FACTORS INFLUENCING THE DECISION OF SMALLHOLDER FARMERS TO SELL TO SMALL GRAIN TRADERS: THE CASE OF GROUNDNUTS AND SOYA VALUE CHAINS IN MALAWI

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Doctor of Business Administration (DBA)

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Abstract

FACTORS INFLUENCING THE DECISION OF SMALLHOLDER FARMERS TO SELL TO SMALL GRAIN TRADERS: THE CASE OF GROUNDNUTS AND SOYA VALUE CHAINS IN MALAWI

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This dissertation explores the involvement of small grain traders (SGT) within the value chains of groundnuts and soya in Malawi. The objective of this study is to verify if the negative perception of smallholder farmers towards small traders in grain value chains influences decisions to sell to them and identify factors that motivate farmers to sell to small traders using the case of aforementioned value chains in Mchinji and Kasungu districts of Malawi. The study used both quantitative and qualitative data using questionnaires combining open and closed questions for data collection from 136 smallholder farmers (SHFs) and 19 small grain traders (SGTs). The researcher conducted three focus group talks, one in each of the selected extension planning areas (EPAs) and interviews with key government and non-government stakeholders.

Results of this study validate that despite the scepticism towards the small grain traders, smallholder farmers rely on them for a market. Four factors were found to significantly influence groundnuts farmers' decision to sell to small traders including "Paying on Delivery", "Loan Access", "Negotiation Platform" and "Price", while for soya farmers are influenced by three factors including, "Distance", "Paying on Delivery" and "Price". The study further observes that smallholder farmers of groundnuts and soya in Malawi are restricted in accessing favourable markets due to their limited capability to mitigate or resolve transaction costs.

The research proposes implementation of interventions focused on augmenting the capacities of smallholder farmers and small grain traders alike in accessing financial products, among other interventions.

Declaration

I thus affirm that this thesis has been authored exclusively by the undersigned and has not been previously presented, either in its entirety or in part, as part of any prior academic pursuit. Unless otherwise indicated by citation or acknowledgement, the offered material is totally original and authored by me.

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Dedication

I dedicate the study to my three grandchildren, Talemekezeka Ngwende, Thamale Ngwende, and Abriella Ngwende, and all grandchildren to be born. This paper should give them a challenge and motivation in life.

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Use of AI:

I acknowledge the use of **QuillBot**, [https://quillbot.com/], and **Grammarly** [App.grammarly.com] to proofread for grammar some passages in Chapters 1-5. These actions were completed on 4.09.2025.

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ADMARC	Agriculture Development and Marketing Corporation
AEDC	Agriculture Extension Development Coordinator
AEDO	Agriculture Extension Development Officer
APA	American Psychological Association
CC BY	Creative Commons BY Licence
EPAs	extension planning area
FAO	Food and Agriculture Organisation
FGD	focus group discussion
FHH	farming household
FTF	Feed the Future
GDP	gross domestic product
IFAD	International Fund for Agricultural Development
IFPRI	International Food Policy Research Institute
IMF	International Monetary Fund
MEAS	Modernizing Extension and Advisory Services
NASFAM	National Association of Smallholder Farmers in Malawi
NES	National Export Strategy
NGO	non-governmental organisation
NSO	National Statistical Office
PTCs	proportional transaction costs (PTCs),
SAPs	Structural Adjustment Programme
SGTs	small grain traders
SHF	smallholder farmer
SHFs	smallholder farmers
TCE	Transaction Cost Economics
VCA	value chain analysis
WB	World Bank
WRS	warehouse receipt system

CHAPTER ONE: INTRODUCTION

Smallholder farmers in sub-Saharan Africa are mainly involved in subsistence farming but are the leading agricultural producers in the region (Giller et al., 2021). Agricultural commercialisation, which involves increasing the involvement of smallholder farmers in formal output markets, has proven effective in promoting economic growth in rural areas of sub-Saharan Africa (Giller et al., 2021). Through agricultural commercialisation, smallholder farmers can increase their earnings from agriculture, develop effective value chains that incorporate them, and achieve sustainable food security (Carletto, Corral, & Guelfi, 2017). However, despite considerable effort invested in developing policies and securing donor support for smallholder farmers to become commercialised, progress has been limited due to several structural, institutional, and socioeconomic factors (FAO, 2020, p. 11).

Smallholder households produce for consumption and only sell the surplus. Smallholder farmers in Malawi employ low-tech farming practices and utilize inadequate inputs, resulting in low yields. The Food and Agriculture Organisation indicates that "around 80% of farms in Sub-Saharan Africa are considered smallholder having less than two hectares of farm size, and a large number of these operate under subsistence conditions with limited market engagement" (FAO, 2021, p. 17). Jayne and colleagues observe that smallholder farmers face several challenges that limit their ability to generate income from farming enterprises, including inadequate infrastructure, limited access to credit, uneven access to market information, and weak bargaining power with traders and aggregators (Chamberlin & Jayne, 2020).

According to World Bank reports, agriculture accounts for nearly a third of Malawi's gross domestic product (GDP) and provides employment for over 80% of the population (World Bank, 2021, p. 9). Groundnuts and soya beans have become important legume crops

for both food security and income generation and have been promoted by the National Export Strategy (NES) and the Agricultural Sector Wide Approach (ASWAp) as strategic crops for Malawi (NSO, 2020, p. 5). In addition to the potential for food security and export markets, groundnuts and soya have proved to be significant for domestic consumption, regional trade, and export markets. Groundnuts are especially useful for household food, trading in the region, and exporting. On the other hand, soya is increasingly used in the animal feed and edible oil industries (FAO, 2019, p. 14).

For the past decade, Malawi has produced approximately 350,000 metric tonnes of groundnuts per year, with a yield of around 0.88 metric tonnes per hectare (FAO, 2024). It realized about $20 million from exports, mostly in raw form, to Kenya and Zimbabwe (Trading Economics, 2024). In 2023, Malawi exported about 120 tonnes of groundnuts as semi-processed (World Bank WITS, 2024). It is estimated that 170,000 metric tonnes of soya were produced in 2023, primarily by smallholder farmers. In that same year, Malawi exported around 58,000 metric tonnes of goods to Tanzania, India, and Zimbabwe (World Bank WITS, 2024).

Smallholder farmers are the leading producers of both groundnuts and soya. It is estimated that smallholder farmers produce approximately 93% of the groundnut and soya that is produced by the smallholder farmers in Mchinji and Kasungu districts (National Statistical Office , 2021). Informal trading remains the primary method for trading groundnuts and soya, especially in rural areas such as Kasungu and Mchinji. In these districts, where the agro-ecological conditions are suitable for legume production, smallholders primarily rely on small-scale traders, known locally as "vendor traders" or "middlemen," to access markets (Chikhawo, Matita, & Chinsinga, 2024). Farmers prefer traders who buy directly at the farm gate and pay immediately upon collection (Phiri et al., 2023). It is argued that this convenience typically

comes with lower pricing and unequal authority. Farmers claim that dealers engage in practices such as under-weighing, incorrect grading, and exploiting knowledge asymmetry (Phiri et al., 2023; Chikhawo et al., 2024).

Most smallholder trading happens within three months of harvest when prices are at their lowest (Van Campenhout et al., 2020, p. 21). It is observed that farmers often sell their produce early at low prices because they have an immediate need for cash and lack adequate storage facilities. They usually choose the dealer who is closest to them (Matita & Chinsinga, 2020). According to the study by IFPRI, smallholder farmers in the two districts mostly trade with small traders instead of structured markets, such as the Agricultural Commodity Exchange (ACE) or the Agricultural Development and Marketing Corporation (ADMARC), due to long distances, delayed payments, and the demand for strict quality standards (IFPRI, 2023).

In the context of sociological factors, it has been observed that in most farming households, men make the final decisions regarding the marketing of commodities and the use of proceeds from sales. However, women are more involved in the production processes (NSO, 2019, p. 17). Branca and colleagues note that farmers also opt to sell to traders they know well and have worked with for a long time, even when other markets might offer better prices and conditions (Branca et la., 2021). Traders typically provide farmers with informal credit or input advances before harvest to maintain their loyalty (Nkhonjera & Mwandira, 2020, p. 24).

In the 1990s, agricultural markets were liberalized, thereby removing government control of crop marketing. This open liberalisation created opportunities for private sector actors to enter agricultural commodity marketing (Matita & Chinsinga, 2020). As a result, informal merchants become the main market channels, particularly for smallholder farmers. Connecting smallholder farmers to formal markets such as cooperatives or NASFAM, has not been effective, particularly in the most remote areas of Kasungu and Mchinji (Chikhawo et la.,

2024). Efforts to expand the groundnut export market have been hindered by the challenge of aflatoxin contamination, which remains the primary problem, particularly for farmers with limited or inadequate access to proper testing and grading services (FAO, 2024).

Production of groundnuts and soya by smallholder farmers is reliant on a rain-fed system, making them vulnerable to production shocks. IFAD observed that a lack of storage facilities reduces the likelihood of a prolonged storage period after harvest, resulting in the sale of crops early (IFAD, 2022, p. 12). Post-harvest losses are exacerbated due to a lack of suitable places to dry and store the crops of smallholder farmers. In this circumstance, the only option for farmers is to sell quickly before the quality gets worse (FAO, 2020, p. 23). In these situations, dealers often exacerbate losses by taking advantage of urgent sales to offer lower prices or rejecting produce due to questionable quality (Nkhonjera & Mwandira, 2020, p. 22).

The study focuses on Mchinji and Kasungu districts because they are both major producers of the two commodities. According to a study conducted by the FAO, the central region of Malawi produces over 70% of the country's groundnuts. The primary districts of production are Mchinji, Kasungu, Lilongwe, and Ntchisi due to their suitable agro-ecological conditions (FAO, 2021). Analysis of data by Chinsinga and Matita confirms that the central plains of Lilongwe, Mchinji, and Kasungu collectively account for more than half of the country's total groundnut production (Chinsinga & Matita, 2021). It is reported that the amount of land used to grow groundnuts in Kasungu, Lilongwe, and Mchinji almost doubled between 2000 and 2015. This production growth demonstrates how the commodity is gaining economic importance in the districts (Chisinga & Matita, 2021).

In the case of Soya, Kasungu, and Mchinji, along with Lilongwe, Dedza, Ntchisi, and Mzimba, are the leading production districts in Malawi. Together, these regions account for more than 80% of the country's total soya production. The concentration of soybean farming

in these districts is due to a combination of good agro-ecological conditions in the districts and the promotion of Soybeans as a cash crop to replace tobacco (Tufu et al., 2019). Because of this, Mchinji and Kasungu districts are both significant places for the production of groundnuts and Soya in Malawi, making them the primary focus of studies on these crops.

In Malawi, smallholder farmers and small traders are key actors in groundnut and soya value chains. In the view of Branca and colleagues, small merchants serve as the link between smallholder farmers and the downstream market in the value chain (Branca et al., 2021).

Figure *1*
Summary Version of Soya Value Chain

The value chain above indicates that small merchants facilitate the linkage between smallholder grain producers and the off-taker market (Chisinga & Matita, 2021). However, policymakers, development workers, and smallholder farmers often stigmatize small traders as exploiters of smallholder farmers. The negative perception is based on the belief that small traders exploit smallholder farmers, who rely on them as their primary market (Mango et la., 2021). As a result of the stigma, efforts to support small traders are hampered. It is argued that because people do not fully comprehend how small merchants operate, they continue to unfairly vilify small grain traders in the value chain (Chikhawo et la., 2024).

In this study, factors influencing smallholder farmers' negative perceptions of small traders will be identified to explore and suggest practical strategies to improve the perception of small traders among smallholder farmers, ultimately enhancing the relationship between the

two. Improving the relationship between the two will lead to more efficient grain value chains. Further, the researcher intends to identify the factors that influence smallholder farmers' decisions to sell their crops to small traders. Researchers and policymakers will be able to use the results to design targeted interventions that maximize the positive contributions of small merchants in grain value chains.

1.1 **Statement of the Problem**

Although considerable investment has been made in the agricultural sector in Malawi, smallholder farmers continue to face challenges in accessing efficient formal markets. Structural problems, including inadequate infrastructure, a lack of market information, and insufficient institutional connections, exacerbate the challenge of integrating production with successful market access (IFPRI, 2023). Chikhawo and colleagues confirm that this experience is also evident in the marketing of groundnuts and Soya. Smallholder produce is primarily sold in informal marketplaces, where small grain merchants (SGTs) are the leading buyers (Chikhawo et al., 2024).

Mango et al. suggest that smallholder farmers need small traders to meet their market needs because of their accessibility, provision of payment, and ability to accommodate ungraded produce. However, there is a lot of mistrust of small traders by smallholders who make claims of exploitative behaviour in this trade relationship. Chinsinga and Matita collaborate and observe that some of these accusations include price manipulation, the use of erroneous weighing scales, and disregard for unclear grading processes (Mango et al., 2021; Chinsinga & Matita, 2021). As a result, formal development interventions often sideline the traders and instead focus on cooperatives and formal value chain actors as the most effective means of market entry (Phiri et al., 2023).

Notably, empirical research indicates that most smallholder farmers continue to work with SGTs, despite these concerns (Branca et al., 2021). This paradox, of continuing to rely on traders even when they are perceived as problematic, suggests the need to learn more about the complex choices that rural farmers must make. The fact that this activity continues to occur raises the main research question: Why do smallholder farmers continue to do business with someone they do not trust and criticize? Recent research suggests that this is not merely a response to market pressure; it is a deliberate reaction to factors such as cash flow demands, location, low transaction costs, and social familiarity (Mbitsemunda & Karangwa, 2017).

Transaction Cost Economics and Rational Choice Theory can help us understand this phenomenon from a theoretical perspective. Both of these theories show how people make choices based on limited information and limited resources (Fernandez-Stark & Gereffi, 2019; Devaux et al., 2020). In this context, farmers can view SGTs as flawed yet applicable market agents that perform tasks not played by the formal market. Although formal buyers may offer better prices, their demand for quality and minimum quantity, coupled with the inability to pay on delivery, makes the formal market less appealing to smallholder farmers. (Chinsinga & Poulton, 2022).

Additionally, the research indicates that attitudes vary across different areas and populations. Some farmers report being satisfied with SGTs who are part of the local social network, offer fair rates, or are transparent about their business operations (Phiri et al., 2023). On the other hand, some traders struggle with their reputations because they act opportunistically, particularly when supply is abundant in the market, and farm-gate prices decline (Srinatha et al., 2024). These diverse experiences make it even more challenging for policymakers to devise ways to reconcile regulation with market functionality.

There are not many formal aggregation centres or cooperative marketing models available, which makes things much harder. The Agriculture Commercialisation Project (AGCOM) and the National Export Strategy II are two examples of policies that encourage aggregation. However, they do not cover all areas equally well or work as well as they could (GoM, 2021). Many cooperatives lack the necessary knowledge to manage their finances, have inadequate governance structures, or lack effective market connections. Therefore, they are not viable alternatives to SGTs (Chikhawo et al., 2024; Branca et al., 2021).

Because of this, it may be incorrect to focus solely on eliminating informal traders. Instead, more and more people are realising that we need to learn more about the roles, business models, and ways that SGTs interact with Malawi's legume value chains. The process of understanding will involve examining how farmers perceive these traders, the conditions that would make them willing to work with or not work with them, and the qualities that make a trader trustworthy from the perspective of a rural producer (Mango et al., 2021).

The study on "Factors that influence the decision of smallholder farmers to sell to small traders" fills a literature gap by investigating the linkage between smallholder farmers and small traders in terms of perceptual issues. The goal is not to make informal markets seem better than they are, but to give proof that can back up targeted actions like tools that make markets more open, trader registration, ways to settle disputes, and education for farmers that show how people act and how the market works (Fernandez-Stark & Gereffi, 2019).

To conclusively address the issue of smallholders' capacity to integrate into formal markets, it is necessary to have a comprehensive understanding of what motivates them, the bottlenecks they face, and the associated cost burdens of integration. Policies that do not take this into account could be useless or even harmful. This research aims to help construct value

chains that are open to everyone and robust, while also addressing the current lack of trust and openness between informal actors and smallholder farmers.

1.2 Research Purpose, Aims and Objectives

The goal of this study is to examine how smallholder farmers in Malawi make decisions about continuing to rely on small grain traders (SGTs) in the groundnut and soya value chains. The aim is to help people better understand how farmers and informal market players interact by examining both the roles that SGTs play and the perspectives of smallholder farmers. The project will utilize real-world data to examine the impact of these beliefs on marketing decisions. The information generated from this study will be utilised for reviewing government programmes, strategies, and policies to enhance agricultural commercialisation for smallholder farmers in Malawi. In many low-income, farming-based economies, such as Malawi, informal market operators remain the primary individuals facilitating agricultural trade, particularly in rural areas. Even as the government moves towards more open markets and private-sector involvement, formal marketing systems remain underdeveloped and unavailable to most smallholders (Chinsinga & Poulton, 2022). In the circumstances, grain traders are the main avenue for smallholder farmers' market access. Through trading with vendors, farmers enjoy benefits such as quick payment, easy access, flexible quality requirements, and minimal transaction costs (Branca et al., 2021). However, people also criticize them for being unprofessional, using shady business tactics, and manipulating prices (Chinsinga & Matita, 2020; Mango et al., 2021).

The goal of this study is to examine how these two roles—market enabler and potential exploiter—impact the smallholder farmer's decision to sell through SGTs. The study examines this relationship to address a range of interconnected issues. First, it will examine why farmers have both positive and negative feelings about small traders and how these feelings are influenced by their own experiences. Second, the study will assess roles that SGTs undertake

in the grain value chain, including reduction in distance to the market, offering platform for price negotiation, providing financing support, and ensuring quality (grading, sorting and drying) and how these roles influence marketing choices.

The findings of study are expected to inform the development of policies that are more realistic and grounded in the actual conduct and limitations of individuals operating in informal trade systems. The study is critical since groundnuts and soya are important for domestic consumption, industry, and region and international trade. As such these two crops are at the top of Malawi's national agricultural investment plans (Chikhawo et al., 2024). The two commodities address contribute significantly to food security and in addressing nutritional issues in rural areas.

The commercialisation of the groundnut and soya value chain is challenged by inconsistent linkages, unstructured communication between value chain actors, and inadequate information sharing among chain actors. Therefore, exploring detailed information on why smallholder farmers prefer small traders will provide a basis for fairness and trust among members, ultimately leading to efficiency in the value chain. Additionally, this study aims to address a significant gap in real-world research on market dynamics. Market access, value addition, and institutional reforms have been the focus of much research. However, fewer studies have examined the small-scale behavioural and relational factors that influence farmer-trader transactions (Phiri et al., 2023).

In places where market institutions are weak, these interactions are crucial for the effectiveness of commercialisation. The study will use a mixed-methods design, allowing for the collection and analysis of both qualitative and quantitative data on individuals' thoughts, feelings, and reasons for making decisions (Rodriguez, 2024). This study will also examine the implications of these interactions between traders and farmers for broader development

objectives, including enhancing the inclusivity of the value chain, improving the pro-poor orientation of market systems, and improving rural livelihoods (World Bank, 2020).

Where SGTs are proven helpful in certain situations the study will facilitate creation of policies them to become part of more formalized value chains while also addressing the factors that lead to exploitative behaviours. On the other hand, if negative opinions are based on systemic wrongdoing, the study will inform regulators and farmers' support initiatives that try to reduce vulnerabilities (Branca et al., 2021). The study will examine how governance structures, market proximity, payment methods, access to credit, and quality requirements influence the behaviour of smallholder farmers. It will draw on ideas from Value Chain theory, Rational Choice theory, market liberalisation concept, and Transaction Cost Economics theory (Fernandez-Stark & Gereffi, 2019; Devaux et al., 2020).

The study will examine the decision to sell to SGTs not only as a business decision but also as a means to adapt to market conditions. The primary goal of this research is not to praise or criticize small merchants but to provide a fair and evidence-based portrayal of how they fit into the marketing channels that smallholder farmers depend on. Through this study, the government, value chain actors, and stakeholders will be able to develop informed policies and programmes that support building trust between smallholder farmers and small traders, while enhancing the efficiency of the value chain. It is expected that the study will provide key information for further development of the soya and groundnut value chains in Malawi, thereby contributing to the country's rural economic development agenda.

The study will also provide more general information by examining the districts of Mchinji and Kasungu, which have a high level of production and active interactions between traders and farmers. These districts serve as important case studies that illustrate how grain is sold throughout the central region of Malawi. Furthermore, the study's results will inform

future studies by individuals and organisations with an interest in developing agricultural markets within and outside the two districts of focus.

1.3 Nature and Significance of the Investigation

This research work is important on academic, policy, and practical levels. The study provides further insight into the behaviour of smallholder farmers and informal market actors in Malawi's legume value chains. People sometimes oversimplify the link between smallholder farmers and small grain merchants (SGTs). The identification of policy gaps will inform policy recommendations that will address the complex structures and relationships governing the informal relationship between smallholder farmers and small traders. The area of this study is significant in the agricultural market for smallholder farmers, which has not yet received due attention in existing studies. It examines how perceptions influence transactional behaviour, the roles SGTs play, and the opportunities for formal-informal market integration.

At the academic level, the study contributes to the discussion of theories in agricultural economics, particularly in how transaction cost economics, value chain theory, and rational choice models can be applied in real-life informal marketplaces. The study adds real-world richness to these frameworks by illustrating how smallholders make difficult choices when selecting up-takers considering their urgent financial needs, the limited market options available to them, and their past experiences of distrust (Fernandez-Stark & Gereffi, 2019; Devaux et al., 2020).

The study also examines an issue that many people agree on but do not investigate enough: Why do smallholder farmers continue to work with market participants they dislike? Most development books say that this behaviour is due to lack of other options. While the lack of options could be true, it does not explain how individual traders, communities, or farming

systems affect the balance between perception and performance. The study will investigate the impact of reputation, trustworthiness, closeness, and past relationships on this decision-making process by combining qualitative and quantitative data from Kasungu and Mchinji (Phiri et al., 2023).

The study is relevant to Malawi's agricultural development framework, which is guided by the National Agricultural Investment Plan (NAIP). This plan collaborates with the National Export Strategy II and the Agriculture Commercialisation Project (AGCOM), among other programmes. These documents stress the importance of legumes, market access, and aggregation. Nevertheless, they do not discuss the informal sector enough, even though it still accounts for most of the real-world commerce in groundnuts and soya. This study will examine whether SGTs are merely filling the gaps of cooperatives or processors or that they play a genuine role that justify their inclusion in policy frameworks aimed at strengthening the value chains.

The study's results help to inform efforts to make informal grain markets more open, such as through mobile-based pricing platforms, standardized weighing procedures, or trader registration programmes. These low-cost changes have been effective in other countries (World Bank, 2020), and Malawi may benefit from similar practical approaches that recognize the usefulness and resilience of informal institutions. The report suggests that instead of eliminating SGTs, they could be improved through light-touch regulation, capacity building, and the involvement of farmers.

The study is critical because it could change how development partners plan programmes and allocate funds. Donor-funded initiatives generally employ cooperative models and commercial aggregators because they believe these approaches are more effective for development. However, these models are not effective and are unsustainable, so informal actors

are often better suited to working with rural communities (Branca et al., 2021). This study provides the details necessary to inform changes in interventions by demonstrating how and why SGTs are perceived as trusted or not trusted, and how their roles evolve and change over time.

This study has a direct impact on the lives of smallholder farmers. Understanding how the 2.5 million rural families in Malawi who grow legumes (FAO, 2024) select their market channels is key to increasing earnings, reducing post-harvest losses, and enhancing investment at the farm level. Smallholders can make better choices if they understand how traders operate and what they are looking for. Traders who are open about their business are more likely to create long-term relationships with suppliers. Misinformation, low trust, and unclear rules are all issues that this study aims to address, enabling the virtuous loop to continue.

The study is also timely. Climate change and geopolitical shocks are making smallholder markets unreliable globally. The impact of climate change on smallholder farmers result in further compromising the capacity of smallholder to access structured markets. For instance, during the COVID-19 pandemic, informal actors played a crucial role in maintaining grain markets while formal value chains were greatly disarrayed (World Bank, 2021).

The study is also significant due to its methodological approach, which employs mixed methods allowing triangulation and in-depth understanding. Using surveys, interviews, and focus groups together provides a comprehensive picture of how farmers and traders behave, making the results more trust-worth and reliable. Simultaneously, focusing on Kasungu and Mchinji enables a comparative subnational examination within Malawi's Central Region, while also highlighting the differences in production, extension planning areas, road infrastructure, and institutional setup.

The importance of this study lies in its wide range of applicability, encompassing policy formulation, academic applications, development strategies, and the enhancement of rural communities' livelihoods. In addition to filling a gap in research work, the study provides development platforms with credible information for developing the two value chains. The study offers a way to transform what is currently perceived as a problem into a solution for Malawi's rural economy by making the behaviours and attitudes surrounding small grain sellers less mysterious.

1.4 Research Questions and Hypotheses

The study will provide evidence to support concerns highlighted by both the general public and earlier academic studies. This study aims to provide further insights into the ease of participation for small-scale merchants in the value chains of soybeans and groundnuts. It draws on the work of Mango et la. (2021), who examined the linkages between smallholder farmers and informal markets in Malawi. In their study, it was observed that a substantial proportion of agricultural produce from smallholder farmers in sub-Saharan Africa continues to be marketed through small-scale grain traders, who remain the primary market outlet in many rural contexts, accounting for between 70% to 90% marketed grains from smallholder farmers (Mango et la., 2021). The study aims to provide a comprehensive account of the key roles played by small traders in the value chains and the extent to which these roles motivate farmers to continue using them.

Additionally, the study aims to examine specific areas that could be improved or that would benefit from assuming new responsibilities. Understanding the roles that influence trading between smallholder farmers and traders will inform strategies for incorporating or excluding small traders from value chains to enhance the efficiency of these chains. The

primary goal is to optimize the entire value chain to its fullest potential. Through this study, two key research questions are addressed:

RQ 1: What factors influence smallholder farmers' perception of small traders?

RQ 2: What are the functions of soya and groundnut grain traders in the Mchinji and Kasungu Districts that influence smallholders' decisions to work with small traders?

The study examines how the selected variables affect smallholders' choice to trade with small traders. The variables examined include (i) distance to market, (ii) quality requirement (sorting, grading, and drying), (iii) pay on delivery, (iv) trader-provided loans, (v) opportunity to negotiate for price, and (vi)price offered.

Hypotheses

The study will examine the following hypotheses:

H1: Farmers' perceptions of small traders are influenced by distance to markets, quality requirements, immediate payment terms, loan access from traders, opportunity to negotiate for a price, and prices offered.

H2: Farmers' decisions to sell to small traders are significantly influenced by distance to markets, quality requirements, immediate payment terms, loan access from traders, opportunity to negotiate for a price, and prices offered.

2 CHAPTER TWO: LITERATURE REVIEW

This chapter provides a review of literature on smallholder farmers' choices to sell to small grain traders (SGTs) in the groundnuts and soya value chains in Malawi. The goal of the literature review is to synthesize empirical findings, identify relevant theoretical frameworks, and highlight areas with gaps that this study aims to address. The review examines peer-reviewed academic articles, policy reports, dissertations, and working papers published between 2019 and 2024.

