Primary data for the study was collected through structured questionnaires administered to smallholder tobacco farmers. Questionnaires are an effective data collection method as they allow for easy administration, analysis, and comparison of responses from different groups. Following the study by Cipriano et al. (2017), which examined the impact of contract tobacco farming on the welfare of smallholder farmers in Mozambique, this study also utilized Cochran's (1977) formula for determining sample size, as outlined below:

$$n = {z^2(1-p)p}/{e^2}$$

where;

n = the sample size

z = is the desired confidence level (1.96 for a 95% confidence level)

p = the proportion of the population that has the characteristic of interest (proportion of tobacco contract farmers, 80%)

e = the margin of error (5%)

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According to the TIMB (2023), over 80% of tobacco farmers are involved in contract farming, with a variability of 80%, so p = 0.8. Based on Cochran's (1977) formula, the appropriate sample size was determined to be 246. To obtain this sample, the study used a multi-stage sampling technique, which included selecting the district, wards, and households. In the first stage, Mutoko District was purposively selected due to the high prevalence of tobacco production and contract farming. In the second stage, five wards within the district were purposively chosen based on the highest number of smallholder tobacco farmers. The third stage involved selecting 246 households using the simple random sampling technique. Household registers, provided by the agricultural extension officer, served as sampling frames for each ward.

With the questionnaires, face-to-face interviews in the local language to ensure clear communication and understanding were conducted. The survey questionnaire included a Likert scale whose purpose was to understand the effects of tobacco contract farming. 240 out of the targeted 246 semi-structured questionnaires were completed.

Analysis

The study employed a descriptive statistics analysis method to assess the livelihood effects of tobacco contract farming on responses from a Likert scale. According to Sullivan and Artino (2013), the Likert scale is an ordinal scale, typically ranging from 5 to 7 points, developed to measure attitudes by allowing respondents to rate the degree to which they agree or disagree with a statement. In this study, the Likert scale enabled respondents to express how tobacco contract farming has affected their livelihoods based on their experiences. This method allowed for a detailed understanding of the perceived effects of tobacco contract farming.

RESULTS AND DISCUSSION

Income Received from Tobacco Under Contract Farming

TABLE 2: MEAN ANNUAL INCOME RECEIVED FROM TOBACCO UNDER CONTRACT FARMING

Year	Mean	Minimum	Maximum
2017	1813.64	50	7000
2018	1650	50	7000
2019	2194.44	300	6000
2020	2620.83	300	10000
2021	2516.43	130	7000
2022	3180.36	75	10000
2023	2873.33	300	13000

Source: Authors' Findings

Table 2 indicates the annual average income received from tobacco by farmers under contract farming in Mutoko. The results show that in 2017 when the farmers joined contract farming, their average income was $1813.64 with the lowest earning farmer getting $50 and the highest getting $7000. In 2023, the average income from tobacco that was earned by farmers was $2873.33 with the lowest earner getting $300 and the highest getting $13000 from tobacco contract farming. Between the years 2017 and 2023, the average has some minor fluctuations with the highest mean being achieved in 2022 valued at $3180,36. As shown in fig.1 below, the mean annual income received from tobacco increased from $1813 in 2018 to a peak of $3180 in 2022. Subsequently, it declined slightly in 2023.