This review utilized several academic databases and search engines, including Google Scholar, JSTOR, Scopus, Web of Science, ScienceDirect, and AGRIS, to gather information. The study also examined institutional repositories and databases from well-known research and development organizations, including IFPRI, the World Bank, and UNCTAD, to find relevant grey literature and agricultural development reports.

Some of the most important search terms used are "smallholder market access," "informal agricultural trade," "small grain traders Malawi," "groundnuts value chain Malawi," "Soya commercialisation in Malawi," "smallholder perceptions," "value chain governance," "transaction cost economics in agriculture," and "informal market actors." These terms were used alone and in combination (for example, "smallholder farmers AND Soya AND Malawi," "informal traders AND value chain," "groundnuts AND pricing AND perceptions") to narrow down the search and ensure sufficient coverage.

The literature study focused on Sub-Saharan African environments, with a particular emphasis on Malawi. It also included comparative observations from neighbouring nations, such as Zambia, Tanzania, and Uganda, where applicable. The evaluation included works published between 2019 and 2024 to ensure that it encompasses recent arguments, trends, and real-world data. The research prioritized studies that examine smallholder commercialisation,

value chain architecture, informal trade ties, and perception studies among agricultural operators. Chapter two is segmented into seven main parts: (i) the conceptual framework of the study; (2) the theoretical foundations—value chain theory, transaction cost economics, and rational choice theory; (3) smallholder commercialisation; (4) understanding informal agricultural trade; (5) smallholders' perception and relationship between smallholder farmers and small traders; (6) review of legumes value chains in Malawi; and (7) a summary and a list of research gaps.

The chapter provides a full overview of the existing research on smallholder farmers' decisions to sell to small grain traders (SGTs) in the groundnuts and soya value chains in Malawi. The goal of the literature review is to synthesize empirical findings, identify relevant theoretical frameworks, and highlight gaps that this study aims to address.

2.1 Theories/Conceptual Framework

A conceptual framework in academic research is a systematic set of ideas and statements that show how variables in a study are thought to be related (Adom et la., 2018). This study employs a conceptual framework to examine how the functions of small grain traders (SGTs) influence smallholder farmers' perceptions of them and their decision to sell to them. The paradigm aims to facilitate an understanding of the cause-and-effect relationship between trader behaviour and farmer attitudes and marketing decisions, particularly in Malawi's informal value chains for groundnuts and soya.

Smallholder farmers operate in agricultural markets that are constantly evolving and imperfect. They rely heavily on informal merchants to enter the market because there are no formal aggregation processes. However, this dependence often accompanies negative feelings, which stem from concerns about prices, weighing techniques, and trader honesty (Chinsinga

& Matita, 2021). At the same time, many smallholders continue to do business with these traders, often citing their closeness, flexibility, and ability to pay cash immediately as the reasons for their continued patronage (Mango et al., 2021).

This study looks at six distinct tasks or service functions that small traders do, based on both previous research and fieldwork in Kasungu and Mchinji districts:

1. Distance to the market
2. Immediate payment at the time of delivery
3. The need to grade or sort produce (quality requirement)
4. Access to trader-provided loans
5. Opportunity for price negotiation
6. The price offered

These trader tasks encompass both logistical and relational aspects that impact how farmers conduct business in the market. Branca et al. (2021) suggest that these roles serve as de facto replacements for services typically lacking in undeveloped formal systems, such as warehousing, transportation, and financing prior to harvest.

The first analysis investigates how the functional roles of small traders influence farmers' perceptions that they are cheaters. This analysis leads to:

- **H1**: Farmers' perceptions of small traders are significantly influenced by distance to markets, grading requirements, payment terms, loan access, ability to negotiate, and prices offered.

Studies have suggested that the trader's behaviour associated with how they deliver the functional role in the value chain has an impact on how smallholder farmers perceive them. For example, Phiri et al. (2023) found that smallholder farmers in central Malawi preferred traders who offered fair pricing and small loans and were consistent in their dealings. Mango

et al. (2021) also found that farmers thought traders were more farmer-friendly when they allowed them to negotiate prices and purchase grains of different grades, even if the prices were only slightly lower than those in structured markets. Chikhawo et al. (2024) also found that farmers' trust and contentment with purchasers increased significantly when they received payments on time and were not penalized for poor quality in their study on sweet potato commercialisation. The way a trader interacts with a farmer may change how they are perceived by them.

The second pathway examines how these functional aspects directly influence the farmers' decision to sell to small grain traders. This hypothesis examines the direct impact of service-related trader traits on conduct, although perception may also play a role in this relationship.

- **H2**: Farmers' decisions to sell to small traders are significantly influenced by distance to markets, grading requirements, payment terms, loan access, ability to negotiate, and prices offered.

Empirical evidence from Mtisunge (2023) supports this concept. In his study, it was found that proximity to farmers and the ability to pay in cash were the two most significant factors influencing smallholders' decisions to sell to SGTs. Farmers, especially those with limited transportation or storage space, prioritized convenience and cash flow over price premiums or grading incentives. In their investigation on livestock marketplaces in Kenya, Kibara and Gyula (2024) found that distance to market and access to cash were more significant in determining who could participate in the market than formal buyer reputation. The study by Kibara and Gyula (2024) supports the claim that functional roles are practical, measurable, and actionable ways to improve informal markets.

Ferris et al. (2020) also observed that in many parts of sub-Saharan Africa, farmers sell to informal traders because they fill gaps in the system. Many farmers would not be able to

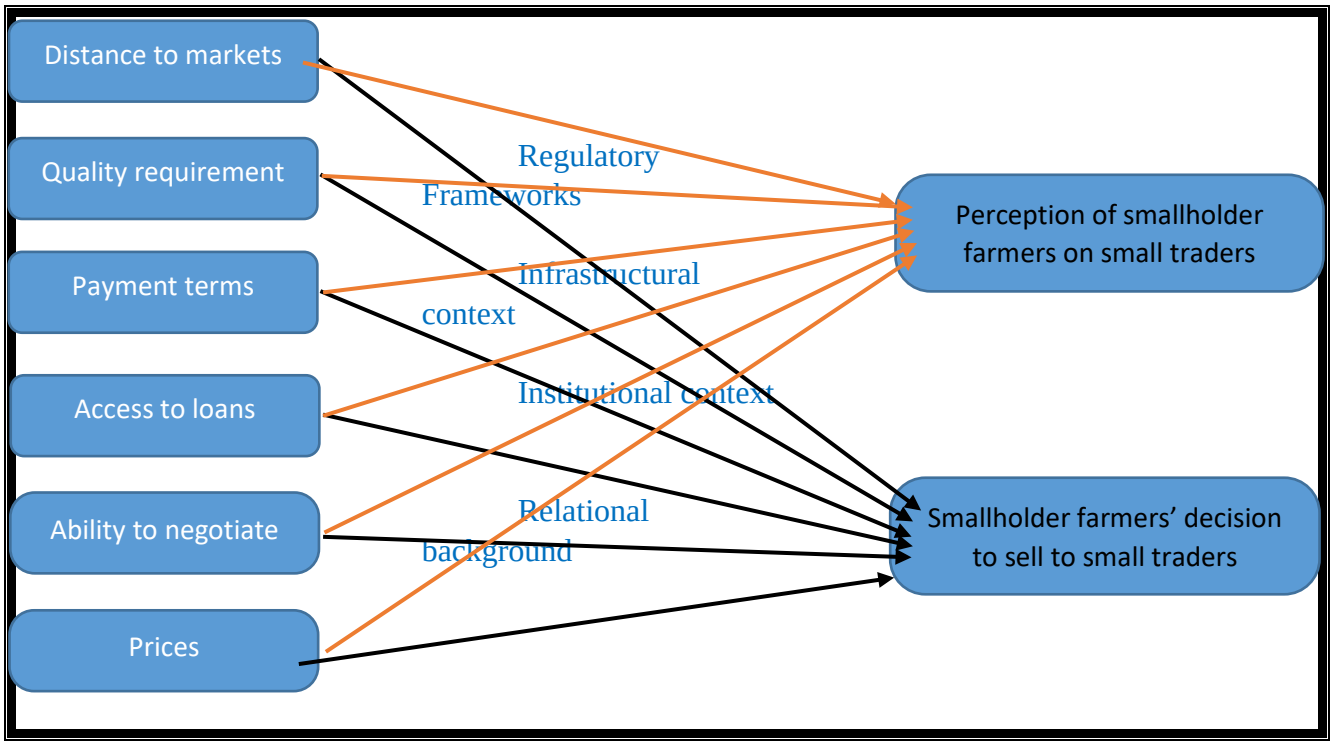
reach marketplaces at all without informal buyers. The roles that SGTs perform are typically similar to those of formal actors but with lower transaction costs and risks.

2.1.1 *Visual Model and Application*

Figure 2 below illustrates the conceptual model in a visual representation. It demonstrates how the responsibilities of functional traders relate to influence both farmers' perception of them and farmers' decision to trade with them, with possible moderators modifying the strength of these connections. This dual-pathway approach provides a logical and empirical basis for the study's data collection, regression modelling, and qualitative thematic analysis.

Figure 2

Theoretical Framework of the Study



2.1.2 *Implications of the Framework*

This paradigm enables the separation of attitudinal (related to perception) and transactional (related to decision-making) dynamics in relationships between farmers and traders. It implies that the actions of smallholder farmers in the market depend not only on price or distance but also on how they perceive and evaluate the actions of informal traders. As a result, it creates opportunities to develop policies and training programmes that enhance trader behaviour, increase market transparency, and foster connections across informal markets without formalizing the trader–smallholder markets. This study aims to provide development workers, agribusinesses, and policymakers with valuable information that will help them make informal markets more open, efficient, and trustworthy by clearly distinguishing which trader functions are most important for determining perception and behaviour.

There are three theories and concepts that the study is anchored on.

2.1.3 *Value Chain Theory*

Michael Porter first introduced the Value Chain Theory in 1985. It provides a framework for examining the steps involved in creating a product or service and adding value to it from the moment it is produced until the time it is utilized. This theory is now a crucial analytical tool in agriculture for examining how different actors, such as producers, traders, processors, and retailers, are interconnected and how value is created, captured, or lost at each stage (Fernandez-Stark & Gereffi, 2019). Value chain analysis examines a business or industry by breaking it down into its most significant activities, allowing for an understanding of how costs change and where differences originate. It emphasizes how companies and individuals in the value chain can outperform the competition by identifying and enhancing these activities (Nandi et la., 2021). This analytical method demonstrates that value is created not only by

individual tasks, such as design, production, and marketing, but also by how these tasks are coordinated, both within and outside the company (Donovan et al., 2019).

Porter first divided value chain activities into two main groups: "primary activities, which include inbound logistics, operations, outbound logistics, marketing and sales, and services, and support activities, which include infrastructure, human resource management, technology development, and procurement" (Donovan et al., 2019). When using this model in agriculture, especially in developing nations, these activities are adapted to accommodate the complex nature of agri-food systems. Inbound logistics, for instance, would include input supply and extension services, whereas outward logistics would encompass aggregation, transportation, and initial sales.

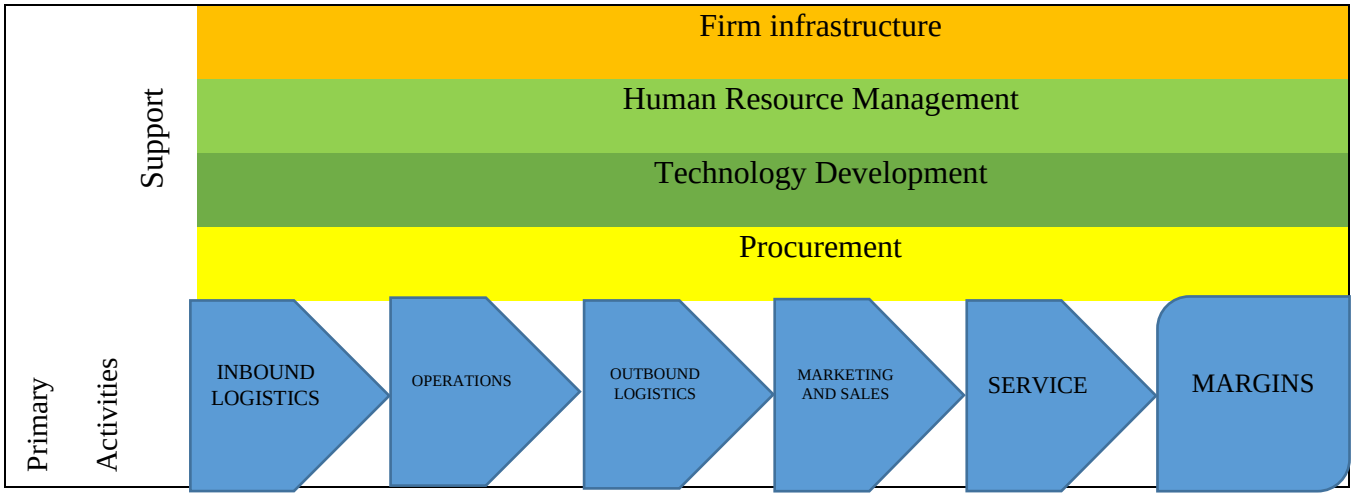
The value chain method enables an examination of how various components of a chain contribute to competitiveness and facilitate the entry of smallholders into the market (FAO, 2022). Value chain analysis examines a business or industry by breaking it down into its most significant activities to understand how costs are incurred and what distinguishes it from others. It highlights how companies and individuals in the value chain can gain a competitive edge by identifying and enhancing these activities (Nandi et la., 2021). This perspective reveals that value originates not only from specific tasks, such as design, production, and marketing, but also from how these tasks are coordinated, both within and outside the company (Donovan et al., 2019). Recent research also highlights the importance of mapping both firm-level and inter-firm linkages across the chain to identify causes of inefficiency and opportunities for improvement (Donovan et al., 2019). This broad view provides companies with a way to assess the scope of their activities, both narrowly (under one actor's control) and broadly (across the entire network). It helps them change their strategic position by working together and coordinating with others in the chain (Nandi et la., 2021). The value chain framework is used

in modern times to emphasize the importance of functional coordination, relational governance, and upgrading strategies in making businesses more competitive, particularly for smallholder producers (Ngenoh et la., 2019).

Michael E. Porter's Value Chain Framework was first published in his 1985 book, "Competitive Advantage: Creating and Sustaining Superior Performance." It was designed as a tool for strategic management for for-profit organizations to help them analyse their internal activities and identify sources of competitive advantage, either through cost leadership or differentiation (Porter, 1985). According to Porter (1985), the value chain framework should assess three main parts of an organisation: (i) primary activities, which include inbound logistics, operations, outbound logistics, marketing and sales, and service; (ii) support activities, which include firm infrastructure, human resource management, technology development, and procurement; and (iii) margins. The margin is the value added to the product and the profit margin that results from combining all these activities effectively.

Figure 2

Generic Value Chain



Adopted from Porter (1985)

In the opinion of Wieland (2021), value chain analysis facilitates improvement of crucial intra-company linkages and inter-company linkages aimed at strengthening efficiency and competitiveness. Modern interpretations build on Porter's original work by emphasizing the importance of coordination and upgrading in global and regional value chains. Value creation is the process by which companies gain a competitive edge by offering goods or services in ways that are unique and hard to copy (Teece, 2020). A company stays ahead of the competition by using tactics that create more value than can be achieved by itself, and that existing and potential competitors cannot match (Barney & Mackey, 2021).

Companies need to understand not only how their value chains operate but also how they fit into the broader value chain system for the entire industry or the global market. Value chains that are distinct among companies in the same industry can be used to set themselves apart and gain a strategic edge (Touboulic et la., 2020). Modern views build on Porter's work by demonstrating that competitive advantage can stem not only from individual activities that create value but also from reorganizing and coordinating connections between the company and other chain actors outside the company including suppliers, customers, and partners (Gereffi & Fernandez-Stark, 2019).

These connections, sometimes referred to as activity interdependencies, illustrate how the performance or cost-effectiveness of one function (such as procurement) can have a direct impact on the results of another (like manufacturing or logistics) (Teece, 2020). For instance, better procurement practices lower the cost of inputs or raise the quality of goods, which makes production more efficient. The performance of both upstream and downstream chain actors also has a significant effect on a company's overall success (Wieland, 2021).

Redefining the competitive scope of the value chain is another way to get a competitive edge. A tight scope focuses on specific activities or market segments, whereas a broader perspective encompasses a wider range of processes and marketplaces. Redefining the scope

provides an opportunity for organisations to re-orient the nature of competition to their favour (Kaplinsky & Morris, 2019). The strategic choice of scope has a significant impact on both internal coordination and the ability of the company to shape relationships within the organization and with the broader ecosystem.

This framework has been modified to account for both the company's internal efficiency and its role within the broader network, which encompasses its suppliers and customers (Fernandez-Stark & Gereffi, 2019). The value chain framework lists related tasks and those responsible in the chain from the input suppliers, production, and product users.

2.1.4 *Application of Value Chain Theory in Agricultural Commodities*

The value chain was initially created to help businesses develop competitive strategies but it has since evolved into a broader concept in development economics, particularly when examining agricultural value chains. As a concept, it can also be utilized as a practical tool or analytical lens to examine how players, processes, and governance structures function within a production-to-market system across different settings (Donovan et la., 2019).

Many people employ this approach in agricultural development to determine how different participants, including aggregators and producers, share and extract value in crop-specific value chains, such as groundnuts and Soya (Donovan et la., 2019). The framework also helps identify leverage points where smallholders or small and medium entrepreneurs (SMEs) can better connect with markets, typically by making adjustments to aggregation, storage, and handling after harvest (AGRA, 2020). Hainzer and his co-researchers suggest that the first step in implementing value chain interventions, which aims to enhance collaborative linkages between organisations, is to conduct a value chain analysis (Hainzer et la., 2019).

Development specialists have realised the potential of value chain analysis in addressing development issues in rural areas. Value chain analysis (VCA) is a tool used by

development professionals to understand how low-income individuals in developing countries can effectively participate in trade within their own country, within their region, and globally (Hainzer et la., 2019).

Value chain analysis has become an important tool for understanding how smallholder farmers sell their goods in developing nations. According to Branca and colleagues, VCA helps identify structural problems, poor governance, and inefficiencies that hinder smallholder farmers in Malawi from retaining value at the farm level (Branca et al., 2021).

2.1.5 *Value Chain Upgrading Strategies*

Upgrading is making changes to chains that will make them more valuable, efficient, and fair. Humphrey and Schmitz (2002) suggest that upgrading can refer to various concepts, including process upgrading (improving operational efficiency), product upgrading (enhancing product quality), functional upgrading (assuming more valuable responsibilities), and inter-chain upgrading (transitioning to more profitable sectors). Recent research shows that value chain upgrading can happen in several ways that are all connected: by upgrading products, processes, functions, or chains (Bamber & Staritz, 2021).

Additionally, vertical and horizontal coordination are becoming increasingly important as structural forms of coordination. Vertical coordination occurs when people at different functional levels of the chain, such as producers and processors, work together and are aligned. On the other hand, horizontal coordination involves collaborating with individuals at the same functional level, such as farmer cooperatives or producer groups, to enhance bargaining power and reduce transaction costs (Nang'ole et la., 2019).

Value chain upgrading is associated with several benefits for smallholder farmers, including increased earnings, access to higher-quality products, and entry into more high-value marketplaces (Donovan et al., 2020). Modern value chain analysis provides a strategic foundation for changes that will transform agri-food systems by examining more than just

primary production. It also examines economic, institutional, and governance aspects (OECD & FAO, 2020).

Islam et al. (2021) employed VCA in Bangladesh to help the aquaculture sector improve by identifying weak points and facilitating connections between traders and farmers through digital platforms, as well as the development of the cold chain. In Uganda, organised trading systems in the maize sector made it easier for small farmers to find prices and avoid some informal middlemen (Sebaggala & Matovu, 2019). However, these models often struggle with scale and long-term success unless informal actors are included in the reform process.

The Agricultural Commercialisation (AGCOM) Project of the Ministry of Agriculture in Malawi has prioritised upgrading the value chain for legumes, such as soya and groundnuts. Most interventions, on the other hand, focus on farmer cooperatives and overlook SGTs, despite IFPRI (2023) indicating that SGTs are still the primary means by which more than 60% of rural legume sales occur. This paper presents a case for a hybrid upgrading strategy that enhances SGTs' clarity, efficiency, and reliability without compromising their local benefits.

2.1.6 *Relevance of Value Chain Analysis to Smallholder Agriculture in Developing Countries*

Recent research has demonstrated that value chain interventions can help rural areas expand economically, enhance industry competitiveness, and reduce poverty (Hainzer et la., 2019). Value chain analysis is a powerful diagnostic tool that helps development workers identify important problems and challenges faced by specific target groups and develop solutions that can change the current situation and support those who lack sufficient resources (Hainzer et la., 2019). It is challenging to study agricultural value chains because it requires a multidisciplinary approach that combines economics, agronomy, sociology, and policy studies (Altenburg et la., 2021). Modern value chain assessments are crucial for identifying systemic

limitations, regulatory barriers, and opportunities in food systems. These assessments support evidence-based actions aimed at making the agricultural sector more productive, inclusive, and sustainable (Davis, 2019).

Smallholder farmers remain at the bottom of most agricultural value chains in Sub-Saharan Africa and beyond, yet they often receive the least value due to structural constraints. Some of them are experiencing difficulties obtaining inputs, struggling to negotiate effectively, and are excluded from high-value marketplaces (Barrett et al., 2021). Researchers and policymakers can use VCA to see how and where value is added or lost, which helps them understand power imbalances and structural leakages (Gereffi & Fernandez-Stark, 2019).

Shiferaw et al. (2020) utilized VCA to examine the wheat sector in Ethiopia and found that farmers received only 27% of the final retail price. The rest went to traders, millers, and retailers since they had better infrastructure, access to finance, and information. Branca et al. (2021) did a value chain analysis on legumes in Malawi and found similar patterns. Farmers were unable to access high-end markets due to stringent grading standards and bulk requirements. SGTs were the primary means for smallholders to generate revenue from their crops, even though they were not officially recognized.

Pokhrel and Thapa (2019) examined the dairy value chain in Nepal. They concluded that intermediaries captured an excessive share of value despite their crucial role in connecting isolated farmers with metropolitan markets. Instead of eliminating these middlemen, the authors suggested making them official and providing them with the necessary tools to enhance chain performance.

2.1.7 *Value Chain Governance and Coordination*

One of the most important things that VCA does is to examine governance structures, which determine how control, coordination, and decision-making are distributed throughout the chain. Gereffi et al. (2020) identify five basic types of governance: market-based, modular,

relational, captive, and hierarchical. Most agricultural chains that include smallholders in developing countries are either market-based or relational, meaning that transactions are not formal and are based on trust, closeness, or frequent contact.

The various styles of governance are primarily based on the degree of control specific individuals have. In buyer-driven chains, lead businesses or buyers have significant influence over standards, prices, and production requirements. This type of relationship often puts producers and aggregators in less important roles (Fernandez-Stark & Gereffi, 2019). Producer-driven governance systems, on the other hand, grant producers or intermediaries greater autonomy, particularly when they possess valuable resources such as technology or specialized knowledge (Taglioni & Winkler, 2020).

Several interconnected factors influence the choice of governance structure. These include the complexity of transactions between firms, the extent to which they can be standardized or codified, and the ability of suppliers to meet buyers' needs (Ponte et la., 2019). These five types comprise the most common forms of governance: market, modular, relational, captive, and hierarchical. They all have different ways of sharing authority, passing on knowledge, and coordinating activities.

Governance analysis of aggregators can be conducted in two ways: by examining the relationships with smallholder farmers at the top and the interactions with large purchasers, processors, or exporters at the bottom. To determine an appropriate governance model for a particular value chain, it is necessary to examine governance characteristics, including the level of control, trust, dependency, and standardization. This type of study is crucial for developing methods to enable small-scale actors to participate fairly and establish value chains that are inclusive and accessible to all.

The table below displays the primary features of value chain governance, as identified by Gereffi et la., (2005).

Table 1

Value Chain Governance Characteristics

Type of Governance	Key Characteristics
1. Markets	• Simple transactions • Producers make products with minimal or no input from the buyers • Little or no formal cooperation between the two actors • There is low or no cost of switching to new partners • Limited transaction-specific investment
2. Modular	• Supplies are on customer specifications, • Suppliers are competent to meet the specifications, • Suppliers use generic facilities that can be used across a wide range of customer base, • Switching cost is low.
3. Relational	• Buyers and sellers rely on complex information that is not easily codified, transmitted, or learned, • Requires trust, mutual reliance, and reputation, • Lead firm specifies what is needed, • Cost of switching to a new partner tends to be high and difficult due to relationship development demands
4. Captive	• Small suppliers are dependent on one or a few buyers that often yield a great deal of power, • Suppliers link to buyers under conditions set by a particular buyer, • Lead firm may support suppliers for the sake of improving efficiency of the chain, • Ethical leadership is important to ensure fair treatment of suppliers.
5. Hierarchy	• This is where there is vertical integration within the firm, • Ideal when highly competent suppliers cannot be found.

Note. Adopted from *Governance of Global Value Chains*, by G. Gereffi et la., (2005).

2.1.8 *Governance issues in grain value chains involving smallholder farmers and small traders*

Recent research on value chain studies in Sub-Saharan Africa reveals a significant gap in the systematic evaluation of governance systems in grain value chains. Chamberlin and Jayne observed that earlier studies in countries such as Uganda and Mozambique provides helpful information although the examination of how value is shared among the chain actors was not very clear in the study (Chamberlin & Jayne, 2020). Empirical evidence consistently shows that there are many small-scale grain traders or aggregators who buy directly from smallholder farmers at their farms or decentralised collecting sites. Farmers can choose who they sell to and where they sell their goods because of this structure. Selecting who to sell to and where to sell is an example of market-based governance, where prices and volumes are set through spot transactions with little formal coordination (Omulo & Wambugu, 2021).

However, there is also evidence that aggregators are starting to act as middlemen for bigger buyers, such as millers and export companies. Sometimes, these aggregators provide smallholder farmers with built-in services, such as training, technical assistance, or inputs. These kinds of interactions are like captive and relational governance, where buyers have more power because they rely on support systems that make them dependent and work more closely with producers (Mabaya et la., 2021).

In addition, a small number of powerful purchasers, usually multinational businesses, dominate major parts of the market and affect prices in many sub-Saharan grain markets. This oligopolistic behaviour in downstream segments exacerbates power imbalances and exhibits captive governance, as aggregators are heavily influenced or partially controlled by the lead businesses (Mabaya et la., 2021). These changes in governance have a significant impact on how inclusive, efficient, and capable the area of improving grain value chains is.

Governance in Malawi's soya and groundnuts sectors is typically based on relationships, especially at the farm gate level, where smallholders sell to traders they know in local communities (Chinsinga & Matita, 2021). These relationships, even if they are not formal, are deeply ingrained in local customs and rely on each other to continue. For example, SGTs frequently pay for transportation or give money upfront, while farmers offer loyalty and flexibility in how they deliver goods (Mtisunge, 2023). However, opportunistic behaviour, poor contract enforcement, or market shocks can undermine relational governance.

Coordination problems also change how value is shared. According to Kabanza et al. (2022), a few processors in Zambia controlled the prices and quality standards in the soya value chains. Smallholder farmers and small traders were not included in official coordination systems, which caused problems and a lack of confidence. Oni et al. (2020) found that Nigeria's maize and rice supply chains shared similar characteristics, where informal actors played a crucial role in trade but lacked influence over pricing and governance.

2.1.9 *Margins and Price Spread Analysis*

VCA also allows examination of price spreads and margins, which indicate the value each player retains. Farmers usually receive 40–60% of the final retail price for groundnuts and soya in Malawi. The remainder is distributed to merchants, processors, and retailers (Phiri et al., 2023). However, research shows that SGTs do not make much money due to high transportation expenses, the possibility of spoilage, and price fluctuations that occur every season.

In the value chain study by Asante et al. (2020), it was observed that traders' share of the margin was only 13% of the price offered to the consumer, despite incurring high operational costs. Their research emphasized the importance of a detailed examination of margins before blaming exploitation. Mango et al. (2021) collaborate with Asante et al. in their

study in Mozambique, where small traders were also found to provide important services but were wrongly blamed for pricing discrepancies.

2.1.10 *Value Chain Issues Influencing Smallholder Farmers' Perception of Small Traders*

Several value chain-related elements influence how smallholder farmers perceive small traders, who are often the primary link between farmers and markets. Some of these are pricing structures, levels of trust, openness in transactions, contract arrangements, market access, information asymmetry, transaction costs, and the quality of institutional support. Barrett and colleagues argue that these factors significantly influence farmers' decisions about whether to sell their goods and with whom to do business (Barrett et la., 2021). Chamberlin and Jayne also stress that how value chains are set up and run affects farmers' ability to access markets and how they perceive market actors (Chamberlin & Jayne, 2020). Omulo and Wambugu (2021) also note that smallholders are wary of informal traders due to transaction costs and power asymmetries, particularly in areas where regulations are lax or enforcement is weak.

2.1.10.1 **Pricing and Market Power Asymmetry.** The pricing dynamics within the value chain are one of the most important elements. Small dealers generally establish prices independently because smallholder farmers lack the authority to negotiate. People often feel they are being taken advantage of or maltreated when prices differ (Barrett et la., 2021). Farmers sometimes claim that traders offer prices lower than what the market is willing to pay, especially during harvest seasons when there is an abundance of supply and farmers lack storage space. This problem worsens in value chains where prices are not transparent, and traders have more information about prices in the downstream market than farmers do (Mabaya et la., 2021).

2.1.10.2 **Trust and Opportunistic Behaviour.** One of the crucial elements that sustains the relationship between traders and farmers is trust. There are not always formal contracts in place for transactions in many value chains, which makes it easier for people to act opportunistically. Smallholder farmers may perceive traders as untrustworthy if they have experienced problems in the past, such as late payments, tampering with weighing scales, or last-minute pricing changes (Omulo & Wambugu, 2021). This lack of trust makes it more difficult to work together over a long period, as there are no binding agreements and weak mechanisms for resolving disputes.

2.1.10.3 **Access to Market Information.** One key challenge that farmers experience is obtaining market information due to information asymmetry. Farmers who cannot access real-time market data are more likely to rely on traders for all their information. The problem of accessing market information leads people to become dependent and makes them believe that traders purposely conceal or misrepresent facts to their benefit (Chamberlin & Jayne, 2020). On the other hand, farmers who can utilize mobile platforms, listen to radio broadcasts, or receive assistance from cooperatives tend to make better choices and are more discerning about whom they trade with.

2.1.10.4 **Transaction Costs and Convenience.** Farmers find small traders vital for reducing transaction costs. When traders buy at the farm gate, they do not have to pay for transportation, handling, or time that would have been the farmer's responsibility. Some farmers, especially those in distant or underdeveloped areas, may view traders as helpful partners, as they provide convenient markets and make immediate payments, thereby compromising their concern for lower prices (Liverpool-Tasie et la., 2020).

2.1.10.5 **The Importance of Aggregation and Volumes.** Farmers' view of small traders may also be influenced by the role played in aggregation. Farmers who do not produce a large quantity of goods may consider traders as necessary middlemen who help them access markets that require a substantial amount of goods. However, if merchants fail to meet expectations for fair weighing, quality standards, or timely sales, they may be perceived differently. It is suggested that traders' cooperation with farmer cooperatives may create a more conducive environment for smallholder farmers to access the market (Trebbin & Franz, 2020).

2.1.10.6 **Policy and Institutional Support.** The extent of policy and institutional support available may also influence how farmers perceive traders. Small traders are more likely to be held accountable in value chains that have robust rules, farmer education, and enforcement of standards. Robust rules, farmer education, and the enforcement of standards help build trust among smallholder farmers. On the other hand, traders often work without supervision in places with poor governance, which leads farmers to have a negative perception of them (Andae et la., 2021).

2.1.10.7 **Value Chain Issues Influencing Smallholder Farmers' Decision to Sell to Small Traders.** Agriculture value chains in Sub-Saharan Africa are not simple for smallholder farmers to work with and significantly impact market choice. Farmers often have to decide whether to sell their crops to small traders or explore other ways to market them. Pricing, location, trust, access to information, transaction costs, and institutional support are just a few of the value chain characteristics that affect this decision (Chamberlin & Jayne, 2020). Chamberlin and Jayne (2020) state that smallholders often struggle to make informed market decisions due to the difficulty of accessing markets and inadequate infrastructure. Additionally, confidence and ease of doing business are also crucial, particularly when farmers lack formal contracts or guarantees of timely payment (Barrett et la., 2021). Omulo and Wambugu (2021) also note that information asymmetry and high transaction costs lead farmers to rely on small traders, who are often the most direct and accessible market interface for them.

2.1.10.8 **The Need for Immediate Cash.** Barrett and others argue that one of the primary reasons people sell to small merchants is that they require money immediately (Barrett et la., 2021). Many smallholder farmers lack sufficient cash on hand and require immediate funds after the harvest to meet their family needs. Small traders typically pay in cash and on the spot, which is beneficial for farmers who lack access to formal banking institutions (Barrett et la., 2021). Formal buyers who do not pay on time make smallholders less likely to use organised marketplaces, which makes them rely more on informal trading ties (Barrett et la., 2021).

2.1.10.9 **Proximity and Accessibility.** The issues of closeness and accessibility to the market is critical. Being close by and easily accessible are also essential. Small merchants typically operate in or near farming villages, where they provide farm gate services that facilitate farmers' access to the market. Farmers in remote locations with poor roads, high transportation costs, and distant aggregation centres find it easier and cheaper to sell to traders who travel to them (Chamberlin & Jayne, 2020). This local presence also reduces farmers' logistical risks, such as losing crops after harvest due to transportation delays.

2.1.10.10 **Low Production Volumes**. Farmers also prefer small dealers because they do not produce large quantities of goods. Smallholder farmers typically cultivate crops on small plots, making only a modest amount of extra food, which is insufficient to meet the minimum volume requirements set by large purchasers or cooperatives. Small traders are more flexible in this area since they accept small volumes of produce without strict quality or packaging criteria (Liverpool-Tasie et la., 2020). In this way, traders meet an essential need by providing a platform for dispersed outputs to be sold.

2.1.10.11 **Information Asymmetry**. Many farmers lack access to timely and reliable market information, including prices in distant markets and the preferences of formal buyers. Small traders, who typically have access to this information, can utilise it to change prices and conditions. Farmers may not trust them, yet traders are necessary when there are no other options (Omulo & Wambugu, 2021). Using ICTs or extension services to provide farmers more access to market information could change the balance of power.

2.1.10.12 **Trust and Social Relationships.** Trust and ties with others also influence marketing decisions. Small businesses are often integral to their local communities and have developed relationships with farmers over time. Smallholder farmers develop confidence with traders they are familiar with, even where transactions are done in the absence of formal contracts. Trebbin and Franz (2020) argue that interactions with others can make people feel less risky and increase the reliability of transactions, especially in places where formal institutions are weak or absent.

2.1.10.13 **Costs of Participating in Formal Markets.** Mabaya et la (2021) argue that the costs of participating in official markets are often too high for smallholder farmers. These costs include transportation, quality certification, grading, and the time spent talking to formal purchasers. Small traders, on the other hand, do not have to follow many official rules, which makes it easier for smallholders to get started.

2.1.10.14 **Lack of Institutional Support and Farmer Organization**. Farmers' bargaining strength is limited by a lack of institutional support and farmer organization. Smallholder farmers typically operate independently because there are no functioning cooperatives, established market links, or effective mechanisms for enforcing contracts. This situation renders them vulnerable, but it also necessitates the presence of traders who can take risks and navigate the informal market structure (Andae et la., 2021).

2.1.11 *Application of Value Chain Theory to the Current Study*

Using Value Chain Theory in this study helps us understand how SGTs function as essential links in the soya and groundnuts chains on multiple levels. The theory helps explain why farmers prefer to work with some dealers and not others. It is not only about pricing; it is also about how closely they align with their needs, the services they offer, and their reliability.

This study does not presume that all SGTs are fair or work well. Instead, it examines the value chain to determine which trading positions are most closely linked to favourable impressions and sales decisions and what institutional changes could enhance those roles. For instance, if farmers care most about being close to one another and being able to negotiate prices, then policies should focus on registering traders, training them, and making it easier for them to circumvent rather than just encouraging e-markets or aggregation centres. The study also employs the concept of value chain governance to argue that informal players, such as SGTs, require regulated inclusion rather than exclusion. Governance structures that encourage openness and cooperation can help distribute value more fairly throughout the chain, benefiting both farmers and traders (Chinsinga & Matita, 2021; Gereffi & Fernandez-Stark, 2019; Islam et la., 2021).

2.2 Transaction Cost Economics (TCE)

Oliver Williamson (1985) developed the fundamental concept underlying Transaction Cost Economics (TCE). It explains why people in the economy prefer certain types of governance, such as markets, hierarchies, or hybrids, depending on the costs of doing business. These expenses of doing business include the costs of gathering information, negotiating and making decisions, monitoring activities, and ensuring agreements are adhered to. In short, TCE suggests that people establish transactions in ways that minimize these costs while maximizing efficiency and predictability (Williamson, 1985).

Transaction costs are very high in agricultural markets, particularly those involving smallholder farmers in developing nations. Smallholders face challenges, including limited access to market information, high transportation costs, weak contract enforcement systems, and power imbalances in buyer-seller relationships (Barrett et al., 2021). TCE is a very useful tool for understanding how these factors influence farmers' marketing choices, such as why

they opt to sell to informal small traders rather than official purchasers or cooperatives (Barrett et al., 2021).

2.2.1 *Relevance of TCE to Agricultural Marketing Systems*

The primary concept of TCE in agricultural value chains is that governance structures emerge as a means to reduce transaction costs. Formal markets may have higher pricing, but they also have complicated rules, delayed payments, and large distances to aggregation centres (Chinsinga & Matita, 2021). On the other hand, informal markets rely on trust between individuals, prompt payment, and minimal entry barriers, but they typically lack clear prices or mechanisms for resolving disputes.

Mtisinge (2023) observed that in Malawi, smallholder farmers sell their groundnuts and soya informally at the farm gate to SGTs. From a TCE perspective, this behaviour makes sense because it is costly to look for and enforce rules in formal markets. Farmers choose channels that make transactions easier, even if the prices are only a little lower (Mtisunge, 2023). Branca et al. (2021) found that more than 60% of smallholders in Malawi prefer informal traders because they are more flexible and can complete tasks promptly.

Similar patterns are observed in Sub-Saharan Africa. Oni et al. (2020) found that maize farmers in Nigeria avoided cooperatives due to their slow and rigid payment processes. Instead, they preferred informal aggregators who bought on-site with cash. These patterns support the TCE theory.

2.2.2 *Types of Transaction Costs in Smallholder Markets*

TCE divides transaction costs into three primary groups: the costs of searching for information, the costs of bargaining and negotiating, and the costs of monitoring and enforcing.

Smallholders in developing markets are strongly affected by all three primary groups of transaction costs:

2.2.2.1 **Search and Information Costs.** These refer to the time the money spent on finding potential buyers and evaluating offers. Farmers in rural areas of Malawi sometimes struggle to access mobile-based price alerts or working market information systems (FAO, 2024). SGTs help lower these costs by visiting the farmers' doorsteps and making bids immediately.

2.2.2.2 **Bargaining and Negotiation Costs.** Bargaining and negotiation costs arise when setting prices, particularly when quality criteria are subjective and based on personal opinion. Formal buyers typically use grading systems that farmers are not accustomed to, or require them to buy in bulk. SGTs usually let you negotiate at the point of sale, even for mixed or ungraded produce (Mango et al., 2021).

2.2.2.3 **Monitoring and Enforcement Costs.** These are the issues that arise when trying to ensure both parties fulfil their end of the bargain. With SGTs, deals are frequently completed immediately; therefore, there is no need for enforcement methods. On the other hand, formal contracts require follow-up, quality checks, and payment reconciliation, which smallholders sometimes lack the resources to perform (Chikhawo et al., 2024).

Smallholders tend to opt for market partnerships that reduce their exposure to search and information costs, bargaining costs, and monitoring and enforcement costs. The more appealing the trading alternative becomes, the lower the perceived or actual transaction cost.

2.2.3 *Asset Specificity, Uncertainty, and Frequency*

Williamson (1985) asserts that asset specificity, uncertainty, and transaction frequency are the most critical factors that affect the choice of governance with respect to TCE. Asset specificity refers to the perishable nature of a product or the need for capital to construct

infrastructure for handling it after harvest. Farmers have minimal asset specificity since they can stockpile legumes, such as groundnuts and soybeans. However, they prefer purchasers who pay cash immediately to lower the risk of losing money (Mtisunge, 2023). Uncertainty is associated with prices that fluctuate significantly or unreliable purchasers. Informal merchants frequently act opportunistically; however, relational trading makes people feel less insecure, especially when traders and farmers have a history of working together (Phiri et al., 2023). Frequency refers to the regularity of transactions. Trust is built through repeated transactions, which makes informal exchanges less opportunistic over time (Gereffi & Fernandez-Stark, 2019).

Chinsinga and Matita (2021) found that long-term interactions between farmers and informal traders in Malawi were self-reinforcing, as they occurred frequently and were easily understood. Over time, these lower the costs of enforcement, which supports the decision to keep doing business informally.

2.2.4 *Applications of TCE in Empirical Studies*

Many studies have used TCE to explain how farmers choose which markets to sell to. Mango et al. (2021) employed TCE to explain why farmers preferred selling to "informal buyers" despite knowing they could obtain better prices. Farmers believed that the benefits of flexible terms and receiving payment immediately were more important than the opportunity to secure a better price. Kabir and Nasrin (2019) employed TCE to determine why prawn producers prefer intermediaries over exporters. Exporters offered better pricing, but they also needed certificates, grading, and payments that were delayed, which raised the cost of doing business. In Tanzania, Matumaini et al. (2020) showed that cassava growers chose buyers based on informal contracts and familiarity. This decision was made because there were no ways to enforce contracts in formal trade. In Malawi, according to IFPRI (2023), grain

producers avoided formal markets due to issues with logistics, grading regulations, and lengthy payment cycles. The avoidance is in line with the idea of keeping transaction costs low.

2.2.5 *TCE and the Functional Role of Small Grain Traders*

The primary concept underlying this study is that the functional aspects of SGTs, including prompt payment to farmers, proximity to farms, purchasing ungraded goods, and offering small loans, reduce farmers' transaction costs (Chikhawo et al., 2024). From a TCE perspective, these trader roles are not only beneficial but also reduce the costs of doing business. Farmers' opinions of SGTs are based on both their own experiences and the ease or difficulty of transactions with merchants. These ideas then influence the decision to sell, which is the primary concept underlying the conceptual framework of this study.

2.2.6 *Critiques and Limitations of TCE in Informal Markets*

TCE is a good way to explain things, but it does not work as well in informal, relational economies. It frequently implies that people are acting rationally, either entirely or partially. However, this may not be true in rural areas, where social norms, reciprocity, or cultural obligations influence decisions (Scoones et al., 2019). TCE also does not give enough weight to authority and trust, which are very important in informal agricultural commerce. Some researchers suggest combining TCE with behavioural economics or institutional theory to fill in these gaps (Barrett et al., 2021). The study employs TCE, along with Value Chain Theory and Rational Choice Theory, to provide an in-depth understanding of farmers' decision-making processes.

2.2.7 *Implications for Policy and Value Chain Design*

Understanding how SGTs reduce transaction costs has tangible real-world effects. Stakeholders need to design approaches that ensure the role of small grain traders in reducing

the costs of reaching the market for smallholder farmers is not compromised, while also enhancing transparency and accountability. For example, making price information available online, helping traders register, and providing them with mobile weighing scales can further reduce transaction costs and build confidence.

Programmes like Malawi's AGCOM often support cooperatives and organized markets, but they do not address the high transaction costs that deter farmers from using SGTs (Branca et al., 2021). Important actions for TCE intervention are those that reduce cost barriers for both farmers and small traders. These actions would reduce the barriers to entry for both farmers and informal traders, while also gradually implementing formalization procedures that maintain flexibility (Branca et al., 2021).

2.3 Rational Choice Theory (RCT) (Scott, 2000)

In economics and the social sciences, the RCT is a fundamental concept that people make choices by logically weighing their options to maximize the benefits they derive from them. This theory is based on the idea that people have stable preferences and can obtain the necessary information to compare the costs and benefits of each option and choose the one that is best for them (Mwonge & Naho, 2022). It is argued that small producers complain about small merchants, yet they still sell to them because they recognize that small traders are the best choice for their market. This approach to decision-making will help us gain a deeper understanding of how the two value chains operate in the market.

RCT has proved very helpful in studying how people make decisions in agriculture, especially among smallholder farmers. For example, Mwonge and Naho (2022) employed an RCT to investigate the perceptions of smallholder farmers in Morogoro Municipality, Tanzania, regarding agricultural financing. According to Mwonge and Naho, farmers' decisions to receive credit was found to be a product of many factors that included farm size,

the size of work to be done, and the perceived risk of borrowing. These results suggest that farmers consider the potential benefits of credit alongside the associated risks and costs, which aligns with the principles of RCT (Mwonge & Naho, 2022).

Similarly, Olutuwise (2023) employed an RCT to examine how farmers utilized climate adaptation technologies. The study confirms that smallholder farmers make rational decisions based on the information made available, taking into account factors such as resource availability and environmental impact. This use of RCT demonstrates its utility in understanding how farmers address climate-related challenges by examining the advantages and disadvantages of various adaptation methods (Olutuwise, 2023).

2.3.1 *Principles of Rational Choice Theory*

Scott (2000), argues that RCT is grounded on five main principles: (i) goal-driven behaviour, (ii) desire to maximise utility, (iii) awareness of the constraints, (iv) evaluation of options, and (v) arranging preferences in order of priority. Mwonge and Naho (2022) suggest that much as these assumptions may not always be strictly true, they provide a framework for considering how people make economic decisions. Smallholder farmers in Malawi make decisions about whether or not to work with SGTs based on factors such as changing prices, seasonal needs, insufficient storage space, debt repayment, and societal expectations.

Tanzanian farmers make choices that maximize the expected utility within the options available to them, even when they cannot access credit (Mwonge & Naho, 2022). Similarly, Olutuwise (2023) demonstrates that Nigerian smallholders made informed decisions about climate-smart activities based on their perceived risk, anticipated financial returns, and available information. Abay et al. (2021) suggest that in Ethiopia, smallholders' choices regarding insurance and inputs follow RCT logic when there is little difference in information. Kuwornu et la., (2020) in Ghana reveal that judgements about whether or not to participate in

the market were closely linked to price access, buyer reliability, and household financial needs. Making decisions based on prices offered, buyer reliability, and household financial needs, as in the cases demonstrated above, is consistent with what RCT.

2.3.2 *Application to Smallholder Marketing Decisions*

The modern applications of Rational Choice Theory (RCT) in agriculture demonstrate its utility in understanding how smallholder farmers make decisions. RCT suggests that farmers make decisions based on logical evaluations of costs, benefits, and the information available to them, taking into account their social, economic, and institutional constraints. This point of view enables policymakers and development workers to create programmes that align with farmers' needs and wants, making agricultural programmes more effective and long-lasting (Abay et la., 2021). The idea also emphasizes the importance of farmers having access to information, arguing that those who are more informed are more likely to make efficient and market-aligned production and marketing decisions (Ma & Abdulai, 2021).

RCT has gained popularity in recent years as a method for explaining the marketing decisions of smallholders. It is popular because an increasing number of scholars view farmers as economically rational agents rather than passive characters in development narratives (Barrett et al., 2021). From this perspective, farmers consider several factors when deciding how and to whom to sell. These factors include pricing, payment terms, the buyer's reputation, transaction ease, and their past experiences. For instance, a farmer can choose to sell to an SGT that pays immediately at a lower price, rather than waiting for a formal aggregator that pays later but offers a higher price. In Ghana, Ma and Abdulai (2021) demonstrate this by showing that farmers consistently chose market routes that met their liquidity demands, even if they yielded lower returns. Chikhawo et al. (2024) found that sweet potato farmers in Malawi made decisions about marketing based on factors beyond price alone. They also considered how easy

it would be to conduct business, how much they would have to repay, and how much they had trusted each other in the past (Chikhawo et la., 2024).

2.3.3 *Empirical Evidence Supporting RCT in Developing Context*

Much research in developing countries show that RCT may be used to explain how farmers make decisions. According to Mtisunge (2023), smallholder soya farmers in Malawi chose to sell to SGTs because they could get paid immediately and it was easy for them, thereby collaborating with RCT's predictions of utility maximisation under liquidity restrictions. Mwonge and Naho (2022) employed an RCT to examine smallholder credit demand in Tanzania and found that perceived repayment flexibility, loan processing speed, and the risk of default all influenced borrowers' behaviour. Olutuwise (2023) found that Nigerian farmers employed agricultural strategies that reduced their risk when the projected rewards outweighed the effort and danger. The study by Mwonge and Naho (2022) further collaborates with the rational actor paradigm. Abay et al. (2021) conducted research in Ethiopia, Uganda, and Rwanda and found that access to information, expected net returns, and trust in a company's reputation all influenced the adoption of inputs and consumer choice. In Ghana, Kuwornu et al. (2020) demonstrated that farmers made informed decisions about where to sell their goods, considering their needs and the costs of doing business, even if it was not the most profitable option.

2.3.4 *RCT and Informal Trader Engagement*

In the context of this study, examination is made on the choice of Malawian smallholder farmers to sell to small grain traders as a means to maximize benefits in a limited situation. Some of the benefits of selling to SGTs include:

(i) Immediate payment: which meets immediate financial demands like school fees, groceries, and paying off debt. RCT is well-documented in Malawi, where smallholders often prioritize liquidity over price (Chikhawo et la., 2024).

(ii) Proximity: which reduces time and transportation costs; IFPRI (2023) found that many farmers prefer dealers who buy directly at the farm gate to avoid problems with transportation and long lines at aggregation centres.

(iii) Accepting ungraded goods: which makes processing and labour less demanding; Branca et al. (2021) assert that dealers who accept legumes of different qualities make post-harvest processing easier, which makes them appealing to farmers who do not have resources to meet the required quality.

(iv) Negotiability: which gives people a sense of fairness and control. Research from Nigeria and Ghana indicates that discussions in the informal market offer psychological fulfilment and relationship benefits that are often lacking in official contracts (Olutuwise, 2023; Kuwornu et la., 2020).

From an RCT perspective, farmers evaluate these trader traits differently based on factors such as their income, access to knowledge, volume of commodities, and past experiences. For instance, a farmer with a limited income who needs money immediately and does not have a place to store will logically prioritize immediacy over price premiums. So, even if they have some flaws, SGTs are typically the choice to optimise utility use in the smallholder marketing (Mtisunge, 2023).

Additionally, social embeddedness does not contradict RCT but it complements it. If a farmer wants to keep relationships, a good reputation, or loyalty in the community, then selling to a recognised SGT makes sense which is consistent with "Extended Rationality" models, which consider cultural and social factors when making economic decisions (Scoones et la., 2019).

2.3.5 *Behavioural Extensions and Constraints*

RCT is a good way to explain things, but it is crucial to recognise when people act differently, especially in places with few resources. The way people act differently due to different circumstances such as:

(i) Bounded rationality: Farmers may not have all the information they need or the mental capacity to weigh all their options equally.

(ii) Heuristics and shortcuts: People may make decisions based on habits or what their friends do, rather than making systematic comparisons.

(iii) Risk aversion: Farmers generally prefer options they know over those that might pay out more but are less predictable on the market.

These behavioural limits do not render the RCT invalid; instead, they highlight the importance of considering reason in context. Makhura et al. (2020) suggest that when examining rationality in poverty, we should view it not as an ideal but as an opportunity.

2.3.6 *Implications for Hypotheses and Conceptual Framework*

The second hypothesis of this study is based on RCT:

H2: *The decision of farmers to sell to small traders is affected by the traders' functional duties, such as being close to farms, offering immediate payment, accepting ungraded produce, giving modest loans, letting farmers negotiate prices, and the price they offer.*

The basic idea is that smallholder farmers will logically approach these functional responsibilities, based on their specific requirements and limitations. The more closely the two match, the more likely it is that the decision to sell to an SGT. The RCT framework alludes to the fact that choices by smallholder farmers to sell to small traders is subject to small traders'

roles that enhances benefits of the services. The benefits may include faster payments, fairer pricing, and lower transaction costs.

The theory suggests that development players need to understanding that market decision come to reality only when the utility function of smallholder farmers matches the services provided by the trader. For instance, pushing for cooperative marketing without addressing late payments or rigid terms might not be effective, as it does not align with what farmers perceive as applicable. Branca et al. (2021) say that changes must reflect what farmers want in order to work as replacements or additions to informal market channels.

Rational Choice Theory is a valuable approach to understanding how smallholder farmers make marketing decisions when they have limited options. It posits that farmers strive to achieve the best results, whether that means earning more money, reducing risk, or gaining more trust in their relationships, even in places where they lack financial resources, access to information, or formal education (Ma & Abdulai, 2021). Therefore, farmers' decision to sell to small grain traders is not a failure of policy or a distortion of the market; it is often a logical response to the structural problems they face (Mango et la., 2021).

This study employs an RCT to determine how farmers evaluate the functional responsibilities of SGTs, including their proximity, payment speed, and flexibility with buyers, and then utilizes these ratings to inform marketing decisions. RCT contributes to the main theoretical foundations of this study, Transaction Cost Economics and Value Chain Theory, by demonstrating how economic incentives, trader roles, and farmer decision-making are interconnected in Malawi's informal grain markets.