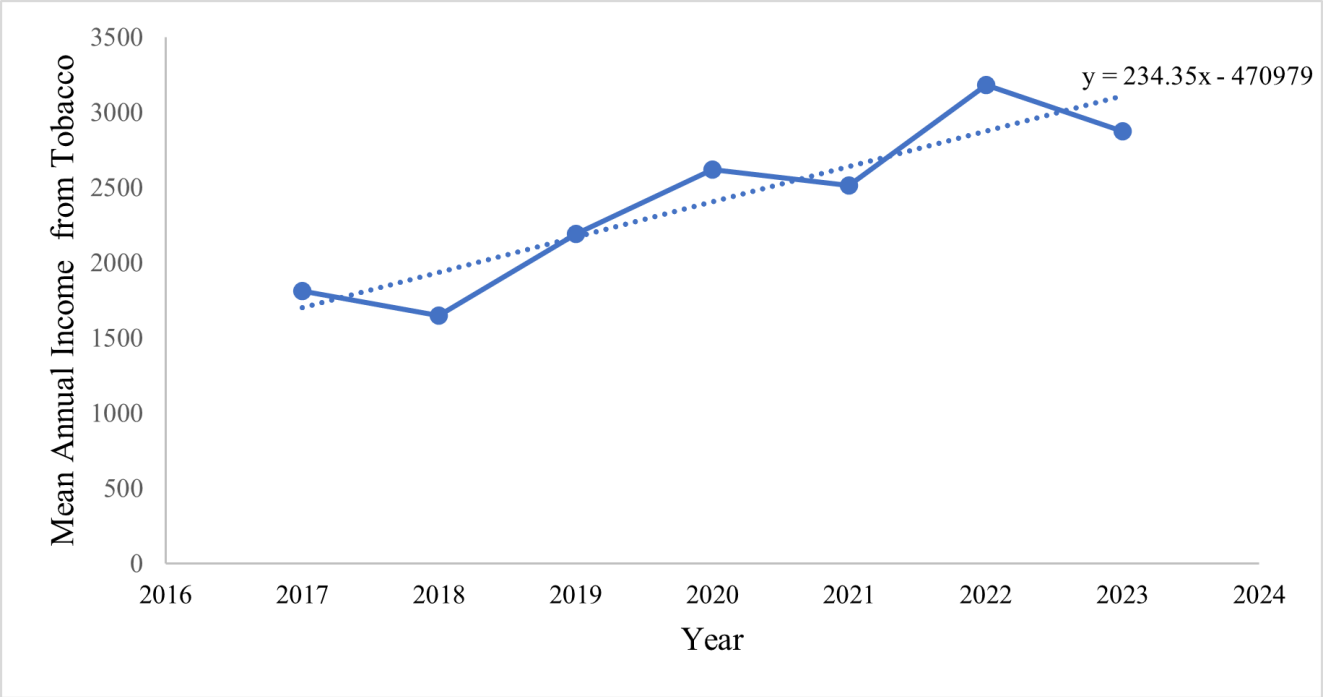

Figure 1: Mean Annual Income Received from Tobacco Under Contract Farming Trend

Source: Authors' Findings

Overall, figure 1 indicates that there is an upward growth of the annual income from tobacco contract farming as shown by the trendline. This implies that over the years farmers joined tobacco contract farming, their income has been increasing suggesting that tobacco contract farming has a positive effect on farmers' income from tobacco production.

Livelihood Effects of Tobacco Contract Farming

The results in Table 3 reveal that 84.6% of tobacco farmers observed changes in their welfare after joining contract farming, while 15.4% did not notice any welfare changes. Given that the majority of tobacco farmers (84.6%) noticed changes in their welfare after joining contract farming, the results suggest that tobacco contract farming had a significant effect on the welfare of tobacco farmers.

TABLE 3: FARMERS' EXPERIENCE AFTER JOINING TOBACCO CONTRACT FARMING

Farmers' Experience	**Frequency**	**Percentage**
Observed changes in welfare after joining contract farming	165	84.60%
Did not observe changes in welfare after joining contract farming	30	15.40%

Source: Authors' Findings

The effect on livelihoods was also assessed through changes in various indicators, as shown in Figure 2. Similar to the results in Table 2, Figure 2 illustrates that most farmers observed improvements in income. Specifically, 93% of farmers saw an increase in income, while 7% experienced a decrease. Similarly, 92% of farmers reported an improvement in food security after joining tobacco contract farming, while 8% saw a decline. In terms of health access, however, the proportion of farmers who experienced a decrease (43%) was equal to those who experienced an increase, with 14% seeing no change. This suggests that tobacco contract farming did not have a significant effect on health access. Regarding education, 92% of farmers saw improvements after joining contract farming, indicating a positive effect on education. Likewise, in terms of asset ownership, 69% of farmers experienced an increase, 23% saw a decrease, and 8% reported no change.