2.4 Conceptualising Smallholder Commercialisation

Smallholder commercialisation is the process by which small-scale farmers transition from farming methods focused on subsistence to more participation in input and output markets

(Barrett et la., 2021). This change often involves reallocating land, labor, and capital from self-consumption to market-oriented production, enabling households to produce more for the market and increase household earnings (Elepu & Nalukenge, 2020).

Carletto et al. (2022) state that commercialisation is not a simple process. It occurs on a spectrum, ranging from semi-subsistence to completely commercialised farming. At its essence, it reveals the extent to which a household engages with the market, acting both as a buyer of inputs and a seller of produce. Several factors, including asset ownership, access to infrastructure and markets, institutional support, information availability, and social and cultural norms, influence this engagement (Mabaya et la., 2020).

Approximately 80% of rural households in Sub-Saharan Africa rely on subsistence farming as their primary source of income and livelihood. In this region, commercialisation is viewed as a means to reduce poverty, enhance food security, and transform rural areas (Jayne, Muyanga, & Sitko, 2019). However, the speed and openness of this change vary across different nations, for different crops, and among different types of farmers.

Malawi has been considering commercializing smallholder agriculture, particularly for commodities like groundnuts and soya, which are recognized for their export potential, nutritional value, and financial viability. However, most smallholders still operate within systems characterized by low inputs and outputs, and primarily sell their goods through informal channels, including small grain traders (Branca et al., 2021).

2.4.1 *Defining Commercialisation in Smallholder Contexts*

There are several different definitions of smallholder commercialisation in the literature. Pingali and Rosegrant (1995) state that it refers to the extent to which the farm household is engaged in the market economy. More recently, researchers have made this more

precise by including both output commercialisation (selling crops) and input commercialisation (buying better seeds, fertilisers, etc.) (Chikowo et la., 2022).

The Household Commercialisation Index (HCI) is the most frequent proxy for commercialisation. It shows the percentage of overall agricultural production that is sold on the market. However, scientists have observed that HCI falls short of capacity to assess finer details that show quality of engagement such as buyer diversity, or sustainability on its own. In view of this shortfall, supplementary indicators have been introduced to measure market frequency, customer categories, decision-making autonomy, and market earnings. (Sibhatu et la., 2020).

Ragasa and Ndlovu (2020) observe that the process of commercialisation happens at the household level, where household characteristics such as gender, landholding, and household income diversity play a significant role. For example, a household's decision on what portion of groundnuts or soya to sell and at what period of the season always has a bearing on the household's socio-economic characteristics.

2.4.2 *Smallholder Market Participation*

According to Otekunrin and colleagues, access to smallholder markets is facilitated by proper interventions that enable market participation, allowing them to sell their crops and generate income. Scientists agree that this is a complex subject crucial to the field of agricultural management (Otekunrin et la., 2019). This study aims to determine why smallholder farmers continue to use small trader channels as their primary market outlet, despite a campaign against small grain dealers. Smallholder farmers' concept of market access encompasses understanding the challenges they encounter when attempting to reach markets. Agricultural marketing is a long-standing method of trade that facilitates the movement of agricultural goods from producers to end-users (FAO, 2022). However, smallholder farmers

often face extra risks when they enter high-value marketplaces, which may balance the expected benefits and limit their ability to participate in the market (Ngenoh et la., 2019).

Small grain dealers need to be involved in bringing smallholder farmers closer to markets, which will help them learn more and make it easier for them to get to markets (Chinsinga & Chasukwa, 2021). FAO advocates that to understand why smallholder farmers still rely on small grain dealers, it is necessary to appreciate the principles of smallholder market access. Increasing market participation for smallholder farmers requires creating an environment for market access (FAO, 2022).

The concept of commodity aggregation highlights the importance of understanding the interactions between smallholder farmers and small grain traders, particularly in informal trading contexts. Small grain traders play a crucial role in the informal grain trade, which is particularly important in sub-Saharan Africa. For example, more than 80% of maize grain transactions in Malawi and Mozambique are done through informal trade (Zavale & Macamo, 2020).

Small grain dealers need to be involved in closing the gap between smallholder farmers and markets, which helps them earn a higher income. To understand why smallholder farmers still rely on small grain dealers, it is necessary to understand what smallholder market access entails. Additionally, facilitating access to marketplaces for smallholder farmers may increase their participation in the market.

2.4.3 *Drivers of Smallholder Commercialisation*

Studies have revealed important factors that encourage smallholder farmers to participate in markets. Some of the factors are:

Access to Markets and Infrastructure: Being close to marketplaces and having access to physical infrastructure, such as a good road network, storage facilities, and aggregation

centres, has been demonstrated to increase the likelihood that farmers participate in structured markets. It is observed that farmers in Malawi who live closer to rural trading centres or along paved roads are more likely to sell their crops and access input markets (Chinsinga & Matita, 2021; Chikhawo et la., 2024).

Asset Endowments: The size of the land, the number of cattle owned, and access to capital all have a significant impact on a household's potential to generate additional income and engage in business (Gebremedhin & Jaleta, 2020). Households with greater access to productive assets tend to prefer growing high-value crops and explore alternative means of generating income.

Input Use and Technology Adoption: Using better seeds, fertilizers, and machines is generally associated with commercialisation. Research in Uganda and Zambia shows that farmers who can get extension services and travel to farmer field schools use more inputs and are more market-oriented (Mabaya et la., 2020; Kabanza et la., 2022).

Institutional Support: Joining a farmer's organisation or cooperative can lower transaction costs, provide farmers more negotiating power, and connect them to structured marketplaces (Monyo et la., 2020). However, if cooperatives have weak governance or employ discriminatory practices, they may struggle to commercialise fully.

Gender and Household Dynamics: Gender is a crucial factor in the process of commercialisation. Women often face challenges in accessing land, controlling inputs, and navigating their surroundings, which reduces their likelihood of working in commercial agriculture (Doss et al., 2019). Most groundnut in Malawi is grown by women, but men make most of the decisions about marketing and income (Branca, et al., 2021).

Market Incentives and Price Trends*:* Stable and profitable prices encourage businesses to go public. Farmers may return to subsistence farming to mitigate their risk in unstable or

low-volume marketplaces. When done right, contract farming can mitigate pricing risk and encourage farmers to continue working with off-takers (Ma & Abdulai, 2021).

2.4.4 *Barriers and Constraints to Smallholder Commercialisation*

Even if it has a lot of potential, transforming smallholder agriculture into a business in underdeveloped nations like Malawi is challenging due to numerous structural and institutional problems. These limitations are generally interconnected and may lead to subsistence farming, even when market opportunities exist.

2.4.4.1 **Land Fragmentation and Tenure Insecurity.** One of the most significant problems with commercialisation is still finding land. Average landholding sizes in Malawi have gone down since the population is growing and family members inherit land (Chinsinga & Matita, 2021). Land fragmentation not only makes it more challenging to take advantage of economies of scale, but it also increases production costs. Also, farmers are less likely to make long-term investments or enter into contracts when land tenure regimes are unclear (IFPRI, 2023).

2.4.4.2 **Access to Credit and Finance.** When farming is commercialised, one typically has to pay for materials, labour, and equipment upfront. However, small farmers in Malawi and other similar economies face significant challenges in obtaining affordable loans. Smallholders are often viewed as high-risk borrowers by formal financial institutions due to their unstable incomes, limited collateral, and poor credit records (Ragasa & Ndlovu, 2020). Village savings and loans (VSL) groups are gaining popularity. However, they often fail to reach a significant number of people and typically offer small loans that are insufficient for real business (Chikhawo et la., 2024).

2.4.4.3 **Information Asymmetry and Extension Services.** Another important component in making decisions about commercialisation is having access to market and agricultural information. Many farmers are unaware of the current prices, quality standards, and potential customers (Mabaya et la., 2020). Many rural areas, such as Malawi, lack sufficient funding or personnel for extension services, which could help address these gaps. As a result, farmers may struggle to access profitable markets or may be vulnerable to exploitation by traders who perceive an opportunity (Barrett et la., 2021).

2.4.4.4 **Post-Harvest Losses and Storage Challenges.** Poor storage facilities and bad post-harvest handling methods cause significant losses, especially for legumes like groundnuts and soya, which are prone to mould and pests. These losses reduce the marketable surplus, which slows down the push to commercialise (FAO, 2024).

2.4.4.5 **Institutional and Policy Gaps.** Inconsistent agricultural policies, poorly regulated markets, and insufficient farmer input in policy-making all make it harder to commercialise. For example, sudden changes in minimum pricing or export bans that are not planned can create uncertainty for both farmers and traders (Chinsinga & Matita, 2021). The insufficient enforcement of contracts and the lack of effective dispute resolution mechanisms make it even less likely that people will participate in the market (Glauber et la., 2020).

2.4.5 *Role of Informal Markets in Commercialisation*

Policy narratives often focus on developing formal markets, but in practice, most smallholder farmers in Malawi and Africa primarily work with informal market participants, especially small grain traders (SGTs). These traders play a crucial role in making goods available for sale, particularly in areas where formal marketplaces or cooperatives are scarce.

Farmers who need cash right away might use informal markets to get what they need quickly and easily. Formal buyers sometimes want a minimum amount, grading, or registration. SGTs, on the other hand, work at the farm gate level and accept small amounts of goods and cash-on-delivery terms (Mtisunge, 2023). This flexibility is particularly beneficial for farmers who lack sufficient funds and must balance their immediate needs with market uncertainties.

Research in Kenya (Njiru et la., 2020) and in Ghana (Asante et la., 2020) indicates that smallholders rely on informal traders to access the market, particularly during periods of economic hardship. IFPRI (2023) suggests that more than 70% of smallholder legume sales in

Malawi happen outside of official channels. It is argued that these merchants are unclear about prices or take advantage of farmers, but they also assume risk, lower transaction costs, and provide relational continuity over multiple seasons (Mango et al., 2021).

Because informal markets remain important, policies should shift from attempting to eliminate them to making them more efficient and accountable. Programmes that register and teach informal traders, provide them with scales to weigh goods, or connect them to digital platforms have proven to have potential in making trade more transparent without compromising their adaptability to local conditions (Branca et al., 2021).

2.4.6 *Relevance of Commercialisation to Groundnuts and Soya Value Chains in Malawi*

Groundnuts and soya have become important legumes in Malawi due to their good agricultural and business potential. The government and development partners have attempted to increase revenue through value chain interventions, contract farming, and the establishment of aggregation centres (FAO, 2024). These projects include AGCOM, ASWAp-SP II, and the TRADE programme.

Despite these efforts, most smallholder farmers continue to rely on informal dealers because they are easily accessible, farmers can negotiate prices, and they cannot access alternative outlets. Chikhawo et al. (2024) found that even in places where formal buyers were present, farmers chose SGTs since they paid faster and had fewer rejections. Branca et al. (2021) found that cooperatives and aggregation centres typically lacked the outreach and trust needed to attract a significant amount of business from smallholders who lived far away.

Seasonal price reductions, the potential of adulteration, and competition from imports make it even harder to sell soya. As Ragasa and Ndlovu (2020) observe, price fluctuations make smallholders less likely to produce goods for the market, and the arrival of cheaper soya imports makes prices less stable in the country. Additionally, there have been reports of

adulteration in informal marketplaces, including the blending of soya with other materials, which makes bulk purchasers and processors who care about quality less likely to buy (IFPRI, 2023).

Groundnut producers face challenges with aflatoxin management and grading standards that many struggle to meet without incurring significant expenses. Branca et al. (2021) note that aflatoxin contamination remains a significant issue in Malawi's groundnut value chain, particularly for smallholder farmers who lack access to modern post-harvest methods. Monyo et la. (2020) also note that following strict quality and grading standards requires purchasing drying, sorting, and testing equipment, which is not affordable for individual farmers.

In this situation, small grain traders (SGTs) are pretty important because they offer flexible terms, although their dealings are not always fair. SGTs are more accessible than formal buyers, as they often purchase ungraded produce, pay cash immediately, and conduct business directly at the farm gate (Mango et la., 2021).

2.5 Understanding Informal Agricultural Trade

Small grain traders (SGTs) play a crucial role in informal trade systems in Malawi and the rest of the region. They are generally the first point of contact for smallholders in the market. They offer essential services, such as picking up goods at the farm gate, accepting cash on the spot, and purchasing ungraded produce (Chinsinga & Matita, 2021). Although their activities are not regulated, they are shaped by local customs, and business dealings are based on trust. Chinsinga and Matita (2021) argue that these partnerships are crucial in areas where state extension services and formal buyers are scarce or non-existent. This situation makes SGTs a necessary part of the agricultural value chain.

Mango et al. (2021) observed similar trends in Uganda, where informal market intermediaries provided farmers with inputs, market knowledge, and even loans for

transportation, particularly in remote districts. Traders make it easier for smallholders who cannot work with established institutions to get involved in the market. According to Kabanza et al. (2022), small traders have proved more effective in linking smallholder farmers to processors than farmer cooperatives due to their high responsiveness, mobility, and general operational efficiency.

However, these roles do come with their own set of problems. Without contracts and government oversight, traders may act in their own best interests, such as adjusting prices, cheating during weighing, and failing to pay on time (IFPRI, 2023). Even if hazards exist, these linkages are more flexible during crises or crop shocks, as they are informal, thereby making them stronger than inflexible formal systems. For instance, during the COVID-19 pandemic, informal traders in Malawi were able to continue operating even when formal buyers stopped purchasing due to logistical issues, illustrating the importance of informal systems in sustaining the food market (Branca et al., 2021).

2.5.1 *Key Features and Transaction Characteristics of Informal Trade*

Informal agricultural trade in Sub-Saharan Africa has distinct traits and characteristics that resonate with the people involved and the economic environment. Careful study of these traits reveals why informal trading continues to dominate smallholder marketing (Scoones et al., 2019). One aspect that distinguishes informal trading is its flexibility. Small traders can quickly respond to changes in the market environment because they do not have permanent infrastructure, making it easier for them to react to changes in prices and logistics (Mango et al., 2021).

Cash transactions at the farm gate are a standard feature. Most of the time, the transactions are completed promptly with no paperwork or contracts required. Farmers like this setup because it is easy to use and provides them with immediate cash, which helps them to cover expenses such as food, healthcare, and education (IFPRI, 2023). Informal traders also

buy a wide range of produce, including ungraded and non-standard types, making it easier for smallholders to transact with them (Chikhawo et al., 2024). Traders often cut prices to compensate for this tolerance, citing factors such as danger, perishability, or the need to re-sort.

Another important aspect of informal trading is that it provides an opportunity for farmer-trader negotiations. At the time of sale, prices are often set based on a visual inspection, current demand, and past business relationships. There is frequently no mention of standardised prices or quality grades for goods, which makes the process very subjective and open to change (Branca et al., 2021). However, research suggests that traders may offer repeat suppliers who consistently provide high-quality goods loyalty-based bonuses or better terms (Mango et al., 2021); illustrating the extent to which personal, informal trading networks are influenced by trust and history, as these factors significantly impact how people respond in transactions.

Another important trait is the limited use of official weighing or measuring tools. Traders typically utilize makeshift tools like sacks or tins, which can be easily changed or are not always reliable. Farmers are concerned about cheating while weighing or undercounting. However, many still accept these conditions because the alternative—taking their crops to distant formal markets—is usually more expensive and takes longer (Kabanza et al., 2022). In these situations, the ease and availability that informal traders offer are more important to the farmer.

Informal trading has lower transaction costs than formal channels. Smallholders are exempt from paying for certification, transportation, packaging, and registration. However, these savings are offset by additional hidden costs, such as uncertainty about some costs, the inability to resolve disputes quickly, and vulnerability to market exploitation (Chinsinga & Matita, 2021). Informal merchants also face their own challenges, including insufficient

working capital, exposure to price fluctuations, and seasonal surpluses or shortages affecting the profitability of their businesses.

Informal trade often occurs in small areas, such as between individuals in villages or nearby settlements. This closeness facilitates easier monitoring, fosters social capital, and reduces information asymmetry. Farmers in Malawi know many SGTs personally, which leads them to demand fairness and stability (Mtisunge, 2023). However, these agreements can also fall apart in the face of economic shocks, political instability, or health crises, such as Covid-19, which disrupted many informal networks (World Bank, 2021).

The transactional aspects of informal agricultural trading reveal both positive and negative aspects. Refer to Table 2 below for a summary comparison of key features in informal versus formal agricultural trade systems, highlighting transaction types, risk factors, and access barriers.

Table 1

Characteristics of Informal and Formal Soya Markets

Feature	**Informal Trade**	**Formal Trade**
Payment Terms	Immediate, Cash-Based	Delayed, Often via Banks
Quality Standards	Flexible, Ungraded Accepted	Strict Grading Required
Contracts	Verbal Agreements	Written Contracts Required
Price Determination	Negotiated at Sale	Set by Buyers or Markets
Weighing Methods	Informal, Visual Estimation	Certified Scales
Entry Barriers	Low	High (certification, volumes)
Market Access	Local, Farm-gate	Urban, Structured Platforms

Adopted from (Chikhawo et al., 2024)

2.5.2 *Risks, Challenges, and Governance Issues in Informal Trade*

Although informal agricultural trading plays a key role in the socioeconomic aspects of rural populations in Sub-Saharan Africa, it is confronted with several challenges, particularly regarding governance for both smallholder farmers and small traders. Some of these problems are price fluctuations, uneven access to information, weak enforcement tools, and weak governmental support (Sinyolo et al., 2020; Alemu & Workneh, 2020). Informal players are generally not subject to government rules, which makes them vulnerable to being taken advantage of, having their plans disrupted by adverse weather conditions, and having policies that do not align with their needs (Tabe-Ojong et al., 2022).

Price instability is one of the biggest concerns for smallholder farmers who do informal commerce. Prices in informal marketplaces are primarily based on demand and supply rather than on structured pricing systems. This uncertainty can make it hard to plan investments in farms and result in low productivity (Chinsinga & Matita, 2021; Chamberlin & Jayne, 2020). Makau and Njeru (2021) observed that the lack of proper storage facilities and the limited access to formal loans lead to smallholder farmers being vulnerable to the need for immediate cash during harvest.

One of the problems with governing informal markets is that there are limited legal options for enforcing contracts and settling disputes. Transactions are based on trust and agreements are informal and flexible which make them unreliable in competitive or troubled markets (Louw et la., 2021; Branca et al., 2021). Farmers are often dissatisfied with the lack of transparency in weighing, grading, and pricing, but there are limited options for institutions to address these concerns (IFPRI, 2023).

Additionally, informal trade networks are particularly vulnerable during times of crisis. The COVID-19 pandemic, for instance, messed up regular trade routes, made it harder for people to move around, and stopped informal traders from doing business, showing how vulnerable they are to big shocks (Sinyolo et la., 2020). Countries such as Ethiopia, Kenya, and Zimbabwe have faced similar challenges during periods of civil instability or extreme weather events (Alemu & Workneh, 2020).

In terms of policy, informal traders are often excluded from plans for agricultural growth. Most national agricultural investment plans (NAIPs) focus on formalised value chains and do not take into account the role of informal actors, even though they are important for collecting more than 60% of legume crops in countries like Malawi and Uganda (IFPRI, 2023) (Ragasa et la., 2021). At times attempts by regulators to formalize these actors, such as requiring them to obtain a license or pay taxes, have backfired by making people less likely to participate or pushing commerce even farther underground (Tschirley et la., 2019).

Researchers suggest employing hybrid governance models to address these issues. These models maintain the freedom of informal trade while providing mechanisms to hold the players accountable, while assisting them. These include trader registration, methods for dealing with complaints, mobile-based market information platforms, and light-touch regulation that focuses on creating capacity rather than punishing individuals (Makau & Njeru, 2021). It is expected that with these changes, informal grain traders will transform into trusted and efficient actors in smallholder commodity trading.

Investments should be made to address risks and governance issues for smallholder commercialisation. Informal players will continue to operate in ways that hinder their growth and put farmers at risk of structural problems if no action is taken to support them (World Bank, 2021).

2.5.3 *Opportunities for Policy Reform and Hybrid Market Structures*

The dominance of informal trading is posing a challenge for policy reforms for opening up agricultural markets for smallholder farmers. Informal markets have long been perceived as inefficient or exploitative; however, an increasing number of scholars and practitioners agree that the focus should be on transforming these systems rather than eliminating them (Makau & Njeru, 2021). Policy changes that acknowledge the valuable role of informal actors, including small grain merchants (SGTs), can make markets more connected, make things fairer, and help agriculture become more commercial (IFPRI, 2023).

Increasingly, people are suggesting that hybrid market structures, which combine the flexibility of informal networks with the efficiency and accountability of formal institutions, are the best approach. These initiatives include some regulatory measures that encourage traders to register voluntarily, obtain certification, and share information without imposing strict compliance rules that might exclude grassroots actors (Louw et al., 2021). Kenya and Uganda have experimented with community trader organisations and digital markets, achieving some success. These have made it easier to trace goods while still providing services in specific areas (Alemu & Workneh, 2020).

Including informal traders in larger efforts to improve the value chain is another way to make changes. Most agricultural projects in Malawi, for instance, focus on organised marketplaces and formalised cooperatives. IFPRI (2023) states that more than 60% of the trade in groundnuts and soya still goes through unofficial routes, nonetheless. Knowing this, policy should focus on teaching traders how to handle their goods after harvest, set fair prices, and maintain accurate records, rather than only creating formal aggregation facilities (Chinsinga & Matita, 2021).

Digital technology can also be used to formalize some trade functions without altering the way informal trade operates. Mobile platforms can share live price information, make

electronic payments, and support virtual certification programmes. All of these things assist lower the risks of transactions and the amount of information that is not available to everyone (Ragasa et la., 2021; Branca, et al., 2021). Kenya's DigiFarm and Ghana's mFarm are examples of digital platforms that have demonstrated how technology can bridge the gap between the formal and informal sectors, fostering trust and openness (Sinyolo et al., 2020).

Reform that works must also address the lack of rules and institutions governing informal trade. Many traders lack a voice in national agricultural discussions, which makes it more challenging for them to access subsidies, training, and loans. Setting up informal trader cooperatives or federations can provide traders more leverage when it comes to negotiating and making policy (Tschirley et al., 2019). The Informal Traders Forum in South Africa, for instance, has had an impact on how cities set trade rules and plan market infrastructure (Louw et al., 2021).

Considering that informal players in the value chain are confronted with several risks, the need for innovations for them to access risk mitigation packages such as risk-sharing arrangements and insurance plans is evident. Insurance based on the weather such as weather index insurance, credit guarantees, and emergency liquidity reserves could help traders and smallholders deal with shocks from outside the market, making them more resilient and encouraging them to invest. However, these tools must be designed with those who struggle with reading and have limited financial resources in mind (Alemu & Workneh, 2020).

In conclusion, pushing for hybrid market reforms that legalize and encourage informal trading is a realistic option to improve rural market systems. Instead of top-down formalisation plans, policymakers should support changes that include everyone and take into account the real-life experiences of both farmers and traders (Chamberlin & Jayne, 2020; World Bank, 2021). Bringing informal trade governance in line with aspirations for commercializing

agriculture will be important for improving rural living conditions and creating food systems that include everyone.

2.5.4 *Smallholder Perceptions and Trader-Farmer Relations*

To understand why farmers prefer to work with small grain traders (SGTs) in informal marketplaces, it is necessary to comprehend how smallholders perceive traders and how the two interact. Past experiences, cultural norms, economic demands, and local knowledge all impact these impressions, which in turn affect the level of trust and interaction between parties in informal marketing systems. This section reviews the different aspects of farmer and trader impressions, transaction features, reputation, trust, and power imbalances. The study also explores the social and economic roots of linkages between the trader and the smallholder farmer and reflecting on how the linkages affect fairness and efficiency and how they relate to policy, basing on studies from Malawi and other Sub-Saharan African nations.

Both transactional and relational aspects affect how farmers think about SGTs. Prices, accuracy of weighing, and payment conditions are all transactional considerations. Trustworthiness, fairness, past experiences, and local reputation are all relational factors (Phiri et la., 2023; Ragasa et la., 2021). These ideas do not stay the same; they change over time based on how often people interact with them, what the community says, and how quickly traders respond to problems or crop failures. Phiri et al. (2023) found that dealers in Malawi who regularly gave clear weighing and timely payments built more loyal networks of farmers, even when their prices were slightly lower than those of their competitors.

The level of trust between farmers and SGTs has a direct effect on the level of trading in the market. Farmers who believe traders are dishonest or exploitative often seek alternative methods to sell their goods, such as joining cooperatives, participating in local marketplaces,

or stockpiling until prices rise. However, this may come with more risk and opportunity costs (Branca et al., 2021). Kabanza et al. (2022) demonstrated that in Zambia, smallholders abandoned several cash crop value chains entirely because they lacked trust in the middlemen. Instead, they chose to cultivate for their own needs or sell directly to consumers, even though they sold less.

2.5.5 *Access to Market Information*

Additionally, having access to accurate market information significantly alters how farmers perceive dealers. Farmers are better able to judge if SGTs' offers are reasonable when they know the current market prices, quality standards, and trading conditions. The Agricultural Transformation Agency's pricing recommendation system made farmers in Ethiopia more confident and less reliant on a single buyer (ATA, 2021).

Digital platforms and mobile technology alter how smallholders perceive traders. For instance, in Kenya and Nigeria, digital apps that let farmers compare prices, get real-time market data and send messages to traders have made it easier for people to trust each other and get the information they need (Ochieng et la., 2021). These tools provide farmers with additional information to help them make more informed selling decisions, ensure dealers are honest, and offer them more options for buyers. When applied correctly, digital technologies give smallholders more control. Louw et al. (2021) found that digital receipts from mobile trader apps helped farmers and traders trust each other more in Ghana, especially when payments were delayed. These new technologies do not replace old connections; they provide a degree of accountability that changes how farmers see things.

Perceptions change over time due to both personal experiences and the collective memories of a group. Farmers typically discuss their experiences with their neighbours, which can influence how new people perceive specific traders. Community radio stations in Rwanda

have been utilised to share information about prices and how to settle disputes, which has helped distant agricultural communities have a better understanding of fair trading practices (Mugisha et la., 2023).

2.5.6 *Socio- Cultural Dimension*

Cultural and communal standards also influence the relationship between traders and farmers. Trade transactions in many SSA situations are based on social relationships rather than just market reasoning. Farmers often prefer to work with traders from their own ethnic or linguistic groups because social norms may serve as a substitute for formal contracts (Makau & Njeru, 2021). These informal punishments are a strong way to keep people in line. Traders who cheat farmers could harm their reputation not only in the village but also in the entire area where they conduct business, which provides a reason for them to be fair in their dealings (Tschirley et al., 2019).

Social embeddedness and cultural familiarity are crucial in shaping perspectives. In many rural areas of Sub-Saharan Africa, traders and farmers have relationships that go beyond business transactions. They may participate in the same community, share familiar links, or even hold similar religious beliefs. These links help people understand one another better and reduce the likelihood that they will act in their own best interest (Scoones et al., 2019; Tadesse et la., 2021). For example, smallholder farmers in Tanzania say they would rather sell to local traders they know, even if they are offered lower rates, because they feel safer doing business with them (Njuki et la., 2020).

However, there may also be problems with being socially embedded. When personal relationships are more important than institutional mechanisms for holding people accountable, disputes can be settled informally, which, in most cases, tends to favor the more influential

party. In the study by Ferris et al. (2020), women farmers were not motivated to report concerns with traders because traders enjoyed more favour from the community than the women.

2.5.7 *Policy Interventions and Media*

The way farmers think also changes in response to the broader policy and institutional context. When governments or donor programmes support established marketplaces or aggregation centres, for instance, farmers may start to view informal traders as outdated or unlawful. However, this way of thinking overlooks the flexibility and immediacy that SGTs offer, which structured markets typically lack (Chinsinga & Matita, 2021).

When designing policies to help small farmers enter the market, it is crucial to consider the interactions between traders and farmers. Improvements to infrastructure, such as feeder roads, rural markets, and storage depots, only partially solve the problem if the way people conduct business remains unfair or exploitative. In nations such as Uganda and Rwanda, programmes that teach traders and farmers how to communicate effectively, negotiate fairly, and adhere to ethical values have been effective (Mugisha et al., 2023).

Mugisha et la. (2023) argue that policy stories about formalisation can change how people at the bottom perceive things. When the government labels informal trading as unlawful or undesirable, it may unintentionally harm SGTs and make it harder for people to trust one another. On the other hand, programmes that include SGTs in training, certification, and information sharing promote inclusion. For example, the Agricultural Sector Transformation and Growth Strategy (ASTGS) in Kenya encourages informal traders to participate by developing local market infrastructure. The involvement of small traders in market infrastructure has led to the creation of a more transparent system, altering how people in the community perceive things (Ministry of Agriculture, Kenya, 2022).

The traders' views are also essential, but they are not always well reflected in writing. Many small grain traders face challenges due to fluctuating prices, post-harvest losses, and uncertain supply quantities that are difficult to estimate accurately. Interviews with traders in rural Malawi Mtisunge (2023) reveal that they view establishing long-term relationships with farmers as a means to sustain their business, not merely a means to market their goods. According to Mtisunge (2023) traders who provide financing or transportation do so to ensure a steady supply in competitive areas, and many of them work on very narrow margins, which contradicts the notion that they are merely greedy middlemen. The Ministry of Agriculture in Zambia included SGTs in warehouse receipt system training, which resulted in improved compliance with grading requirements and increased trust between farmers and purchasers (Kabanza et al., 2022).

Government programmes that certify small businesses are beginning to change how people perceive traders. For example, smallholder farmers in Uganda viewed traders who had been trained and certified by the Ministry of Agriculture with high respect (Ferris et al., 2020). The certified traders were considered professionals and could be trusted by the smallholder farmers.

Media and public conversation make perceptions even stronger. Trader exploitation cases, such as tempered scales, price collusion, or rude behaviour, often spread swiftly through radio, social media, and word of mouth, changing how others in the community perceive traders. These stories might deter new farmers from working with traders, but they also put pressure on some traders to be honest. Mtisunge (2023) argue that traders in Malawi have been increasingly using mobile weighing scales and clear pricing boards to avoid damaging their reputations.

2.5.8 *Demographic*

Makau and Njeru (2021) noted that the socioeconomic status of smallholder farmers plays a significant role in how they perceive traders. The expectations and ability of farmers to judge small traders differ from one to another based on education, gender, farm size, and location, among other factors. For example, farmers who are more knowledgeable about the market and have more experience with it may be less likely to sell under pressure and more likely to be skeptical of prices that fluctuate frequently. On the other hand, less knowledgeable farmers may be more concerned with completing tasks efficiently and being comfortable with them than with receiving price premiums (Makau & Njeru, 2021; IFPRI, 2023). Actions that help farmers become more informed and skilled at negotiating could change how people perceive trade, making it more competitive.

Education and sharing information are significant ways to change the way farmers and traders interact. When farmer training programmes include lessons on how to analyse the market, set quality standards, and read and write basic business documents, it becomes easier to judge traders. FAO (2022) examined a commercialisation project in Kenya that focused on legumes and found that trained farmers not only improved their post-harvest techniques but also identified new buyers, which gave them more leverage in negotiations and increased their farm gate income by 17%.

Farmers' contacts with traders are also affected by their degrees of education and literacy. Farmers with greater education are typically more aware of their rights, more likely to negotiate terms, and better equipped to identify and address unfair actions. Agyeman et al.'s (2020) study in Ghana found that farmers with at least a secondary education were 25% more likely to seek alternative buyers if they believed they were being mistreated. To the contrary,

those with lower education proved to be susceptible to ill treatment by the traders and likely have limited capacity to negotiate with traders.

The way men and women interact with one another also affects the quality and nature of trader-farmer relationships. Women farmers typically face structural problems that make it difficult for them to access resources, obtain finance, and learn about the market. Because of this, they rely more on local traders who can get to the farm gate. This dependence could exacerbate power imbalances and increase people's vulnerability to price manipulation (Doss et al., 2021). Research in Malawi and Ghana indicates that women are less inclined to haggle for better pricing and are more likely to accept whatever is offered, as they often need the money immediately or lack alternative options (Asare et al., 2022).

The situation is even more complicated because of gender issues. Women farmers often depend more on farm gate traders, as they typically lack access to transportation or market information thereby making them more vulnerable to bad deals. However, Sinyolo and colleagues (2020) observed that the women farmers rely on informal networks that share information on prices and traders in the area. Sinyolo et al. assert that the preference of female farmers is to deal with traders they know and are familiar with and they are confident that they are not disadvantaged.

2.5.9 *Availability and type of credit provided*

Studies have indicated that both the type and amount of credit offered by a trader affects market access decision of a smallholder farmer. In places where conventional credit institutions are unavailable, SGTs often provide informal credit in the form of advance payments. Providing credit to smallholders can save lives during difficult times, but it can also make farmers dependent on it, which they perceive as unfair. This phenomenon has been

observed in Burkina Faso and Senegal, where advance payments are sometimes linked to sales at lower prices (Badiane et la., 2020).

2.5.10 *Regional integration*

Regional integration and cross-border trade also influence how people perceive things. Traders from nearby nations often enter local marketplaces in locations close to borders, adding another level of difficulty for farmers as they assess the risks of doing business with people they do not know, who may not be trusted because among other things they are neither registered with nor regulated by the authorities of the country they are buying from. Phiri et la., observed that trading across the border of Malawi and Zambia in the northern Malawi has been characterised with price increases and disagreements (Phiri et al., 2023).

2.5.11 *Farmer - Trader relationship*

The ability to negotiate is another crucial factor in the interaction between traders and farmers. Unlike formal buyers who set prices, SGTs often allow farmers to negotiate, which they view as a symbol of respect and economic power. Negotiating even little pricing changes might help people feel like they are being treated fairly and included (IFPRI, 2023). Research by Louw et al. (2021) in Nigeria indicated that 78% of smallholders preferred informal markets because they could negotiate terms with buyers in person.

Farmers also value things beyond monetary gains, making selling to SGTs seem much more helpful (Mtisunge, 2023; World Bank, 2021). These functions make it easier for households with limited resources to do their jobs, plan their logistics, and save time. When farmers and traders work together effectively, mutually beneficial outcomes typically occur for both parties. Traders may offer farmers informal advice by sharing information about pricing changes, weather forecasts, or planting schedules. In turn, committed farmers may give these traders more business during busy times, even if other purchasers offer better pricing (Barrett

et al., 2021). This partnership strengthens local market systems, enabling them to better cope with external shocks.

Building trust takes time and occurs through multiple transactions. Kabanza et al. (2022) found that in Zambia, farmers were more inclined to keep doing business with dealers who were reliable throughout several seasons, even if alternative traders offered better pricing. This long-term involvement helped maintain market stability, even in the absence of formal contracts.

Many people believe that trust is the key to maintaining these partnerships over time. The study by Tschirley et al. (2019) in Mozambique found that new traders in the area would be reported to village officials if they were found to be cheating, while familiar traders in the area would be excused if found with similar issues. It can be concluded that the way conflicts are resolved is dependent on the social fabric developed between traders and farmers (Tschirley et al., 2019).

2.5.12 *Selling approach*

Group-based marketing methods and collective action have also shaped farmers' views of and interactions with traders. Farmer-based organisations (FBOs) can bring together farmers, secure higher pricing, and establish group standards that make it more difficult for traders to exploit farmers. Dedehouanou et al. (2020) found that in Rwanda, soya farmers who sold their crop through cooperatives had fewer problems with traders and could get price information and weighing equipment more easily. Even in FBO-mediated trade, confidence and transaction history remain vital, especially in communities where people are unfamiliar with reading or have limited knowledge.

The timing of sales is a crucial factor that influences the interaction between traders and farmers. Prices often decrease during peak harvest times because the market is

oversaturated, which makes people feel like they are being taken advantage of even more. In response, traders reduce their prices because they lack sufficient storage space and to minimize post-harvest losses. Mango et al. (2022) discovered that farmers were less happy when they sold their crops after a glut in Malawi and Zambia. On the other hand, dealers who offered delayed payment or storage arrangements during gluts were perceived in a more favorable light, even if those arrangements carried some risk.

Seasonality also affects liquidity limits. Farmers often have to sell their produce immediately when school fees, medical bills, or loan payments come due, coinciding with harvest time. SGTs who offer cash on delivery become essential, which leads people to view them as required partners, even when the terms are not always favorable (Branca et al., 2021; IFPRI, 2023).

2.5.13 *The role of Infrastructure*

Chisinga and Matita, (2021) observe that infrastructure problems remain a significant issue. SGTs are typically the sole buyers due to poor rural road networks, uncertain storage, and limited financial services. In certain situations, farmers may still view traders as necessary even when the contract conditions are unfavourable.

2.5.14 *The Role of Youth Participation*

Ultimately, the involvement of young people in farming and trading is transforming the way people interact with one another. Young farmers are more likely to utilize digital tools and challenge established relationships that are unclear (FAO, 2024). Studies have shown that the youth easily adapt to multiple marketing models and means of payment. This is more evident with educated youth who appreciate and are conversant with the use of mobile technology for payment and accessing market information (Sinyolo et al., 2020).

In this section, we reviewed the perceptions of smallholder farmers towards traders and the relationship between the two, as documented in the literature. The studies have proven that the perception of smallholder farmers is premised on several characteristics within them, including the farmer and the environment in which the farmer operates, such as the location of the farm. Chinsinga and Matita (2021) argue that the practice of traders wearing two faces, where they are viewed as ideal partners on one hand and untrustworthy on the other, presents a challenge that needs to be addressed. In the next section, the study reviews how the concept of market liberalisation has affected smallholder markets in sub-Saharan Africa, with a particular focus on Malawi.

2.6 Theory of Market Liberalisation

In this section, the study examines how the Market Liberalisation Concept impacts market access for smallholder farmers in the region and in Malawi. Studies suggest that the market liberalisation theory is crucial in the agricultural industry for understanding how policy changes affect smallholder farmers, particularly in developing countries (Srinatha et al., 2024). Neoclassical economic ideas led to the development of this market liberalisation concept, which was then advocated by a group of economists (Friedman and Hayek) and policy organisations (the IMF and World Bank; Matita & Chirwa, 2019).

Prior to market liberalization, many African governments employed licensing systems, price controls, and direct government intervention in commodity trading to maintain stable prices and protect both producers and consumers (UNCTAD, 2019). However, during the period of economic reform and structural adjustment, several nations implemented policies aimed at opening up markets, eliminating state monopolies, reducing trade barriers, and increasing private sector involvement in agricultural markets (Siddiqui, 2019).

The shift from a state-controlled economy to a market-led one has brought numerous private-sector players into the grain market, completely changing how farmers access and interact with markets (Chapoto et la., 2019; Andae et la., 2021). To understand how smallholder farmers perceive small traders and the limited market options they face in liberalized settings, it is essential to understand the origins of market liberalisation and its evolution.

Srinatha et al. (2024) argue that there is evidence of several benefits realised from market liberalisation, while on the other hand, there are challenges that need to be addressed (Srinatha et al., 2024). In their study, Srinatha and colleagues concluded that while farmers may have easy access to markets as a result of liberalisation policies, weaker farmers with limited resources and inadequate market information may face challenges in accessing the market. Olutuwise (2023) collaborates with Srinatha and colleagues arguing that liberalisation has made some farmers more vulnerable in the market.

The extent to which governments have completely or partially stopped selling grain still affects important factors, such as access to credit, price negotiations, and distance to other markets. These are especially important for rural farmers who lack sufficient infrastructure or bargaining power (Mabaya et la., 2021).

2.7 Commodity Aggregation

Commodity aggregation is a valuable and analytical approach to discussing how smallholder outputs are combined to address issues related to size and market access (Amrouk et la., 2019). The concept of aggregation is based on the notion that smallholder farmers cannot produce as much because they lack sufficient resources, resulting in the sale of only a small portion of their output, which is a relatively small part of their overall household income. As a result, commodity aggregation is a crucial tool that enables smallholder farmers to access markets by allowing them to combine their crops for bulk sales. In places like Malawi, where

smallholders operate in small, fragmented areas, aggregation can help overcome challenges such as high transaction costs, limited bargaining power, and restricted access to structured markets (Chinsinga & Chasukwa, 2021). Farmers are better able to meet the needs of bigger customers for volume, quality, and consistency when they pool their outputs through cooperatives, associations, or informal trader networks.

Aggregation not only resolves logistical problems but also enables farmers to obtain better prices, reduce transportation costs per unit, and access value-added services such as storage, processing, and certification (AGRA, 2020). For example, well-organised aggregation facilities can be places where quality control can be employed, find out what the best prices are, and negotiate prices as a group. Well-coordinated aggregation facilities enable the achievement of economies of scale, which can help farmers generate more revenue and increase their resilience, especially in legume value chains such as groundnuts and soya, associated with high post-harvest losses and poor quality (FAO, 2022).

However, the institutional structures surrounding aggregation have an impact on its effectiveness. In many rural areas of Malawi, aggregation is often informal and conducted by small traders or brokers who act as intermediaries between farmers and traders. These traders are crucial for transporting goods to market, but they may charge lower prices or exploit information gaps, which raises questions about the fairness of these systems (Zavale & Macamo, 2020). Farmers' groups, warehouse receipt systems, or digital platforms should formalize the aggregation process to facilitate easier tracking and monitoring. Still, this requires investment in infrastructure, governance, and training for farmers to ensure its sustainability (Ngenoh et la., 2019).

Smallholder farmers typically cultivate small amounts of crops, which are insufficient to attract major buyers or make the cost of reaching distant marketplaces attainable (Chamberlin & Jayne, 2020; Liverpool-Tasie et la., 2020). It is argued that the practice of

aggregation provides an opportunity for small quantities of outputs from several smallholders to be put at one point for economic logistics. The literature discusses various types of aggregation, including farmer cooperatives, lead farmer models, and private trader networks. It also discusses the challenges that smallholders face when attempting to utilize or trust these options (Mabaya et la., 2021). To create marketing systems that are accessible to everyone and help small-scale producers reach more customers and reduce their costs, it is essential to identify the factors that prevent farmers from utilizing other aggregation channels (Andae et la., 2021).

2.8 **Empirical Evidence on Legume Value Chains in Malawi**

Producing legumes, especially groundnuts and soya, is an essential aspect of Malawi's agricultural economy. They provide millions of smallholder farmers with both food and income. Soya and groundnuts are both referred to as nitrogen fixing crops thereby improving soil fertility in places they are grown. The two crops are also known for improving the household nutrition as they have high protein (IFPRI, 2023). FAO, 2024 observes that the two crops are important cash crops for local and export trade (FAO, 2024). However, the value chains of these two commodities still face numerous issues with their structure, institutions, and market, which render them less effective.

This section provides in-depth details of the soya and groundnut value chains in Malawi, utilizing data from recent value chain studies and other relevant literature. It examines trends in production and commercialisation, the roles and interactions of actors, market structures (both formal and informal), transaction dynamics, value capture, policy and institutional frameworks, and new ideas in the legume sector. The section also examines how these factors influence the decisions of smallholders, particularly regarding participation in the

market and whether to sell to small grain traders (SGTs) or more formal players, such as processors, cooperatives, and exporters.

2.8.1 *Production Trends, Regional Distribution, and Agro-Ecological Suitability*

Like any other crop, the production of soya and groundnuts in Malawi is influenced by several factors, including institutional, agro-ecological, and socio-economic factors. This section examines how production patterns have evolved, how regions have become more specialized, and the challenges that affect productivity and adoption on farms.

2.8.1.1 **Production Trends.** Over the past 20 years, the production of soya and groundnuts has fluctuated, but it has generally increased. This is due to both market-driven incentives and donor-supported interventions. According to Malawi's Annual Agricultural Production Estimates (APES), soya production increased from approximately 110,000 metric tonnes in 2010 to more than 250,000 metric tonnes by 2022. Groundnuts production, on the other hand, has stayed stable at roughly 350,000–400,000 metric tonnes in recent years (MoA, 2023).

The production growth is as a result of increased demand from local processing companies, particularly for chicken feed and oil production, as well as the opportunity to sell to neighbouring countries such as Kenya, Tanzania, and Zimbabwe (AGRA, 2022). The resurrection of groundnuts has benefited from improved access to seeds (although many farmers still use recycled seeds), as well as increased extension services through the staff and lead farmer model. Farmers have also been encouraged because of its nitrogen-fixing and soil fertility benefits (World Bank, 2021).

Although improvements have been made, yields are still significantly lower than their potential yields. The average yield of soybeans is 1.2 to 1.5 tonnes per hectare, but with proper farming methods, the potential output can reach 2.5 to 3.0 tonnes per hectare (Doss et la., 2021).

The average yield for groundnuts is also lower than the potential yield. The average yield is 0.8 to 1.2 tonnes per hectare instead of the expected 2.0 to 2.8 tonnes (ICRISAT, 2022). The primary reasons for this gap include issues with seed quality, inadequate pest and disease control, soil degradation, and limited extension coverage.

2.8.1.2 **Agro-Ecological Zones and Spatial Distribution.** Groundnuts and soya do well in various agro-ecological zones. However, there is some overlap in the regions where they can grow well. Groundnuts like sandy loam soils with moderate rainfall, while soya does best in fairly fertile soils with adequate drainage and steady rainfall throughout the early stages of growth (FAO, 2024).

The central part of Malawi remains the most important area for growing soya, notably in the rural districts of Mchinji, Kasungu, and Lilongwe. These areas are generally flat and have greater road access and investment support from commercialisation programmes like AGCOM and ATI (Ministry of Agriculture, Malawi, 2022). Groundnut production, on the other hand, is spread out over a larger area and involves extensive farming in southern districts, such as Balaka, Ntcheu, and Zomba, as well as parts of the northern region, including Mzimba and Rumphi (ICRISAT, 2022).

Chinsinga and Matita (2021) found that factors beyond weather and soil conditions influence the geographical concentration of production. It is also affected by market access and past agricultural practices (Chinsinga & Matita, 2021). For example, in Kasungu and Mchinji, long-term relationships with lead enterprises and more knowledge of soya as a cash crop have led to more people producing it. Meanwhile, female farmers in southern Malawi continue to prefer groundnuts because low inputs demand and is mainly for household consumption (Doss et la., 2021).

2.8.1.3 **Gender, Youth, and Household-Level Participation.** Gender roles have a significant effect on who can participate in the legume value chain. Women primarily produce groundnuts, as they do not require as much labour and are traditionally associated with home consumption and saving money (Branca et al., 2021). On the other hand, soya has become popular among male-headed households and young people, especially those involved in contract farming and aggregation schemes funded by the private sector (Makau & Njeru, 2021).

Young people are becoming increasingly involved in farming legumes, albeit not to a significant extent, as the commercial potential of these crops becomes clearer. Sinyolo et al. (2020) found that an increasing number of young farmers in Mchinji and Lilongwe were growing soya because they could obtain better prices in the market and receive training through donor-funded programmes. According to the World Bank (2021), women and youth face unique challenges that hinder their participation in the two value chains. The challenges include institutional problems, limited access to land, credit, and labour for women and the youth. Programmes that support women- and youth-led farmer organisations in specific ways have demonstrated promise, although they do not reach a large number of people (World Bank, 2021).

2.8.1.4 **Input Supply and Productivity Challenges.** Obtaining better inputs is a significant factor in determining the productivity of soya and groundnuts. Smallholders still cannot access certified seeds, inoculants (for soya), and fertilizers because they are too expensive, not widely available, and government subsidy schemes are not always available (IFPRI, 2023). Less than 30% of soya and groundnut farmers reported using better seeds between 2020 and 2023. Less than 15% of them reported using fertilizers or inoculants on their legume crops (NSO, 2023). This problem is exacerbated by the fact that private businesses do not participate sufficiently in rural agro-dealer networks and that soil testing and climate-smart methods are not utilized sufficiently. Pests and diseases, including rosette virus in groundnuts and rust in soya, exacerbate yield instability, making people less likely to invest in growing more crops (MoA, 2023).

The Legume Development Trust and AGCOM's subprojects on agro-input supply chains are two recent efforts to address these gaps, but coverage remains spotty. Small farmers in remote locations continue to use recycled seeds and informal seed systems, which lower genetic vigour and compromise market quality standards (Branca et al., 2021).

Table 3 below provides a summary of production-related constraints and opportunities associated with soya and groundnuts cultivation in Malawi:

Table 3

Production Related Constraints

Dimension	Soya	Groundnuts
Agro-ecological suitability	Central and northern regions	Central, southern, and northern regions
Average yield (MT/ha)	1.2–1.5	0.8–1.2
Gender dynamics	Male- and youth-dominated	Female-dominated
Key constraints	Access to seed, inoculants, pests, and extension	Aflatoxin, access to clean seed, and pests
Major production districts	Mchinji, Kasungu, Lilongwe	Balaka, Mzimba, Zomba, Ntcheu
Input access	Low formal input use (<30%)	Reliance on informal seed systems
Yield gap	High—potential is 2.5–3.0 MT/ha	High—potential is 2.0–2.8 MT/ha

2.8.2 *Value Chain Actors and Market Channels in Groundnuts and Soya Trade in Malawi*

There are several groundnuts and soya value chain actors in Malawi. The main chain actors include input suppliers, producers, traders, wholesalers, processors, and exporters. The study reviews the role of each group of actors as follows:

1. Input Suppliers. Input suppliers are the first step in the value chain. They provide essential agricultural inputs, including improved seed varieties, inoculants, insecticides, and fertilizers. A few institutional agro-dealers, such as Seed Co, Funwe Farms, and Peacock Seeds, as well as smaller rural stockists, control the provision of inputs for legumes in Malawi. However, it is still challenging to obtain certified legume seeds. IFPRI (2023) observes that in the 2021/22 season, fewer than 25% of smallholder farmers were able to obtain certified soya or groundnut seed. According to Branca et la (2021), more than 60% of legume seed used is

supplied by informal seed networks that involve farmers in recycling seeds from season to season or trading them with people in their communities. As a result of recycling the seed, the yield potential and quality are compromised, especially for formal market participation. Additionally, the distribution of inputs is uneven, being more favourable in peri-urban areas and along key road corridors. Many rural farmers now rely on informal suppliers due to the gap in market access. These suppliers sometimes lack knowledge or fail to adhere to quality assurance standards (Branca et al., 2021).

2. Producers (Smallholder Farmers). About 90% of soya and groundnuts in Malawi are produced by smallholder farmers with landholdings of 0.2 to 1.0 hectares per household (NSO, 2023). Smallholder farmers rely on family labour and produce multiple crops combining legumes with crops such as maize, cassava, or tobacco. According to Doss et la (2021), the market participation level of smallholders is influenced by household demographic characteristics such as the gender of the household head, income levels, and location. Male-headed households with resources and access to inputs and training are more likely to sell their legumes than poorer women-headed households, who often grow little and primarily for consumption (Doss et al., 2021).

Farmer cooperatives and Farmer-Based Organisations (FBOs) support farmers with good agriculture practices, including post-harvest activities for better quality and aggregation. Nevertheless, only 15–20% of legume farmers are anticipated to be members of active cooperatives (World Bank, 2021). When cooperatives are operational, they provide market linkages for the bulked commodities. Failures of cooperatives and FBOs are mainly due to poor management or a lack of incentives for members.

3. Aggregators and Small Grain Traders (SGTs). For most smallholders, aggregators are the first market option. The actors are in two main groups:

- Small Grain Traders (SGTs) who typically operate informally, purchasing small quantities of grain directly from farmers or at local marketplaces. They usually pay immediately and cover the expenses of transportation and sorting upfront. Their profits are small, but they remain in business because they sell a large volume and have low overhead costs. According to IFPRI (2023), SGTs handle most of the rural legume trade despite the absence of grades or formal contracts.
- Large Aggregators who are individuals operating in a semi-official capacity. They purchase from SGTs or cooperatives and sell to processors who produce various products, or they sell directly to exporters who process products for export. NGOs or private companies assist some in setting up structured trading systems.

Mango et al. (2022) found that traders, especially SGTs, play a crucial role in connecting rural supply with urban demand. However, farmers do not trust them since they are not transparent about their practices, use unstandardized weighing tools, and act opportunistically in certain circumstances.

4. Processors and Millers. Processors are a formal part of the value chain. Rab Processors, Sunseed Oil, CP Feeds, and Central Poultry are among the key players. These companies obtain soya and groundnuts to produce oil, fodder for animals, and snacks. Most processors prefer to buy from trustworthy aggregators or cooperatives because they are concerned about quality, traceability, and consistency of volume (FAO, 2024).

Most of the processing happens in cities, with the most in Blantyre, Lilongwe, and Mzuzu. These companies need large shipments that fulfil the Malawi Bureau of Standards (MBS) standards for moisture and aflatoxin levels. Most smallholders are reluctant to join official processor supply chains due to the high costs of testing and the risks associated with high aflatoxin levels in groundnuts (ICRISAT, 2022).

5. Retailers and Wholesalers. Retailers and wholesalers sell legume products to households, schools, hospitals, and food sellers at the end of the supply chain for domestic consumption. People commonly buy things in grocery stores, supermarkets, and other informal markets. Urban and peri-urban stores play a significant role in distribution, responding to the growing demand for roasted groundnuts and soya flour. However, retail chains are not often connected to the rest of the value chain. They act independently and receive minimal input from producers or processors (Chinsinga & Matita, 2021).