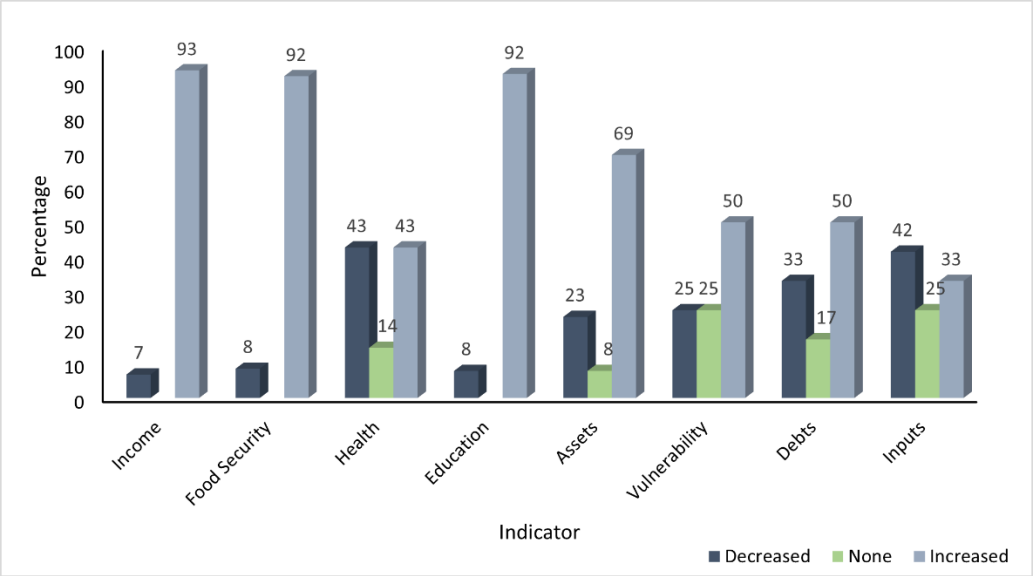

Figure 2: Livelihood Changes Experienced by Farmers After Joining Tobacco Contract Farming

Source: Authors' Findings

Concerningly, the majority of the farmers (50%) experienced an increase in debt and vulnerability to climate change and other natural disasters. Similarly, 42% experienced a decrease in their ability to purchase inputs. 25% of the farmers did not experience any changes in vulnerability and input access. However, 25% experienced a decrease in vulnerability, and 33% experienced a decrease in debt. These results suggest that for most farmers, joining tobacco contract farming had a negative effect in terms of vulnerability, debt, and input access. The extent to which this effect is shown in table 4.

The results in Table 4 show that amongst the farmers who experienced an increase in income after joining tobacco contract farming, 64% felt that the extent of this change was high whereas 21% felt that it was very low, and 14% felt that it was neither high nor low. All the farmers who experienced a decrease in income felt that this change was neither high nor low. This generally implies that the effect on improving income was high. Moreso, the results suggest that the effect on increasing food security was high as the majority of the farmers felt that the extent to which joining tobacco increased their food security was high.

TABLE 4: EXTENT OF THE LIVELIHOOD CHANGES EXPERIENCED AFTER JOINING TOBACCO CONTRACT FARMING

Indicator	Change Observed	Very Low	Low	Neutral	High	Very High
Income	Decreased			100		
	Increased	21		14	64	
Food Security	Decreased			100		
	Increased		36		64	
Health	Decreased	17		17	17	50
	None			100		
	Increased			17	83	
Education	Decreased			100		
	Increased		25		67	8
Assets	Decreased	100				
	None			100		
	Increased		11	11	67	11

Vulnerability	Decreased		33	67		
	None			100		
	Increased		17	0	33	50
Debts	Decreased	25		50		25
	None			100		
	Increased	17		17	17	50
Inputs	Decreased	60		40		
	None			67		33
	Increased				100	

Source: Authors' Findings

Similarly, the majority of the farmers felt that the extent to which joining tobacco contract farming increased education levels, asset ownership, and input access was high. Amongst the farmers who were negatively affected in terms of input access, the majority (60%) felt that the extent of this effect was very low suggesting that the negative effect was to a lesser extent. Similarly, all the farmers who were negatively affected in terms of asset ownership felt that the extent of this was very low as well. On the other hand, the majority of the farmers felt that joining tobacco contract farming increased their vulnerability to natural disasters and debt to a very high extent.

DISCUSSION

Tobacco contract farming presents a mixed effect on farmer welfare. While it positively influences income, food security, health, education, asset ownership, and input access, it also heightens farmer vulnerability and debt. The access to inputs provided by contracting companies offers a significant advantage to smallholder farmers engaged in contract farming, improving their preparedness for tobacco production (Mango and Kugedera, 2022). This access to inputs is a key motivator for smallholder participation in contract farming, supporting Masakure and Henson's (2005) assertion that farmers engage in such arrangements to improve input access.