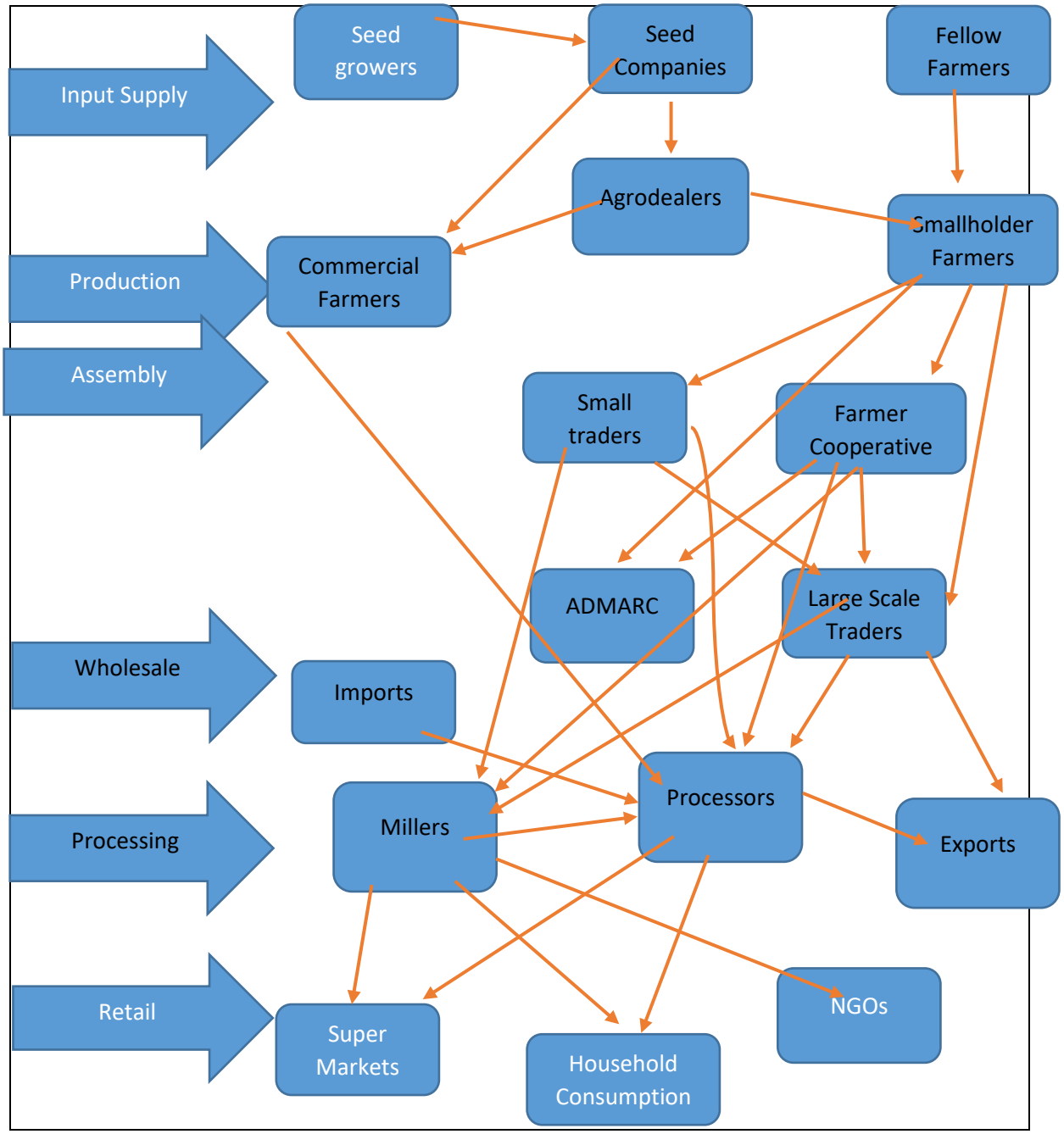
6. Exporters and Commodity Exchanges. Groundnut exports are well-established, with Kenya, Tanzania, and certain regions of Europe (for use in candy) as key target customers. However, the amount of exports has declined due to problems with quality control, including high levels of aflatoxin and inadequate post-harvest management.

Soya exports are still low, but they are increasing, especially in processed form such as soya oil. Both commercial companies and development-linked platforms, such as the Agricultural Commodity Exchange for Africa (ACE), are involved in exporting soya.

Even though policies like the warehouse receipt system (WRS) are trying to make organised marketplaces more popular, legume producers still do not use them very often. Farmers report that late payments, complex rules, and a lack of trust in centralized institutions are significant problems (IFPRI, 2023; Ministry of Agriculture, Malawi, 2022).

Figure 3

Mapping of Soya Value Chain Actors in Malawi



Adopted from (Mtisunge, 2023) FARA Research Report

Figure 4

Mapping of Groundnuts Value Chain Actors in Malawi

Adopted from: (Chisinga & Matita, 2021)

2.8.3 *Supporting Institutions and Development Partners*

The following are supporting institutions for groundnuts and soya value chains in Malawi.

- *Government agencies* like the Malawi Bureau of Standards and the Department of Agricultural Extension Services;
- *NGOs* including GIZ, World Vision, and Self Help Africa;

- *Research organizations:* ICRISAT and the Department of Agricultural Research Services (DARS);
- *Development programmes:* AGCOM, the Legume Development Trust, the TRADE Programme (value chain programme under the Ministry of Local Government), and the Zantchito Entrepreneurship initiative, which the EU sponsors.

These groups provide support in policy development, market connections, capacity building, and extension services. However, duplication of tasks and poor coordination can hinder the long-term effectiveness (Branca et al., 2021; FAO, 2022).

A mix of formal and informal actors shapes the soya and groundnuts value chains in Malawi. Each one is important for getting goods from the farm to the market. Smallholder farmers and SGTs conduct most of the work at the beginning of the chain, but processors and exporters take over later on. They add quality and traceability criteria that many producers find hard to achieve. Strengthening cooperatives, connecting smallholder groups to formal supply chains, and increasing the openness of rural markets could help distribute value more evenly along the supply chain.

2.8.4 *Value Chain Governance and Coordination in Malawi's Legume Sector*

Governance systems influence who makes decisions, establishes rules, ensures compliance, and distributes benefits throughout the chain (Gereffi et la., 2005). Governance arrangements in Malawi's soya and groundnuts value chains differ significantly across formal and informal marketplaces. The differences illustrate how both formal and informal elements characterize the sector.

2.8.4.1 Governance Typologies in Malawi's Value Chains Legume. Market-based and relational governance are the most common forms of governance in the legume industry

in Malawi, especially in informal commerce. Transactions are not personal in market-based governance; spot markets set prices, and quality is not always enforced. This type of business is prevalent in the informal sector, where small grain traders (SGTs) and mobile aggregators purchase produce directly from the farm gate, often without contracts or methods for grading quality (Mtisunge, 2023; IFPRI, 2023).

Trust, reputation, and repeated interactions between actors are all crucial for transactions in relational governance. This type of governance is common in long-term partnerships between smallholder farmers and individual dealers or buyers in local marketplaces (Branca et al., 2023). These contacts are vital for preserving trade in areas where there are no strong or official systems.

On the other hand, formal trade channels, particularly those involving processors, exporters, and structured aggregators, tend to have more hierarchical or modular governance structures. When this happens, purchasers use formal contracts or memoranda of understanding to set particular delivery, quality, and volume standards. Development partners or cooperatives, such as NASFAM, often assist in setting up these deals. They give more control over standards, traceability, and compliance (AGRA, 2022).

2.8.4.2 Challenges in Governance and Coordination. The fact that coordination mechanisms are not well-connected is a significant problem for Malawi's legume value chain governance. Formal actors, such as commodity exchanges and processors, often operate independently and rarely interact with informal actors, who are responsible for transporting goods from rural areas, resulting in two distinct systems of governance: one highly controlled and another largely unregulated. These systems rarely meet or discuss best practices (Chinsinga & Matita, 2021).

In the Soyabean business, processors like Sunseed Oil and Rab Processors generally obtain their raw materials from large aggregators or cooperatives. The cooperatives, on the

other hand, face challenges, including limited capacity, poor leadership, and low member compliance, which hinder their ability to fulfil contracts and deliver goods (FAO, 2024). Aflatoxin compliance requirements provide another layer of governance to the groundnuts value chain. Buyers want to see written procedures for managing groundnuts after they are harvested, which makes it difficult for informal traders to enter formal markets (ICRISAT, 2022).

Governance is even worse when public institutions and private actors fail to work together effectively. The National Agriculture Investment Plan (NAIP) has outlined value chain initiatives for the Ministry of Agriculture; however, these initiatives are sometimes not implemented or are underfunded. However, this limits their effectiveness at the community level (MoA, 2023). Additionally, programmes such as warehouse receipt systems (WRS) and the Agricultural Commodity Exchange for Africa (ACE) have not yet matured sufficiently to have a significant impact on operations in more than a few districts.

2.8.4.3 Trader-Farmer Coordination Mechanisms. Traders and farmers typically work together informally based on social contracts and agreements that are not legally binding. These arrangements make it easier to be flexible and adapt, but they are also open to people who want to take advantage of them. Farmers report that "weighing scale manipulation," random price adjustments, and late payments are significant issues, while traders claim that supply is inconsistent and the quality of produce is poor (Makau & Njeru, 2021; Tschirley et al., 2019).

NGOs like GIZ and Catholic Relief Services have tried to formalize these interactions through "trader registration" and "digital contracting." However, not many people are using these yet, as they lack the ability to read and write, there is insufficient digital infrastructure, and people do not trust formal processes (USAID, 2022). Still, these initiatives suggest possible strategies for gradually improving informal governance without alienating key stakeholders.

Some cooperatives have attempted to facilitate cooperation between official and informal traders. For example, in Mchinji District, farmer groups that worked with the AGCOM project collaborated with both certified buyers and traders at the village level to maintain stable prices and volumes. This mixed strategy provided farmers with some leeway while still meeting processors' minimum quality standards (AGRA, 2022).

2.8.4.4 **Governance Innovations and Best Practices.** Recent research has shown new best practices in value chain governance that could help Malawi's bean sector make changes. For instance, in Ghana's groundnuts industry, the introduction of trader licenses, buyer codes of conduct, and mobile tracing systems has reduced cheating and built confidence between farmers and traders (Asante et al., 2021). In Tanzania's sunflower chain, digital contracts driven by cooperatives made deliveries more reliable and helped smallholders become more involved in formal markets (Kabanza et al., 2022). Price dashboards, bulk input supply through cooperatives, and participatory market surveys are some of the new ideas that have the potential to improve coordination and information flow in Malawi (IFPRI, 2023). However, to scale these treatments, various groups must be willing to invest in extension services, mobile platforms, and post-harvest infrastructure.

Smallholders cannot conduct business effectively when governance mechanisms are weak. Smallholders face high transaction costs, limited bargaining power, and fewer incentives to invest in quality improvement when there is no reliable coordination. On the other hand, well-governed chains with clear rules, fair methods for settling disputes, and opportunities for everyone to participate in decision-making encourage farmers to produce more, combine their goods, and sell them in high-value markets (Fernandez-Stark & Gereffi, 2019). Smallholder farmer commercialisation cannot be achieved without addressing issues of value chain governance.

In conclusion, Malawi's soya and groundnuts value chains still have uneven and broken governance and coordination systems. Informal actors follow relational or market-based rules, while formal actors follow modular or hierarchical rules. To resolve these gaps in governance, we need hybrid models that combine flexibility with accountability and recognise the important but often overlooked role of small grain dealers. As Malawi works towards an agricultural transformation strategy that includes everyone, governance changes must focus on making the legume sector more integrated, open, and capable of building its institutions.

2.8.5 *Marketing Margins and Price Transmission in the Soya and Groundnuts Value Chains*

A key part of understanding how agricultural commercialisation works is examining marketing margins and how well prices move down the value chain. This study demonstrates how value is shared among actors in the soy and groundnut value chains in Malawi. It focuses on smallholder farmers, small grain traders (SGTs), aggregators, processors, and retailers, highlighting structural problems that hinder fair participation in the market and maximize profits for all.

2.8.5.1 **Farmgate Prices and Price Dispersion.** In Malawi, the prices of soya and groundnuts at the farm gate change significantly depending on the season, location, and type of buyer. For instance, during the 2022/23 season, the average price of soya at the farm gate was between MWK 400 and MWK 700 per kg, and the average price of groundnuts was between MWK 600 and MWK 1000 per kg, depending on the quality and how close they were to markets (MoA, 2023; IFPRI, 2023). Many people believe that this significant difference is due to traders having varying levels of market power, insufficient information about prices, and inadequate infrastructure in remote farming areas (Mtisunge, 2023).

Structured buyers pay more than SGTs, but SGTs pay immediately, allow one to choose how much one wants to buy, and are easy to deal with at the farm gate. For example, farmers

in the Mchinji and Kasungu districts say that SGTs usually pay 10–15% less than the market prices supplied by formal aggregators. However, they prefer SGTs because they save on transportation costs and receive their money immediately (Branca et al., 2021; Chinsinga & Matita, 2021).

2.8.5.2 **Marketing Margins Across Actors.** The difference between the amount the ultimate buyer pays and the price the producer gets is called the marketing margin. Research in Malawi shows that smallholder farmers receive 40–60% of the ultimate retail value of groundnuts and Soya. The remainder is divided among dealers, processors, wholesalers, and retailers (Phiri et al., 2023; USAID, 2022).

After paying for transportation, labour, spoilage, and storage, SGTs only make 5–12% of their sales in informal networks. They cannot generate more income since they lack sufficient funds, are uncertain about how to manage their affairs after harvest, and do not have economies of scale (Makau & Njeru, 2021). On the other hand, formal processors frequently have greater margins (15–25%) since they add value (for example, by extracting oil or making groundnut butter), build brands, and develop structured retail partnerships.

Mango et al. (2022) conducted a study in Malawi, showing that cooperatives and trader associations with better bulking capacity and access to organized markets earned more collectively (up to 20%) because they could negotiate prices and reduce transaction costs per unit.

2.8.5.3 **Value Share and Intermediary Roles.** In both the soya and groundnut chains, intermediaries play a crucial role in gathering, transporting, and grading crops. However, SGTs who play a leading role as intermediaries are often accused of "exploiting" farmers by using unclear pricing. However, studies do not support this view. Sinyolo et al. (2020) state that without these middlemen, it would be more difficult for people in rural areas to access the market, especially during the lean season when institutional buyers are not present.

According to a 2023 IFPRI study examining price spreads, farmers retained an average of 47% of the consumer price for groundnuts and 52% for Soya. Traders, including SGTs, kept roughly 13–18% of the money, while processors and merchants took the remainder. These results demonstrate that, although the margins may appear uneven, they illustrate how service provision and risk-bearing are distributed across the chain (IFPRI, 2023).

2.8.5.4 **Price Transmission and Market Efficiency.** Price transmission efficiency measures how well price changes at one level of the supply chain (such as the processor level) are reflected in prices at other levels (such as the farm gate). In a well-functioning market, price signals move rapidly and in the correct amounts along the supply chain, enabling producers to capitalize on favourable demand conditions.

Unfortunately, the legume markets in Malawi still have inadequate price transmission. Phiri et al. (2023) note that prices offered by urban processors and retailers do not always align well with farm gate prices. Information asymmetry, bad logistics, and differences in market power are all reasons why transmission is delayed. The delay means that smallholders may not reap significant benefits from rising retail prices when demand increases or there are opportunities to export unless they are part of formal contracts or cooperative structures.

A 2021 World Bank research study also highlighted that Malawi's agricultural markets are too inflexible, with issues including the lack of real-time price information, farmers' inability to collaborate horizontally, and inadequate storage infrastructure. All of these limits

lower the bargaining power of smallholders and make price signals less clear or take longer to be received (World Bank, 2021).

2.8.6 Summary and Emerging Lessons from the Soya and Groundnuts Value Chain Studies

This section consolidates the key findings from the most recent empirical review (2019–2024) of the value chains for soya and groundnuts in Malawi. The study reviewed both formal and informal market structures, as well as trends in production and sales, including value chain players and governance.

2.8.6.1 **Formal and Informal Markets working together.** Formal marketplaces often feature structured contracts, high pricing, and the ability to track goods. However, most smallholder farmers are unable to utilize them due to stringent quality standards, delayed payments, and logistical challenges. More than 70% of rural producers still rely on informal markets as their primary source of income (Chinsinga & Matita, 2021). These marketplaces are primarily composed of small grain traders (SGTs), mobile aggregators, and vendors.

2.8.6.2 Transaction Costs as Key Determinants. Phiri et al. and Branca et al. view transaction costs as key determinants that influence farmers' choices. They argue that farmers' choices on who to sell to are less influenced by price differences but more affected by elements of transaction costs (Phiri et al., 2023; Branca et al., 2021).

2.8.6.3 Perceptions and Trust Dynamics. In addition to transaction cost, some scholars have viewed perception and trust as vital drivers of market choices. It is argued that how smallholders perceive traders is crucial to their market choices. People frequently care more about trust, familiarity, and response than about pricing. Socially embedded relationships, even though they are not formal, help maintain stable trade and ensure that people do business with one another again (Mtisunge, 2023; Makau & Njeru, 2021). The key lesson here is that programmes aiming to change how people promote themselves must focus on relational

factors, such as communication, transparency, and dispute resolution methods, in addition to economic incentives. Governance and Coordination Gaps. Scholars have recognized the need to enhance governance and coordination along value chains to mitigate information asymmetry and rebalance power (Gereffi & Fernandez-Stark, 2016; Dedehouanou et al., 2020).

2.8.6.4 **Margins and Value Capture.** Farmers in Malawi usually get 40–60% of the final consumer price. SGTs and processors receive significant percentages because they perform a substantial amount of work involving aggregation, processing, and distribution. Trader margins are not always significant (Mango et al., 2022). According to Mango, the 2022 analysis of margins should aim to improve performance without impeding intermediary logistics that take commodities to the final consumer.

2.8.6.5 **Policy Institutions.** Several projects and strategies have been implemented to increase the marketability of legumes, including those led by AGCOM, ATI, and GIZ. However, problems persist due to fragmentation, limited size, and a top-down design.

The review of the groundnuts and soya value chains confirms that transaction costs, trust connections, and institutional arrangements have a significant impact on smallholders' participation in the soya and groundnuts value chains. Informal trade remains the most prevalent form of trade, serving a purpose that extends beyond mere exploitation. In this section, the study provided a detailed overview of how smallholder farmers make decisions and how small traders become key participants in the value chains.

2.9 Summary

This presentation gives an overview of Chapter 2 of the dissertation "Factors Influencing the Decision of Smallholder Farmers to Sell to Small Traders: The Case of Groundnuts and Soya Value Chains in Malawi." Chapter 2 examines relevant literature on theoretical concepts, as well as other related subjects, including smallholder

commercialisation, informal agricultural trade, trader-farmer relationships, and studies on the value chains of soya and groundnuts. The chapter utilizes contemporary research (from 2019 to 2024), primarily from Sub-Saharan Africa (SSA), and combines it with theoretical frameworks that form the conceptual foundation of the study. This part also highlights important areas of research that require further attention, which helped shape the design of Chapters 3 and 4.

Value Chain Theory (VCT), Transaction Cost Economics (TCE), and Rational Choice Theory (RCT) are the three primary theories employed in the literature review. These concepts form the basis of the study's examination of how smallholder farmers in Malawi choose to collaborate with informal small grain traders (SGTs) in the legume value chains.

The study first utilised the Value Chain Theory, which was first proposed by Porter in 1985 and subsequently modified for agri-food systems by Kaplinsky and Morris in 2019 and Fernandez-Stark and Gereffi in 2019, to illustrate how various individuals and groups interact throughout the legume value chains. The theory helps to understand how value is made and lost, and it shows that informal channels are the most important ones for commerce in rural areas, particularly for smallholder farmers (FAO, 2024).

Williamson's work from 1985 onward on Transaction Cost Economics helps in understanding the institutional and transaction-related constraints that smallholders encounter when attempting to enter formal markets. Farmers typically choose informal market players because they offer flexibility, have developed trust-based connections, and present low barriers to entry due to unpredictability, asset specificity, and enforcement costs (Chinsinga & Matita, 2021; Kabanza et al., 2022).

Rational Choice Theory introduces a behavioural aspect by viewing farmers' decisions as choices that maximize their utility while staying within certain limits (Scoones et al., 2019). Farmers consider SGTs not just based on price, but also on how much they value them, such

as their proximity, payment speed, acceptance of ungraded produce, and the level of trust they have in them. This hypothesis supports the assumption that informal transactions, although not ideal, are the most effective way to trade in rural areas (IFPRI, 2023).

Research shows that the value chains for groundnuts and soya in Malawi are composed of two parts: formal segments that handle processing and export, and informal traders, which are the primary means for smallholders to reach the market (Branca et al., 2021). SGTs are the primary source of cash flow and proximity for most farmers, especially women, young people, and those living in rural areas (Makau & Njeru, 2021). Formal systems often feature stricter grading standards, more requirements for volume, and delayed payments, which makes it harder for smallholder farmers to participate.

Chapter 2 demonstrates the significant role informal actors, particularly SGTs, play in the commercialisation of legumes in Malawi. The literature supports the dissertation's focus on analysing farmer-trader relationships and decision-making by utilizing theoretical models and real-world data from across the SSA. The study has identified gaps that will be addressed in the subsequent chapters.

In addition to the theoretical insights gained from Value Chain Theory, Transaction Cost Economics (TCE), and Rational Choice Theory (RCT), it is also crucial to understand how these frameworks are applied in various parts of sub-Saharan Africa. Omamo et al. (2020) employed TCE in Kenya's maize industry to illustrate how transaction costs affect the market channel choices of smallholder farmers. The literature study also reviewed the study in Ethiopia by Gashaw et al. (2021), where an assessment was made on the relationship between the individual perception of fairness of the prices and the decision to sell. The studies from the region provide a solid foundation to inform the development of legume value chains in Malawi.

The assessment also found that excluding small grain traders (SGTs) from policy discussions and programmes is a significant mistake in value chain governance. Donors and governments generally focus on cooperatives and large processors, while informal actors remain in charge of the aggregation process at the grassroots level. This study aims to bridge this gap by examining SGTs not as problems but as opportunities that could facilitate commercialisation.

The literature also reveals differences in how people perceive market access. In many value chain initiatives, access is only defined in terms of physical or infrastructural elements. However, this work broadens the concept to include cognitive and relational aspects, such as trust, bargaining power, and past experiences, which are pretty similar to what smallholders in Malawi encounter. Chinsinga and Matita (2021) argue that these intangible factors often have a greater impact on market decisions than distance to transportation or storage space. This study adds to our knowledge of access in informal agricultural economies in this way.

The identified information gaps are significant because Malawi is still in the process of formalizing its agricultural markets. Recent policy frameworks, such as the National Agriculture Policy (NAP, 2022) and the National Export Strategy II, support established markets and procedures for the warehouse receipt system. These are good ideas, but they will not work unless they are open to everyone and adaptable to different needs. Policies like these could deter important individuals and render them less effective if they lack real-world examples of how farmers perceive and interact with informal traders. The dissertation provides us with helpful information that can help us come up with ideas for formalizing that include everyone.

This synthesis of the research has also highlighted the importance of power imbalances in value chains, a factor often overlooked in technical assessments. According to Gereffi and Lee (2020), governance systems naturally determine who gains and who takes on risk in value

chains. Smallholders in Malawi are at a disadvantage because they are unable to obtain official contracts, negotiate prices, or influence quality standards. The study provides an indirect glimpse into the power dynamics at play by examining how smallholders' perceptions reveal these imbalances, particularly when they choose to do business with SGTs.

There is also a lack of mixed-methods research that combines both econometric models and qualitative insights to examine the interactions between traders and farmers. Qualitative case studies, such as Mtisunge (2023), have a great deal of depth in their stories, but they cannot be generalized. On the other hand, quantitative surveys often fail to demonstrate the connection between informal trade and society. This study employs both qualitative and quantitative methodologies to answer the two research questions, ensuring that the results are valid and valuable not only to the researcher but also to the participants.

In general, Chapter 2 lays the groundwork for the research in Chapters 3 and 4. It confirms that to understand smallholder commercialisation, one must also comprehend how informal trading operates and how farmers perceive the benefits. The chapter argues that this research is a significant contribution to the ongoing discussion on market access, trader engagement, and value chain inclusivity in Malawi and other similar SSA contexts. It does this by using strong theoretical engagement, empirical synthesis, and gap identification.

Another important point that comes up in the research is the lack of spatial equality in the growth of the legume market. Urban and peri-urban areas tend to have better infrastructure, more market knowledge, and more aggregation centres. On the other hand, distant rural areas still rely heavily on informal marketing arrangements. The World Bank (2021) states that investments biased towards certain areas often exacerbate inequities by concentrating processing and storage facilities in areas that are more accessible, leaving out remote farmers to depend on small traders who are not officially registered.

Gender dynamics are also rarely studied in empirical value chain research, despite significant evidence indicating that men and women have varying levels of access to markets and decision-making responsibilities. Doss et al. (2021) and FAO (2023) argue that women are more likely to be involved in groundnut value chains than in soya value chains. However, they struggle with negotiating pricing, obtaining extension services, and adding value after the harvest. This dissertation attempts to build on these ideas by examining how the behaviour of traders interacts with gender-based barriers to smallholder commercialisation.

The research also reveals a lack of knowledge about the gaps in institutions in rural marketplaces. In Malawi's agricultural trade, institutions (both formal and informal rules that govern behaviour) are typically weak or inconsistent, making it challenging to enforce weights and measurements, break contracts, and maintain consistent quality control. Branca et al. (2021) suggest that the lack of clarity in institutions increases the likelihood of people taking advantage of others, particularly in informal transactions. The study aims to determine whether small traders exacerbate or mitigate these gaps in the context of legume trade.

When it comes to policy-practice disconnects, the literature shows that many interventions fail because they do not align well with the underlying realities. When making policies from the top down, they often ignore the fact that smallholders come from a wide range of social and economic backgrounds and consider them as a single group. AGRA (2022) suggests that farmer segmentation methodologies should be employed to tailor interventions to each farmer's unique requirements, limitations, and level of market readiness. This dissertation utilizes this kind of difference to gain a deeper understanding of how farmers make decisions about working with traders.

Finally, the analysis highlights that digital tools are not being utilized sufficiently to enhance the value of legume value chains. Mobile market information systems and digital financial platforms are becoming increasingly common in Malawi, although smallholder

legume farmers still do not utilize them extensively. Louw et al. (2021) and Sinyolo et al. (2020) found that digital literacy, connectivity, and trust in digital platforms are among the factors that hinder people's adoption.

2.9.1 *Key Thematic Insights*

Here is a synopsis of the main themes that came out of the literature review:

1. Smallholder commercialisation remains low because it is challenging for them to access inputs, they lack sufficient market information, and there are no functioning aggregation nodes.

2. More than 70% of legume sales in Malawi happen through informal agricultural trade. It is adaptable and flexible but not well-regulated (Phiri et al., 2023).

3. How traders and farmers view things affects how the market works. Farmers' opinions of SGTs as allies or exploiters depend on trust, social embeddedness, and their past business dealings (Sinyolo et al., 2020).

4. Value chain studies support the notion that SGTs are crucial in the early stages of a market. However, their functions are not taken into account in policy, which means that what happens on the ground does not match up with what is done formally (Mango et al., 2022).

2.9.2 **Research Gaps**

Here is an overview of the research gaps that were found:

1. There is little research on how people perceive SGT roles influence market decisions for smallholder farmers.

2. There is a lack of detailed information about how smallholders and informal traders interact on a transaction-by-transaction basis.

3. SGTs are not included in models for upgrading the value chain.

4. Not enough understanding of traders' points of view—most studies primarily look at farmers.

5. There is not enough separation of smallholders by gender, age, and education in perception analysis.

Chapter 3 (Methodology) will fill these gaps by suggesting a systematic way to evaluate farmers' decisions and views quantitatively and qualitatively. Chapter 4 (Findings) will explain how different factors can predict participation in informal trading.

3 CHAPTER THREE: RESEARCH METHOD

This chapter explains the study methods used to investigate the reasons why smallholder farmers in Malawi choose to sell to small grain traders (SGTs) in the soya and groundnuts value chains. The study fills in research gaps relating to informal agricultural trade, smallholder participation in the value chain, and smallholder access to markets to address the two research questions (Chinsinga & Matita, 2021). Legume value chains in Malawi are complex and frequently evolving. Informal trade is common in first-mile transactions. Therefore, a strong analytical approach was needed to capture both quantitative variables and subtle differences.

The primary objective of the study is to examine how the functions of small grain traders, such as proximity, immediate payment, tolerating ungraded commodities, opportunity for negotiating prices, and the price offered, influence smallholder commercialisation decisions. The research is based on three related theoretical frameworks: Transaction Cost Economics (TCE), Value Chain Theory (VCT), and Rational Choice Theory (RCT). Each of these factors influenced the design of data collection tools and analytical approaches (Williamson, 2020; Gereffi & Fernandez-Stark, 2019; Scoones et la., 2019). These theories suggest that individuals working in informal agricultural markets act strategically, guided by both market incentives and social norms. They also suggest that smallholders want to keep costs low and profits high, even when they are not part of formal institutions.

The study employed a mixed-methods research design, which incorporated both quantitative and qualitative methods, to ensure that the research encompassed all aspects of these decisions. The objective of the quantitative study was to assess the statistical relationships between farmer decisions and specific trader functions. At the same time, the qualitative part sought to investigate the perceptions, experiences, and contextual factors that influence these

interactions. Creswell & Creswell (2023) endorse this approach because it allows for methodological pluralism in situations where neither numbers nor stories alone can explain social behaviour. The study selected two districts, Kasungu and Mchinji, which are the primary groundnut and soya-producing districts.

This chapter provides in-depth details about the research approach and design, explaining the research paradigm that guides the study and suggesting alternative methods for conducting the research. The pragmatist paradigm suggests that the type of research should define the method used (Kivunja & Kuyini, 2017, pp. 35,36). Secondly, there is a discussion about the population and sample of the study. Demographic details of the households of the participants in this study, as well as the sampling approaches, are also included in this discussion. Thirdly, the study examines the research tools and instruments used to gather and analyse data, indicating how suitable the tools are in aligning with the study's objectives. The chapter also covers research methods, outlining the methods, ethical standards, safeguards, and processes for ensuring these safeguards. The latter part of this chapter provides detailed information about the steps involved in collecting and analysing data.

In summary, the chapter gives a systematic base for the study on the research topic, addressing the research questions. The chapter highlights how the study method aligns with the study's objectives, which is to inform the development of policies that incorporate informal actors into more efficient and inclusive value chains, without compromising the social and economic roles they play at the grassroots level.

The discussions in this chapter present the research methods in six main sections: Research approach and design, Population and sample of the research study, Instrumentation of research tools, Operational definitions, Study procedures, ethics assurances, and data collection and analysis. The chapter concludes with an observation that the study followed the rigour and meets the demands for validity and reliability.

3.1 Research Approach and Design

This study employs a mixed-methods research design, specifically an explanatory sequential design, which combines both quantitative and qualitative methods for collecting and analysing data. The type of design chosen is based on the study problem, which aims to determine not only the quantitative factors influencing smallholder farmers' decisions to sell to small grain traders (SGTs), but also the thoughts and circumstances that led to such decisions. The explanatory sequential technique begins with a broad statistical overview and then proceeds to provide further detail through a qualitative exploration, which aims to explain and confirm the quantitative results (Creswell & Plano Clark, 2018).

The quantitative phase employed structured surveys administered to a group of smallholder soya and groundnut farmers in Kasungu and Mchinji districts of Malawi. These surveys aim to identify connections between the functional features of SGTs (such as distance, payment terms, and flexibility for negotiations) and farmers' decisions to conduct business with them. To identify patterns related to market access for participants, the study also examined the demographic data of participants, including household size, participant gender, income sources, and educational level.

The next step was to conduct focus group discussions with farmers, traders, and extension agents in focal extension planning areas (EPAs) and key informant interviews (FGDs). Researchers argue that this triangulation method enhances the validity of the results because it provides insights into motivations, perceptions, and institutional aspects that quantitative data cannot capture effectively (Bryman, 2021).

This study employed a mixed-methods approach for several reasons. First, the issue of smallholder farmers engaging in informal trading is both quantitative (involving measurable trends and frequencies) and qualitative (encompassing reasons, trust, and social capital).

Second, in collaboration with Venkatesh and colleagues, the quantitative and qualitative study approach brings the practical aspects of agricultural value chain studies to address "what," "how," and "why" questions (Venkatesh et la., 2019). Lastly, this approach enhances the relevance of policies.

According to Giller, the mixed-methodology approach provides stakeholders, including agricultural extension staff, donor programmes, and private sector players, with helpful information that can be applied in real-life situations by integrating evidence-based trends with stories that put them into perspective (Gerring, 2017).

3.1.1 *Research Paradigm*

Research paradigms are fundamental philosophical ideas that guide the conduct of scholarly research, including its planning, execution, and analysis. They include essential ontological and epistemological assumptions that shape perception and verify knowledge (Creswell & Creswell, 2023; Saunders, Lewis, & Thornhill, 2019). Four main paradigms are widely accepted in modern research: positivism, interpretivism (or constructivism), critical theory, and pragmatism (Guba & Lincoln, 2020).

According to Saunders et al. (2019), a paradigm is a way of viewing the world or a set of beliefs that influences the decisions and interpretations of a researcher. These paradigms are not only ideas; they also affect how data is acquired, evaluated, and understood (Pham, 2021). They also present diverse perspectives on what reality is (ontology), the relationship between the knower and what is to be known (epistemology), and the values that guide the inquiry (axiology) (Creswell & Guetterman, 2021).

The positivist view posits that reality is objective, unique, and unaffected by how people perceive it. It is possible to measure and verify knowledge through empirical observation and statistical testing. Positivism prioritises hypothesis testing and generalizability, employing

standardised tools and deductive reasoning (Mohajan, 2020). People believe that being objective and neutral is crucial for producing valid knowledge. Critics, on the other hand, argue that positivism cannot thoroughly study complex social phenomena since it fails to account for subjectivity and context (Saunders et la., 2019).

The Interpretivist paradigm's view differs from the positivist paradigm in that it allows for multiple interpretations of results, recognizing that reality cannot be viewed solely from one fixed hypothesis. It suggests that interpretation should be based on a wide range of sources, including meanings people attribute to their experiences (Yin, 2023). Interpretivism focuses on understanding people's behaviour in context, valuing the points of view of those involved, and using qualitative methods to find meanings and patterns. People believe that researchers should actively engage with social reality, rather than merely observing from a distance (Pham, 2021). This approach is beneficial in fields such as education, sociology, and development studies, as questions are grounded in complexity, subjectivity, and local context (Mackenzie & Knipe, 2020).

The critical paradigm, also known as the transformative paradigm, challenges the way power is distributed and seeks to expose the inequities in unfair social systems. It views knowledge as something that is embedded in society and research as a means to promote social justice, empowerment, and freedom (Creswell & Guetterman, 2021; Guba & Lincoln, 2020). Critical theorists argue that researchers must engage with the communities they study reflexively and strive towards transformative change, particularly among individuals who are marginalized or on the margins of society (Guba & Lincoln, 2020). This approach is frequently employed in studies of gender, indigenous peoples, and human rights.

This study employs the pragmatic paradigm, a flexible and problem-centred approach that examines what works in a given situation. Pragmatism prioritises the research topic and allows researchers to utilise a variety of approaches, including qualitative, quantitative, or

mixed methods, to study complex issues (Tashakkori et la., 2021). Creswell & Creswell (2023) posit that pragmatism is not tied to any one way of thinking about philosophy or reality. Instead, it combines various methods to gain a deeper understanding of the research issue. Researchers who operate in this way view both observable behaviour and subjective experience as valid means of learning (Shannon-Baker, 2020).

Pragmatism is important because it enables the comparison of results from different methodologies, making the conclusions stronger and more useful in real-life applications. This makes it an appropriate choice for research like this one that aims to investigate how smallholders make decisions and how small traders play multiple roles in agricultural value chains. Pragmatism connects theory and practice by focusing on contextual relevance and methodological pluralism. This enables us to obtain both explanatory and interpretive insights (Teddlie & Tashakkori, 2019).

In brief, each paradigm has its own set of assumptions and strengths in research. The pragmatic paradigm was chosen for this study because it can be applied to both qualitative and quantitative approaches. It gives the study's goals a philosophical basis for combining quantitative data on how farmers make decisions with qualitative insights into how traders and farmers interact.

3.1.2 *Research Approach*

This study employed a deductive research method, which is the most suitable approach for examining hypotheses based on existing theory. A deductive approach starts with broad theoretical ideas and then tests them in the real world. This process confirms, rejects, or refines the theory based on what is seen (Saunders et al., 2019). The study design employs deductive reasoning instead of inductive reasoning because it aims to examine specific, pre-defined relationships, particularly between the functional roles of small traders and the decisions that

smallholder farmers make regarding the sale of their legumes (soybeans and groundnuts) through formal or informal channels.

Positivist and pragmatic paradigms, which prioritise objectivity, measurability, and the use of theory to guide data-gathering tools, are the basis for the deductive approach (Creswell & Creswell, 2023). In this scenario, the conceptual framework from Chapter 2 identified independent variables that could affect smallholder selling decisions, including functional trader qualities such as proximity, acceptance of cash payments, flexibility in quality, negotiation of prices, and provision of credit. The study tested these proposed links using survey-based quantitative data, which aligns with deductive logic (Sekaran & Bougie, 2020).

Deduction provides studies with a more methodological structure and is beneficial for investigations that aim to use statistical analysis to prove or disprove existing assumptions (Bryman, A., 2021). This is very important to this study, which reviews independent variables' impact, such as "trader proximity, immediate payments, and price negotiation flexibility influence the decision of smallholder farmers to sell to small traders." The Value Chain Theory, Transaction Economics Theory, and Rational Choice Theory formed the basis for the assumptions. According to Saunders et la, the deductive approach is used to test hypotheses using quantitative approaches (Saunders et al., 2019).

Additionally, the deductive technique facilitates the replication of the study, thereby enhancing its credibility and applicability to other parts of Malawi or similar areas in Sub-Saharan Africa (Saunders et al., 2019). Inductive reasoning is more open-ended and is often employed in research that seeks to learn about things without preconceived notions (Gioia et la., 2013).

In summary, the deductive approach is justified in this study because it: (i) aligns with a positivist/pragmatist epistemology, (ii) enables hypothesis testing, (iii) provides structure for

statistical analysis, enhances reliability and generalisation, and is congruent with the quantitative methodological tools employed.

3.1.3 *Research Strategy*

The study employed a case study research design, grounded in the pragmatic research paradigm and a deductive analytical approach. The study employed the case study method to examine closely the roles that small grain traders play in the groundnuts and soya value chains in Malawi. This method is particularly effective for studying modern events in real-life situations where the distinction between the event and its setting is not immediately apparent (Gustafsson, 2019).

The reason for adopting a case study is that it is well-suited for answering "how" and "why" questions that are crucial to the research (Saunders et al., 2019). Case studies differ from experimental or purely statistical designs because they enable the researcher to examine the complex, nuanced, and multi-actor dynamics of both formal and informal trade systems. Case studies are helpful in agricultural value chain research for breaking down transactional interactions, embedding networks, and institutional problems that affect decision-making at the micro level (Rahman & Giovanetti, 2020).

This study employed a multiple-case study approach, examining two distinct yet related units of analysis: the groundnuts value chain and the soya value chain. As a result of the multi-case technique applied, the reliability of the results was strengthened, and the research has broader applicability where the results of the two value chains can be compared (Creswell & Poth, 2018). The pragmatic paradigm supports this design, as it allows researchers to employ both qualitative and quantitative approaches. This ensured that the researcher was flexible in gaining insights that are sensitive to the situation (Feilzer, 2019).

The case study approach is known for utilising data from three different sources, and this study employed this strategy with great care. The researcher collected a wide range of data from various sources, including semi-structured interviews, focus group discussions (FGDs), and key informants from the government, non-governmental organizations, and the private sector. The collection of data from various sources facilitated quality triangulation, thereby strengthening the accuracy and reliability of the study (Flick, 2022).

The case study method also enables the researcher not only to describe and explain but also to engage in critical thinking about how value chain governance structures currently operate. This is crucial for addressing the challenging social and economic circumstances that smallholder farmers and traders face (Makau & Njeru, 2021). This study was designed to provide practical, usable information to guide the improvement of the two value chains. The study creates a platform for understanding the meanings within the context and dynamics of value chains.

3.1.4 *Methodology and Methods*

The study examined three primary research methods: quantitative, qualitative, and mixed methods. Structured tools, such as closed-ended surveys and statistical modelling, are often associated with quantitative research. It is based on numbers, testing hypotheses, and making generalisations (Creswell & Creswell, 2023). Bryman (2021) argues that quantitative research focuses on accuracy, repeatability, and statistical validity. Its goal is to explain things by collecting and analysing objective data. However, quantitative methods are effective for identifying patterns and correlations. However, they often overlook the finer details of a situation and may not account for the social and cultural factors that influence behaviour (Silverman, 2020).

Qualitative research, on the other hand, seeks to uncover meanings, interpretations, and experiences using instruments that can be adapted, such as open-ended focus group discussions and semi-structured interviews (Nowell et la., 2017). Denzin and Lincoln (2018) argue that qualitative research offers an opportunity for in-depth understanding, addressing questions of "how" and "why." (Denzin & Lincoln, 2018).

This study used a mixed-methods approach because both methods have some limitations. Mixed methods combine both qualitative and quantitative approaches to leverage the strengths of one while mitigating the limitations of the other (Creswell & Plano Clark, 2018). This method facilitates triangulation, enabling researchers to verify the results of diverse data sources against one another, thereby increasing their reliability (Fetters & Molina-Azorin, 2019). Mixed methods are best suited for value chain research, as they enable the examination of both quantifiable results and subjective reasons for actions (Baul & Varghese, 2021).

Johnson et al. (2020) argue that mixed methods research enhances the rigour of approaches by allowing for complementarity, which enables the capturing of complex dynamics that a single method alone may overlook. The examination of smallholder farmers' relationships with small traders necessitated a mixed-methods approach, as both qualitative and quantitative results were deemed equally important (Baul & Varghese, 2021).

The researcher advances three specific reasons why a mixed method was used in this research:

1. Comprehensiveness: refers to obtaining a complete understanding of how value chain interactions function by integrating the perspectives of stakeholders and measuring their outcomes (Vogl et al., 2020);

2. Triangulation: is the process of verifying findings by combining different types of data and approaches (Carter et al., 2014); and

3. Complementarity and Contradiction—looking at things that do not make sense, such how farmers depend on informal traders even when conditions are not good (Onwuegbuzie & Hitchcock, 2021).

A mixed-methods approach enables the researcher to leverage both empirical generalisation and narrative depth. Tracy (2020) states that quantitative models cannot correctly capture the complexity of socio-economic behaviours, such as choosing a farmer's market, how transactions work, and how to negotiate prices. Thus, mixed-methods approaches provide us with the epistemological freedom not only to measure trends but also to assess the meaning behind the trends. Tracy argues that a study involving a review of results from both quantitative and qualitative data would yield more reliable results regarding the market behaviours of smallholder farmers and small traders (Tracy, 2020).

Furthermore, using a mixed-methods design also helps to integrate theory and practice. From a practical point of view, the study is stronger because it utilizes qualitative tools to gather real-time, field-level information and then employs statistical data analysis to contextualize the information, making it more credible. This type of analysis aligns with the concept of pragmatic inquiry, which posits that research questions should inform the methods used, rather than the other way round (Creswell & Plano Clark, 2018). The researcher is of the view that this study provides the flexibility required to provide a better understanding of the topic of study, "factors that influence smallholder farmers' decisions in the value chains of groundnuts and soya in Malawi."

In conclusion, the researcher observed that multiple strategies would be required to address better the various problems affecting the relationship between traders and smallholder farmers on the market, particularly concerning informal trading in Malawi. The study was able to provide results that show generic patterns alongside real examples because of the use of analysis based on precise numbers and qualitative, in-depth data. Vogl et al. (2020) argue that

employing mixed methods enhances the research process and renders the results more applicable to policy, practice, and future studies.

3.2 Population and Sample of the Research Study

3.2.1 *Study Population*

The study area was in Kasungu and Mchinji districts in Malawi, purposefully selected because they were strategic districts for the study. They were considered strategic districts because they are leading producers and marketers of soya and groundnuts in Malawi. Because the two are neighbouring districts in the central region of Malawi, the selection of the two reduced the logistical hurdles of the study. Furthermore, these districts have been the focus of legume commercialisation initiatives under programmes such as the Agricultural Commercialisation Project (AGCOM), the Agricultural Transformation Initiative (ATI), and GIZ's Inclusive Value Chain Development programme, making them representative sites for analysing dynamics between smallholder farmers and small grain traders (AGRA, 2022). The Ministry of Agriculture reports that these two districts collectively contribute over 30% of Malawi's soya and groundnut output and are hubs for both formal and informal grain trade (AGRA, 2021).

Kasungu and Mchinji districts demonstrate both the variety and consistency of smallholder market experiences in Malawi's legume belts. The areas also exhibit larger tendencies of the Sub-Saharan Africa, where informal trade is the primary means of goods movement and value chain coordination remains relatively poor (Kabanza et al., 2022). Because of this, focussing on these districts provided a strong basis for making policy suggestions that are relevant to the whole region.

The study participants were selected from three extension planning areas (EPAs) in the two districts: Chulu EPA in Kasungu District and Mkanda EPA and Chioshya EPA in Mchinji District. According to reports from the three EPAs, in the 2022 marketing season, 41,594 smallholder farmers grow groundnuts, and 24,934 smallholder farmers grow soya. This study targeted these groundnut and soya farmers in the three EPAs. The exact number of farmers forming the population in the area is not known because it is uncertain how many farmers produce both soya and groundnuts. Output records from the three EPAs for the 2022 growing season indicated that approximately 64% and 38% of farming households grew groundnuts and soya, respectively, indicating that these crops are more prevalent in the studied locations (see Table 4 below).

Table 4

Groundnuts and Soya Farming Households in the Focal EPAs-2022

Name of Extension Planning Area and District	**Total Number of Farming Households**	**Farming Households that produced groundnuts**	**Farming Household that produced soya**
Chulu – Kasungu	14,750	3,516	9,587
Mkanda – Mchinji	35,125	24,587	4,852
Chioshya – Mchinji	14,994	13,491	10,495
Totals	64,869	41,594	24,935
Percentage	100	64	38

Adopted from Chulu, Mkanda, and Chioshya EPAs.

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The study's primary participants included smallholder farmers, small-scale grain traders (SGTs), district and national-level government officials, representatives from the Grain Traders Association, and stakeholders involved in the processing and procurement of soya and groundnuts. These participants represented the diversity of actors along Malawi's legume value

chains and provided multifaceted insights into the institutional, transactional, and behavioural dimensions shaping trade outcomes (Chinsinga & Matita, 2021).

3.2.2 *Study Sample*

The selection of study participants used a mixed sampling approach that combines probability and non-probability methods. As a result, the sample was well-representative and inclusive. This hybrid method allowed the researcher to select individuals who were both relevant to the research objectives and came from diverse geographic and socioeconomic backgrounds. Palinkas et al. (2019) suggest that combining purposive and random sampling in mixed-methods studies enhances the utility and generalizability of the results. Gentles et al. (2015) also suggest that combining random and purposive selection enables researchers to maintain credibility in qualitative research while maintaining statistical rigour in quantitative parts.

The study used the following equation to come up with the sample size;

$$n = \frac{\mathrm{Z}^2 \times \hat{p}(1-\hat{p})}{\varepsilon^2}$$

Where;

n=sample size

Z=Z score (1.96)

$\hat{p}$=population proportional

ε =Margin of error

The population proportion is at 10% and the margin of error is at 5%. The population proportion is lower due to the following reasons: noting that most farmers in the selected districts produce soya and groundnuts, the rate was adjusted to reduce data variability, and secondly, to minimize the cost of data collection. The margin of error is smaller to give

assurance that the results obtained are an accurate representation of the population. Using the equation, the number of smallholder farmer respondents required for the research was calculated to be 139.

To get the smallholder farmer respondent, the following steps were taken. Based on the number of sections in each extension planning area, a simple random sample of 10 sections was selected. Within these sections, a simple random sample of 15 smallholder farmers was selected. The process of selecting the sections was as follows: the 38 sections in the study area were first stratified as remote and non-remote. The definition used for remoteness in this study is based on distance (Vandercasteelen et la., 2019). To ensure a fair and comprehensive representation of both remote and non-remote sections of the EPAs, a random sampling was conducted to select 4 sections from the 17 remote areas and 6 sections from the 21 non-remote sections of the EPAs. Out of the ten sections selected, 5 sections were in Mkanda EPA in Mchinji, two sections from Chiosya EPA in Mchinji, and three sections from Chulu EPA in Kasungu.

The three selected EPAs have a total of 38 sections, of which 17 are considered remote while 21 are non-remote. See Table 5 Below.

Table 5

EPA Sampling

	Chulu EPA	**Mkanda EPA**	**Chioshya EPA**	**Total**
Number of sections	12	18	8	38
Number of non-remote sectios	10	8	3	21
Remote sections	2	10	5	17

Source: EPA reports from Chulu, Mkanda, and Chioshya EPAs, 2022

The study selected 15 small-scale farmers at random from each section who had cultivated groundnuts and/or soya in the last three years for each particular sector to participate in the survey. The anticipated number of participants was 150 respondents for the smallholder farmer household survey. Similarly, two small traders were selected at random from each section to participate in the survey. This strategy ensured that every home in the specified area had the same chance of participating in the study thereby reducing sampling bias (Etikan & Bala, 2017). This method was essential, as it allowed for statistical studies while maintaining demographic and spatial diversity.

The study involved 208 participants, comprising 136 smallholder farmers and 19 small traders, who participated in a survey. Additionally, 30 smallholder farmers, 9 small traders, and 9 agriculture extension officers were involved in focus group discussions, and five were interviewed as key informants. All participants were selected from the three EPAs, except for those participating in the KIIs. The nine agriculture extension officers comprised six agriculture extension development officers (AEDOs), with two officers selected from each of the aforementioned EPAs, and three agriculture extension development coordinators (AEDCs), who act as the leaders of the three EPAs.

The study conducted one focus group discussion (FGD) in each of the EPAs to collect qualitative data. The study randomly selected 10 smallholder farmers and three small grain traders, as well as two agricultural extension agents from each of the 10 EPA locations, to participate in these discussions. Most of them were from areas close to the EPA offices. Braun and Clarke (2021) argue that FGDs are particularly effective at exploring shared experiences and illustrating how groups function, as participants often build upon what others have said, thereby enriching the discussion.

The focus group guides were organised around the main study themes to help participants think deeply about how traders and farmers interact, how they perceive prices, and

how they make decisions. Nyumba et al. (2018) argue that FGDs are an effective method for gathering community-level opinions and uncovering culturally entrenched information, particularly when farmers and traders negotiate informally, trust is a concern, and fairness is perceived differently across different contexts.

3.3 Material Instrumentation of Research Tools

In this section, the study presents the research tools used in the investigation. Wilkinson and Birmingham argue that research instruments are tools used to collect valuable information about a particular subject (Wilkinson & Birmingham, 2003, p. 3). The researcher noted that several options are available, and the appropriate ones for the study depended on the unique features of the instruments that meet the study's needs. It is suggested that no single approach or tool can be classified as superior to all the others (Wilkinson & Birmingham, 2003, p. 3). Based on a careful review of the goals and objectives, the researcher determined that a Pragmatist paradigm was the most suitable approach for understanding the fundamental meaning of the actions of subsistence farmers and local grain merchants (Kivunja & Kuyini, 2017, pp. 35, 36). The researcher suggested combining quantitative and qualitative research methods, which share some basic characteristics from a pragmatic viewpoint. In this model, data were collected using three different methods, including questionnaires, focus group discussions, and key informant interviews.

Smallholder farmers and small traders completed semi-structured questionnaires, while smallholder farmers, small traders, and district government workers participated in focus group discussions. FGD guideline properly led the focus group talks. The study employed interview guides to gather information from key informants, including exporters, processors, government officials at the national level, and other national stakeholders.

The study employed structured questionnaires to collect quantitative data on aspects such as the volume of groundnut and soya sales by smallholders to SGTs, distance to formal markets, the reliability of merchants, the number of transactions they conducted, and their socio-economic status. The researcher conducted a pre-test of the questionnaire before using it for data collection, allowing for modifications and enhancing its transparency and cultural relevance. The researcher used key informant interviews and focus group discussions (FGDs) to collect qualitative data. These techniques enabled a closer examination of the trust ties, informal contracts, credit exchanges, and norms that influence the interactions between farmers and traders.

The research design matrix was employed to clarify the research questions, goals, data sources, and analytical methods, ensuring that they align with one another (Flick, 2022). The researcher used this matrix to organize the data collection and analysis, ensuring that the research process would yield the expected results (Guetterman et la., 2019). The matrix facilitated effective connection between the research topic, objectives, methods, and analysis of data (Plano Clark & Ivankova, 2022).

As shown in Table 6, the matrix illustrates how both qualitative and quantitative methods were employed in conjunction with the mixed-methods design. For instance, structured questionnaires and multinomial logistic regression were used to examine how smallholders perceive small grain traders (SGTs), which is the primary focus of Research Question 1. The study made use of statistical analysis to assess how distance to the market would affect the farmer's perception of a trader, how the freedom not to sort or grade would impact on the farmer's views of the trader as a cheater or not, how means of payment whether immediate or delayed and opportunity to negotiate would relate to farmer's relationship with the trader.

Table 6

Research Design Matrix

Research Question	Research Objective	Data Collection Tool	Key Variables	Analysis Method
What influences smallholder farmers' perception of small grain traders?	To identify and analyse factors that shape smallholders' perceptions of SGTs in the legume value chain.	Smallholder Farmer Questionnaire, Traders' Questionnaire FGDs	viewc, distanceg, distances, priceg, prices, pay_del, nego, sort, quality	Multinomial Logistic Regression
What influences smallholder farmers' decision to sell to small traders?	To assess the key determinants influencing the decision of smallholders to sell their produce to SGTs.	Smallholder Farmer Questionnaire, Traders' questionnaire, FGD, Interviews	saleqg, saleqs, packr, priceg, prices, viewc, nego, pay_del, sort, quality, distanceg, distances, transc	Seemingly Unrelated Regression (SUR), Linear Regression

Annexe 2 provides a Questionnaire for Research Objective Mapping, which provides more information on how the survey questions relate to the research objectives.