Tobacco contract farming offers several advantages that positively affect farmer income in the Mutoko District. Contracting companies often provide essential inputs (seeds, fertilizers, pesticides) on credit, reducing farmers' initial financial burden, guaranteeing a buyer, and mitigating market risks (Singh and Kishor 2021). This input access, combined with technical assistance and training, improves yields and crop quality, further enhancing income potential (Minot, N. and Sawyer, B., 2016**)**. These factors contribute to greater income stability and potentially higher overall earnings for contract farmers. Increased income can improve livelihoods and reduce poverty. Several studies corroborate the positive income effects of tobacco contract farming in developing countries (Mazwi et al.,2020), (Magati et al., 2018) and (Makoka et al., 2016). However, other research reveals less favorable outcomes. Magati et al., (2018) have shown that even with guaranteed sales and provided inputs, tobacco farmers often operate with thin profit margins or losses, particularly after accounting for labor costs.

The study indicates a positive effect on food security among contract farmers, who source food from their production, markets, and neighbors. The guaranteed market provided by the contract ensures a steady income, which can be used to purchase additional food from the market and neighbors (Bellemare and Novak, 2017) The increased revenue can be invested in non-farm activities, such as small businesses or livestock, creating additional income streams and employment opportunities (Phiri, Mungatana, and Mhondoro, 2024).

The study aligns with the findings of Bellemare and Novak (2017), who discovered that smallholders in Madagascar save part of the extra income they earn from contract farming to purchase food during months when they would otherwise have to skip meals. Similarly, Phiri, Mungatana, and Mhondoro (2024) found that

tobacco contract farming enhances productivity, allowing farmers to earn enough money to buy food and maintain better health, despite the harmful effects of tobacco cultivation elsewhere. However, studies by Hu and Lee (2015) noted that prioritizing tobacco farming to meet contract requirements diverts land and resources from staple food crops, increasing reliance on purchased food and making farmers more vulnerable to market fluctuations. This emphasis on tobacco farming disrupts traditional agricultural practices and local food systems, potentially reducing dietary diversity and negatively affecting nutrition (MacFall, Lelekacs, LeVasseur, et al., 2015). These results are also consistent with Magati et al. (2020), who suggest that the pressure from tobacco companies to expand production diminishes the land available for food crops, which could lead to increased food insecurity for tobacco farmers in the long term.

The results indicated that tobacco contract farming has a positive effect on access to education for contract farmers. This is largely because tobacco, being a cash crop, generates income that is used to fund children's education. These findings are consistent with the research of Shiringo, Chundu, and Sithole (2022), who observed that in Marondera District and Igava Community, tobacco contract farming contributes to both economic and human development. Households involved in tobacco contract farming have improved their financial capacity to support their children's education, which, in turn, promotes human development, as education at all levels is key to growth. However, Xia and Deininger (2019) found that tobacco cultivation is labor-intensive, and in communities with higher tobacco production, children spend more time working as casual laborers, reducing their chances of advancing to the next grade. Additionally, Nyumbu and Banja (2022) reported that tobacco farming negatively impacts school attendance. Their study found that tobacco farming demands significant labor, and since most farmers cannot afford to hire workers, they rely on family members to provide labor, further limiting children's ability to attend school.

The study shows that tobacco contract farming positively affects access to health services. The income farmers receive from selling their tobacco provides them with leverage in making decisions regarding healthcare access (Shiringo, Chundu, and Sithole, 2022). These findings align with those of Shiringo, Chundu, and Sithole (2022), who found that in Marondera District and Igavi Community, tobacco contract farming enabled farmers to build a school and a clinic for their community, contributing to human development. However, Audi, Wamalwa, and Achieng (2022) found that tobacco contract farming can negatively affect health by increasing the risk of green tobacco sickness.

The study revealed that tobacco contract farming has a positive effect on asset accumulation. Farmers involved in contract farming experience an increase in valuable assets such as land, livestock, machinery, and tools (Shiringo, Chundu, and Sithole, 2022). This growth in asset ownership has significant implications for the livelihoods of farmers and their communities. Well-maintained assets, like tractors or irrigation systems, enhance agricultural productivity, resulting in higher incomes and improved food security. Furthermore, increased asset ownership offers a safety net for farmers during economic downturns or natural disasters (Adnan, 2020). These findings align with the research of Mazwi et al. (2020), Sakata (2017), and Scoones et al. (2017), who found that contract farming across various sectors, including tobacco, contributes to asset accumulation. These results demonstrate how tobacco contract farming helps small-scale farmers in Zimbabwe acquire assets.

The study revealed that tobacco contract farming negatively affects farmers, making them vulnerable to natural disasters and high levels of debt. This means that when farmers agree to grow tobacco under a contract with a company, they can face challenges. These challenges include financial difficulties, as they may borrow money from the contracting company to cover labor costs and may not always be able to repay these loans (Appau et al., 2019). Furthermore, if a natural disaster like a drought or flood damages their crops, farmers may face financial difficulties in recovering due to the poor economic conditions and the lack of contingency or insurance funds to protect against such events (Belle, Sithabile, and Ogundeji, 2017; Vogt et al., 2018). High debt levels can entrap farmers in a cycle of poverty, restricting their capacity to invest in their farms, improve their livelihoods, and support their communities. Additionally, the vulnerability to natural disasters can worsen these issues, contributing to food insecurity and social instability.

Several studies have highlighted the reasons why contract farmers often fail to repay loans provided by contracting firms, including:

- Opaque financial terms in contracts, which leave farmers unaware of the debt they incur when inputs are advanced (Mazwi, Chambati, and Mudimu, 2020; Drope et al., 2017; Appau et al., 2019; Magati et al., 2019).
- The high cost of tobacco inputs, with prices only being announced at the end of the season, which increases the risk of indebtedness for contracted tobacco farmers (Mazwi, Chambati, and Mudimu, 2020; Drope et al., 2017; Appau et al., 2019; Magati et al., 2019).
- A lack of control over the grading and pricing of the tobacco leaf (Chingosho, Dare, and Walbeek, 2021).
- Indebtedness resulting from delayed crop maturity, which forces farmers to take out additional loans to sustain their livelihoods (Martiniello, 2017).

According to Boughton et al. (2007), the risk of indebtedness is higher in tobacco contract farming compared to other crops because tobacco farming is more expensive and requires greater credit. Consequently, farmers involved in tobacco contract farming face the additional risk of higher financial losses if the crop fails. These findings are consistent with those of Mazwi et al. (2020), who discovered that only 7.7% of contract farmers in Goromonzi and Zvimba failed to repay their loans. However, the researchers noted that the actual scale of indebtedness is likely much higher. They also pointed out that tobacco companies often grant farmers an extra year to repay loans instead of taking legal action, supporting Watts' (1994) argument that contract farmers often remain in contract farming not by choice but due to their debt obligations.

Patricio (2020) also found that the livelihoods of tobacco farmers are generally not prosperous. On average, they experience significant economic losses and engage in fewer diverse farming and economic activities, leading to greater poverty and increased reliance on government assistance (Magati et al., 2019). Although farmers are motivated by income generation, the low prices offered by contractors lead to poor returns and growing debt (Cipriano, Mambo, and Masangano, 2017).

CONCLUSIONS AND RECOMMENDATIONS

The aim of this study was to assess the livelihood effects of tobacco contract farming on farmers in Mutoko district, Zimbabwe. A sample of 16 smallholder tobacco contract farmers was selected through a multi-stage sampling method, and a questionnaire was used to gather data. The data were analyzed using descriptive statistics analysis and descriptive statistics. The findings revealed that, since joining tobacco contract farming, the farmers experienced improvements in access to inputs, income, food security, education, asset ownership, and vulnerability, along with an increase in debt levels. Overall, the study concludes that tobacco contract farming has a positive effect on farmers' welfare, particularly in terms of income, food security, health, education, asset ownership, and input access, but a negative effect on vulnerability and debt.

The study suggests that the government and tobacco contracting companies should enhance extension services for tobacco farmers, particularly women, to boost household incomes and support rural livelihoods. It also recommends that tobacco companies organize seminars and workshops to educate their contract farmers about contract terms and conditions, thereby improving their engagement and understanding. Training smallholder farmers on tobacco production, including the application of chemicals and spraying, can lead to the production of high-quality tobacco. This can result in better prices in the global market, leading to increased income for the farmers. The government must also regulate prices for various input categories and interest rates to create a win-win situation for both contractors and farmers. Additionally, government-revolving funds and management systems should be put in place to ensure that farmers can easily access support and reduce their dependence on contractors.

The study recommends future research on analyzing the debt burden of contract farmers and the impact of interest rates and repayment terms on their financial sustainability, evaluation of the environmental impact of

tobacco cultivation, including soil degradation, water pollution, and deforestation, and assessment of the social impacts of contract farming, such as labour rights, working conditions, and community development.

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