3.3.1 *Questionnaires*

To answer the main research questions and hypotheses of this study, two different but related sets of questionnaires were created. One questionnaire was for smallholder farmers while the second one was for small traders. (i) the research questions guided the design of the questionnaires, (ii) the research hypotheses, and (iii) the theoretical framework. This organised strategy ensured that the tools used to collect data were aligned with the research goals and that there was consistency within each group of respondents.

The questionnaire for smallholder farmers had three sections. The first section collected information about the demographic data of the smallholder farmer participants, including age,

level of education, size of land used, sources of income, and other relevant details. The second part of the questionnaire included questions about the farmers' perception of small traders. The last portion inquired about how well the farmers understood duties of the traders and how they influenced their actions. There were four parts in the second questionnaire for small dealers. The first part of the questionnaire focused on demographic information about the traders, while the second part collected information about the traders' businesses, such as where they do business, age of the business, how much they trade in Soya and groundnuts. The questions were aligned with the research goals as shown in the research Matrix above.

After the questionnaires were drafted, they were pre-evaluated in one part of Mkanda EPA, specifically the Kapyopyo Section, to ensure they were appropriate and relevant for gathering the intended data. The finalised questionnaires were digitised and used the KoBo Collect Android app to facilitate easier data collection (Benshaul-Tolonen et la., 2022).

The Harvard Humanitarian Initiative and the United Nations Office for the Coordination of Humanitarian Affairs (OCHA) collaborated to develop KoBo Collect, a crucial tool for collecting data on mobile devices in resource-constrained settings. Because it can operate in various situations and remains functional even when connectivity issues arise, it is particularly well-suited for fieldwork in rural Sub-Saharan Africa, where digital infrastructure is often unreliable (Anthonj et al., 2021). The Kobo application enables users to collect data using an Android-operated phone or tablet without internet connectivity, store the data locally on the device, and then synchronize it with a central server when reconnected to the internet. These features not only make it easier for researchers to navigate but also reduce the risk of data loss and increase accuracy by enabling built-in validations and skip logic during the survey process (Singh et al., 2021).

The KoBo Collect platform was also utilized due to several advantages, including the ability to perform geo-referencing, view data in real-time, and export it directly to spreadsheet

software for later statistical analysis (Wamala et al., 2023). Additionally, the tool enabled the researcher to easily consolidate data collected in real time, identify issues promptly, and address them immediately. All of these factors are crucial for maintaining data quality in field-based studies.

Each questionnaire loaded on Kobo was carefully prepared to include both open-ended and closed-ended questions. As a result, the study was able to gather a wide range of information while still obtaining a great deal of detail.

The questionnaire given to smallholder farmers contained 21 open-ended questions and 51 closed-ended questions. The open-ended questions were designed to allow farmers to discuss their marketing experiences, their perceptions of traders, and the decision-making process. On the other hand, the trader questionnaire had 66 items, 18 of which were open-ended. In this study, open-ended questions proved highly useful for obtaining detailed insights, especially when the issues were emotionally or culturally complex, such as trust in traders or perceived fairness in pricing. These tools enable participants to express themselves in their own languages and share their thoughts without being limited by pre-set choices. In the study "Phenomenology of precarious work in Iran," it was observed that open-ended questions were instrumental in collecting perceptual data that was emotional in nature (Alavi, 2025).

Studies have demonstrated that open-ended questions can get more in-depth answers and reveal points of view that structured enquiries can miss (Hansen & Swiderska, 2024). However, they also have drawbacks: they take longer to answer, are more challenging to code when analysing, and may cause the researcher to overlook some themes that they consider significant. For example, one open-ended question asked farmers what dealers did to sell groundnuts. Many farmers may discuss prices or transportation, but fewer naturally bring up the role of aggregation unless asked directly. So, even though open-ended answers provide us

with a wealth of subjective information, they also run the risk of missing important details if the person answering the question does not understand the unspoken assumptions behind it.

Closed-ended questions, on the other hand, were better since they were more consistent and easier to measure. These things enabled the researcher quickly sort replies into groups and make statistical comparisons between groups of participants. Closed questions also made it less likely that people would give biased answers and made it easier to compare replies, especially when it came to factual information, such as farm size, production levels, or the number of trading partners. However, their drawback is that they may limit the respondent's point of view and overlook important information that was expected (Bolarinwa et al., 2021).

Using both types of questions was consistent with the use of two methods when analysing the results; one method views the results from a structured perspective, and the other from an interpretive perspective (Guetterman, Creswell, & Kuckartz, 2019). This thereby provides a fuller and broader picture of the research topic (Fetters & Molina-Azorin, 2019).

3.4.2 *Focus Group Discussions*

The main goal of this study's focus group discussions (FGDs) was to get a complete and detailed picture of how different actors in the value chain, especially smallholder farmers, small grain traders (SGTs), and agricultural extension officers, see the roles and duties of SGTs in the Soya and groundnuts value chains. FGDs provided participants with an opportunity to discuss their real-life experiences, contextual knowledge, and personal opinions about trader behaviour, market limitations, and transactional relationships that are difficult to measure in standardised surveys (Bachtiar et la., 2024).

Focus groups are a standard qualitative research tool used to examine group norms, shared values, and how individuals within a specific demographic or stakeholder group collectively make sense of things. Barrett and Twycross (2022) argue that FGDs are particularly effective in illustrating how people interact with one another and how their

responses evolve when they consider the same problem collectively. These group talks encourage conversation, debate, and clarification, which helps people explain what others have said and learn more about the things that are important to them.

In recent years, FGDs have gained popularity in agricultural and development research, as they facilitate the connection between statistical evidence and real-life experiences. Mukumbang et al. (2020) argue that FGDs are suitable for participatory studies because they align with decolonised research methods and provide participants with an opportunity to share their perspectives in areas where local knowledge is often underrepresented. In this study, FGDs were utilised not only to gather data but also as a place for researchers and participants to reflect, learn, and validate each other's stories.

The current study held three focus group talks, one in each of the three chosen Extension Planning Areas (EPAs). There were 12 to 15 people in each group, including smallholder farmers, SGTs, and government agricultural officers. The wide range of stakeholder involvement made sure that different points of view were heard. The issues discussed combined those that affect the farmers with those that affect the traders.

The FGD guide was used in all three FGDs. The purpose of the guide was to ensure that the discussions reflected the research questions and the research theoretical framework. The guide had these sections:

1. Introductory remarks;
2. Overview of the study, including purpose, objectives, research questions, and anticipated benefits;
3. Ground rules to encourage respectful engagement and equitable participation;
4. Informed consent procedures, ensuring voluntary participation and permission for audio recording;

5. Collection of basic demographic data from participants;

6. Core discussion topics centred on the perceived roles of traders, trust and dishonesty, opportunity to negotiate, and market choices;

7. Closure activities allow participants to reflect on the discussion and given a chance to ask questions.

Smartphones were used to record all the FGD sessions for the purpose of keeping a record of the discussions. Prior to starting the recording, the researcher explained the purpose of the recording and obtained permission to record the discussions. No recording would be done where permission was denied. The recording method was discussed in detail, making it clear that the recordings were solely for verification and to ensure the accuracy of the data, and that they would be kept private and not shared for any reason other than the current study. This method aligns with the ethical norms for protecting data and being transparent about it in qualitative research (American Psychological Association [APA], 2022).

The researcher was able to review the discussions again to verify the accuracy of the transcriptions, coding, and themes. Braun and Clarke (2022) suggest that for thematic analysis to be rigorous, it is important to have high-quality recordings and verbatim transcriptions. The recordings also helped the researcher ensure that the quality of the data was preserved by allowing them to clarify unclear statements and compare the results with survey and interview data.

Many of the statistical results from the quantitative analysis were better understood with the use of focus group data. For example, the quantitative data showed that many farmers believe traders are dishonest because they often fail to pay on time. The FGDs allowed participants to explain why these delays occur, commonly citing problems with urban buyers' cash flow, fuel costs, or poor communication. These qualitative stories provided more depth and insight into what could have been seen as trader negligence alone.

The participatory and dialogical style of FGDs also helped the researcher find places where different stakeholder groups agreed and disagreed. For instance, farmers often discussed how traders could offer better terms if they did not have to contend with unpredictable market conditions and pressure from off-takers. Comparing different perspectives enhanced the quality of the study.

Lastly, the study employed an interactive nature that was facilitated by the comparative FGD approach. Stakeholders were not only suppliers of data; they were also co-analysts who provided valuable insights that helped shape the understanding of the study's findings and the recommendations that emerged from it. This method aligned with the trend in agricultural research towards involving all stakeholders and utilising locally led development methods (Ferrer et al., 2023).

3.3.3 *Interviews*

Interviews remain an essential method for gathering data in qualitative and mixed-methods research, particularly when researchers aim to obtain personal, nuanced, and context-rich information that cannot be easily collected using standardized tools such as questionnaires. Interviews were conducted in this study to gather detailed opinions from key stakeholders in the value chain, including government officials, processors, exporters, and the Grain Traders and Exporters Association. The interviews focused on the roles played by small traders in the sector and provided insights into the interviewees' opinions.

According to Barrett & Twycross (2022), interviews provide researchers with more information than questionnaires, as they can observe not only the answers but also the tone, pauses, and hesitations of the person being interviewed (Barrett & Twycross, 2022).

The structured interview approach was chosen for this study to ensure consistency across all interviews, facilitate more straightforward comparison of results, and maintain control over the length and topics of the conversations. Structured interviews have a set of

questions, a consistent approach to conducting them, and a predetermined order. This made them very useful for the research that combines qualitative insights with strict comparisons between cases (Saunders et al., 2019). This method also made it easier to manage time since the interviews lasted between 45 and 75 minutes.

The interviews focused on gathering information that could not be obtained through surveys, such as:

- Institutional views on the integration of SGTs in formal value chains;
- Policy positions regarding market regulation, licensing, and aggregation;
- Stakeholder experiences with market coordination and pricing mechanisms.

Participants included:

- Two senior government officials—one from the Ministry of Agriculture (responsible for agricultural market oversight) and another from the Ministry of Trade (responsible for policy formulation in domestic markets);
- Three private sector players, including exporters and processors;
- The chairperson of the independent Grain Traders and Processors Association.

A guiding protocol was used in line with the study questions for each interview.

Jamshed (2014) suggests that guiding questions should be open-ended yet focused, allowing participants to discuss topics such as trust, regulation, trade dynamics, and policy gaps while still facilitating comparison of answers.

Interviews were recorded digitally (with permission), and field notes were gathered at the same time for data management and quality control. To maintain data accuracy, transcription and coding were performed immediately after data collection. Structured

interviews also helped reduce bias in the interviewer and made it easier to code and compare themes during analysis (Barrett & Twycross, 2022).

The researcher found the interviews helpful in areas of getting insights into the institutional, policy, and regulatory context of the study. This also helped to understand challenges and limitations affecting both smallholder farmers and traders arising from the policy or regulatory framework. Furthermore, through interviews with key informants, the researcher gained insight into the views of key stakeholders on the subject of the study. The insights from the KII also formed building blocks for further analysis.

In summary, the research tools and methods for gathering data were carefully chosen and used to make sure that the study's both quantitative rigour and qualitative richness were maintained. The study employed a robust mobile data collection technology using KoBo Collect, and a combination of question types (open and closed) to gather the most accurate data possible. The data collection adhered to best practices in modern field-based research. In addition to questionnaires and FGDs the study employed structured interviews to gather detailed information from carefully selected individuals in a manner that was both organised and adaptable. The interviews with key informants contributed to the study's analytical depth by providing information about value chain actor behaviour, policy alignment, and governance dynamics that are often missing from quantitative datasets.

3.4.4 *Validity and Reliability*

Reliability and validity are crucial in any research process to ensure that the study's results are accurate and trustworthy. According to Taherdoost (2019), reliability refers to the ability to get same results from the research tool or method every time the tool is used under the same conditions while validity, suggests how well is the research tool measuring what is intended to be measured. In this case, validity encompasses not only the accuracy of the

research tool but also the reliability and validity of the conclusions drawn from the results (Mohajan, 2020). In this case, reliability and validity justify why the research results should be considered valid and minimise the possibility of being challenged.

3.4.4.1 Research Strategy and Methodological Rigor: This study employed a mixed-methods research strategy, combining both quantitative and qualitative methodologies to provide a comprehensive understanding of the factors influencing smallholder farmers in Malawi's groundnut and soya value chains to work with small grain dealers. The study employed a mixed-methods design because neither quantitative nor qualitative methods alone would be able to fully capture the complex and contextual nature of farmers' perspectives, trader behaviour, and value chain governance dynamics. This method is based on the pragmatic paradigm, which suggests that employing a variety of methods is the most effective way to address complex research problems in the real world (Creswell et la., 2018).

Creswell and Creswell argue that triangulation, which combines qualitative and quantitative methodologies, enhances the reliability and completeness of findings by allowing other perspectives to enrich the interpretation. The use of semi-structured questionnaires allowed the possibility of conducting concurrent triangulation, which involved examining qualitative insights and quantitative patterns together to ensure consistency and accuracy. This enables the confirmation of results across different tools by combining data from multiple sources through triangulation (Creswell & Creswell, 2023). Additionally, the tool enables researchers to identify statistically significant variables, including distances to marketplaces, pricing differences, and sales frequency. The tool also facilitated the acquisition of narrative insights into trust, negotiation experiences, and how fair people perceived transactions.

Further, qualitative information was collected through focus group discussions. The focus groups included a cross-section of research participants, including smallholder farmers, traders, and agriculture officers from the EPAs. The FGDs employed open questions that were

discussed from the perspectives of all the groups represented, thereby bringing in deeper insights into the matters. The FGDs featured open-ended questions that allowed participants to delve deeper into complex, context-specific topics. Nowell et al. (2017) argue that the involvement of various stakeholders with different interests and sometimes competing interests helps make qualitative research more trustworthy and reliable by ensuring that the data is complete and that the themes are consistent.

3.4.4.2 Quantitative Component: Objectivity and Generalizability: The study employed a quantitative approach to assess relationships between specific variables, such as the decisions of smallholders and the actions of traders. Saunders et la., (2019) argue that quantitative research involves gathering objective, numerical data that can be analysed statistically to identify patterns, relationships, and causes. This study employed multinomial logistic regression and seemingly unrelated regression models to examine factors such as distance to market, access to loans, and prices obtained. This helped us understand how farmers make decisions when market conditions change.

The study ensured the reliability of the quantitative data by using the same methods for each data collection session and maintaining consistency in the language and structure of the questionnaire. According to Mahajan (2020), dependability in quantitative research refers to the consistency of measurements over time and across different groups of respondents. The researcher also conducted pre-testing of the questionnaires to enhance the internal consistency of the tool.

In terms of validity, the study ensured that the content and construct were valid by creating survey questions closely related to the research goals and based on existing knowledge about how smallholders market their goods. Validity refers to the extent to which a tool accurately measures what it is intended to measure, and it is crucial because it ensures that the results are accurate (Taherdoost, 2020).

3.4.4.3 Quantitative Component: The study's qualitative element provided it with depth, context, and participant perspectives that cannot be measured. The study employed open-ended survey questions, interviews, and focus group discussions to gain a deeper understanding of how smallholder farmers perceive trader honesty, and how the conduct of traders affects their market participation.

Qualitative research focuses on the depth of interpretation, examining how people make sense of things and their own experiences (Tracy, 2020). In this survey, participants shared their experiences with late payments, poor packaging, and inconsistent grading. The researcher employed thematic content analysis to identify similarities in these stories and then applied theories about transaction costs and market participation to interpret the findings.

Four related criteria were used to assess the trustworthiness of the qualitative part: credibility, transferability, dependability, and confirmability (Nowell et al., 2017). Member verification, in which selected individuals reviewed key themes to confirm interpretations, helped establish credibility. Providing detailed descriptions of the study settings and the demographics of the participants helped with transferability. It was possible to trust the results since coding decisions and changes to the approach were written down. Another way the results were confirmed was through quoting verbatim.

3.4.4.4 Triangulation. The approach used for triangulation was by using three different types of triangulation. The study used methodological triangulation, which means that it used three different sources of data: structured questionnaires, FGDs, and KIIs. This made the research more rigorous overall. Noble and Heale (2019) argue that triangulation enhances the reliability and strength of conclusions by verifying information from diverse sources and methodologies against one another. In this situation, triangulation helped confirm important patterns found in both the qualitative and quantitative datasets, such as perceptions of trader dishonesty and the reliability of payments.

For example, the quantitative data indicate that late payments were a significant factor in traders' negative perceptions, but focus group discussions added depth to this by revealing that late payments were commonly caused by dealers relying on urban buyers or credit-linked transactions. This cross-validation not only made the analysis better but also made the results more reliable.

3.4.4.5 Research Objectives and Comprehension Focus. This study aimed not only to test causal hypotheses but also to gain a deeper understanding of the interactions between smallholders and traders. In line with the research questions, the study's goal was more focused on gaining understanding than providing an explanation of the relationship, thereby highlighting the exploratory and explanatory nature of mixed methods research in agricultural development (Johnson et al., 2020). This viewpoint recognises that factors beyond price and distance influence the relationship between traders and farmers. It is also affected by past trust, gender roles, and problems with infrastructure.

The study aimed at gathering evidence that could inform policymakers on how to integrate small grain traders into the value chain while addressing the concerns of smallholder farmers. The research provides government authorities, politicians, and business sector actors interested in inclusive agricultural marketing with a comprehensive picture, presenting both numerical trends and detailed stories.

3.4.4.6 Methodological Rigor and Ethical Consistency. Bazeley (2021) emphasizes that mixed methods research must maintain methodological rigor, which entails that the research strategy, data collection tools, and analytical approaches must be aligned. This study met these standards by employing established theory as a basis for its methodology, utilizing validated techniques, and adhering to the American Psychological Association's (APA, 2022) ethical guidelines.

To maintain the integrity of the research, the study documented all the decisions made regarding sampling, instrument design, coding, and model selection. The design purposefully left out individuals who are more likely to be harmed, such as children and those with cognitive disabilities, to be consistent with ethical practices. In the qualitative and mixed methods literature, these processes are referred to as "rigor" (Morse, 2019), which helps make the research more legitimate, reliable, and ethical.

3.5 Operational Definition of Variables

This study has used detailed quantitative analysis for two research questions to address the two key objectives:

a. To investigate factors that influence small-scale farmers' perspectives of small traders in the groundnuts and soya; and

b. To examine the pivotal roles fulfilled by small-scale grain traders in the groundnuts and soya bean supply chains that influence the decision of smallholder producers of groundnuts and soya to sell to them. This involves assessing their role in reducing the proximity to the market for small-scale farmers, sorting and grading before taking to the next market, being paid on delivery, accessing loans from the small traders, opportunity to negotiate for price, and price offered for their crop.

3.5.1 *Factors that influence the perception of farmers on small grain traders*

Objective 1: To investigate the factors that influence smallholder farmers' perception of small grain traders also referred to as vendors in the context of soya and groundnuts value chains.

The perception of smallholder farmers regarding small grain traders is a critical factor in this understanding. Perception influences how individuals view and react to various situations, objects, and individuals. It is the process by which individuals interpret and organize information to comprehend their environment (Knudsen et la., 2021). Given that perceptions can vary significantly among individuals observing the same issue, it is challenging to quantify the impact of perception on other factors. Consequently, qualitative research methods are often preferred for this purpose. However, in quantitative research, one effective approach to understanding perception is through categorization, as demonstrated by (Agyeman, et al., 2021). In that study, farmer's perceptions on improved Bambara groundnuts were categorised as Strongly Disagree, Disagree, Neutral, Agree, and Strongly Agree. In this study, smallholder farmers were asked whether they strongly agree, somewhat agree, or do not agree with the statement that small grain traders are dishonest. While direct answers are not obtained from such questions, this method facilitates quantitative analysis by simplifying the interpretation of perceptions.

Multinomial regression is an appropriate statistical method for situations where the dependent variable is categorical with more than two outcomes. It allows for the analysis of decisions and the relative importance of each factor influencing these decisions. Manda (2021) utilized multinomial regression to examine the impact of farmers' perceptions on single and multiple commodity markets in Tanzania. The study found that farmers derived the greatest benefits when they perceived and participated in multiple-commodity markets, highlighting the significance of policies that promote diversification in crop income sources to enhance welfare and food security. In the context of this study, the dependent variable is the perception of smallholder farmers (categorized as strongly agree, somewhat agree, and do not agree). The independent variables include distance to the nearest market, product quality, payment terms, access to loans, negotiation capabilities, and prices for groundnuts and Soya.

The multinomial logistic regression model can be expressed as:

$$\text{Pro}\, Y_j = \beta_0 + \beta_{1j}X_1 + \beta_{2j}X_2 + \cdots + \beta_{nj}X_n + e_j$$

Where $\text{Pro}\, Y_j$ is the probability of perceiving the small grain traders as j, which is: strongly agree, somewhat agree, and do not agree. The β_0 is the intercept for perceiving j, β_{nj} are the coefficients associated with the independent variables X_n for perceiving j, and e_j are error terms.

The independent variables are:

i. Distance to nearest soya market X_1 and distance to nearest groundnuts market X_2

- The distance to the nearest market is a crucial logistical factor influencing smallholder farmers' perceptions. Research indicates that proximity to markets facilitates constant communication with grain traders, thereby building relationships and making it more attractive for farmers to sell their produce. In Malawi, where infrastructure is often underdeveloped, having closer markets can significantly reduce the transaction costs associated with trading groundnuts and Soya (Dorward, et al., 2007).

ii. Sorting X_3 and Quality Product X_4

- Product quality is another pivotal factor. While it might be expected that traders would offer better prices for high-quality produce that meets certain standards, this is not the case in Malawi. After the liberalisation of commodity markets, the practice of buying based on grades ceased, leading to commodities being purchased at the same price regardless of quality. As a result, farmers who sort, grade, and produce high-quality produce often perceive small grain traders as dishonest.

iii. Paying on Delivery X_5

- Cash on delivery is highly valued by smallholder farmers, many of whom have limited cash reserves and need prompt payments to meet their household needs. Delays in payment lead farmers to perceive traders as dishonest, making them prefer other markets that offer immediate payment, even if the price is slightly lower.

Access to Loans X_6

Access to loans can significantly shape smallholder farmers' perceptions of small grain traders as honest. Farmers with access to financial resources are better positioned to invest in quality improvements and can afford to wait for better market conditions before selling. In Malawi, the limited availability of formal credit services often forces farmers to depend on traders who offer loans, creating a dependency that influences their selling decisions and perceptions of trader honesty.

v. Ability to Negotiate X_7

Traders who provide a platform for negotiation positively influence smallholder farmers' perceptions of their honesty. Smallholder farmers often struggle to negotiate favourable terms, particularly when dealing with more experienced traders, which can negatively impact their perception of trader honesty. However, traders who offer a platform where farmers can compare or suggest prices help secure better deals, leading farmers to perceive these traders as honest.

vi. Price for Groundnuts X_8 and Soya X_9

Increases in prices influence smallholder farmers to strongly agree that small grain traders are honest. Price is a crucial factor in the decision-making process, with farmers continuously comparing prices offered by different markets for groundnuts and soya. Studies have shown that price discrepancies can lead to market inefficiencies and dissatisfaction among farmers. Therefore, price transparency and access to market information are essential for helping farmers make informed decisions.

Multinomial regression is a robust analytical method for examining the decision-making behaviours of smallholder farmers within the groundnuts and Soya markets in Malawi. This approach helps to identify and measure the various factors influencing their choices to engage with small-scale grain traders. Understanding these factors enables stakeholders to better support farmers, guiding them towards more profitable and sustainable marketing decisions.

3.5.2 *Factors influencing the decision of smallholder farmers to sell to small traders*

Objective 2: To examine the pivotal roles fulfilled by small-scale grain traders in the groundnuts and soya bean supply chains that influence the decision of smallholder producers of groundnuts and soya to sell to them.

This objective was achieved using Seemingly Unrelated Regression (SUR). The decision to engage in the market is typically denoted by a binary variable, commonly referred to as a "dummy" variable. Within this particular framework, a numerical value of 1 indicates a state of active engagement or participation, whereas a value of 0 denotes non-participation. In the given scenario, the farmer's decision to engage in a transaction with a small trader is contingent upon the perception that the small trader will yield more financial gains compared

to alternative options. This study employed a dummy variable to examine the extent to which farmers' comprehension of the subject matter affects their participation in small trader markets. To comprehend the magnitude of a continuous variable, it is necessary to utilize its scale. This study shares similarities with the research conducted by Muhammed Urgessa in Ethiopia, where he examined several factors that impact the supply of teff in the market (Urgessa, 2011). The study anticipated the presence of a continuous variable and examined the aggregation of smallholder farmers with small grain traders. Therefore, the variable labelled as Y or the dependent variable specifically signifies the amounts of goods supplied exclusively to small-scale grain merchants. To be more explicit, the variable "saleqg" indicates the sales made just for groundnuts, while "saleqs" reflects the sales made specifically for soya. Presented below is a succinct summary of the independent variables:

Table 7

Description of Independent and Dependent Variables for Multinomial Regression

Variable	Explanation	Category	Value
Dependent Variables			
Salesqg	Quantity of groundnuts sales made with a small grain trader	Continuous	Kilograms
Salesqs	Quantity of soya sales made with a small grain trader	Continuous	Kilograms
Independent Variables			
Distanceg	The distance between small grain trader and alternative markets for groundnuts	Continuous	Kilometres
Distances	The distance between small grain traders and alternative markets for soya	Continuous	Kilometres
Sort	Whether groundnuts or soya is graded before selling to the small grain trader	Dummy	1= Yes, 0= No
Quality	If the same quality sold to small grain traders is sold to other markets	Dummy	1= Yes, 0= No
pay_del	Whether one received an advance payment for the commodities	Dummy	1= Yes, 0= No
Loan	Average of loans received during the growing season	Continuous	Kwacha
Nego	Did the farmer negotiate for the selling price that marketing season	Dummy	1= Yes, 0= No
Priceg	Average price sold of groundnuts to small grain traders	Continuous	Kwacha

Prices	Average price sold of soya to small grain traders	Continuous	Kwacha
Age	Age of the farmer	Continuous	Years
Gender	Sex of the respondent	Dummy	1= Male, 0= Female
Dependants	Number of people in the household	Continuous	Number
Edu	Education level of the farmer	Categorized	1= None, 2= Attended primary school, and 3= Attended secondary school

This study examines the characteristics listed above to represent the roles that small grain merchants play within a community. The subsequent factors delineate the attributes of the responder that may have influenced their decision to engage in commerce with the small grain trader. The study takes into account several household characteristics. The variables considered in this study are the farmer's age (measured in years), the respondent's gender (represented as a binary variable with 1 indicating male and 0 indicating female), the household size (providing information about the available workforce), and the education levels (which help assess the impact of literacy on the decision to sell to a small grain trader). These parameters have been examined in prior research works conducted by Shiferaw et al. (2008) and Urgessa (2011),

The statistical study of these household variables involved employing the T-test and the Chi-Square Test to compare their means. Loki et al. (2019) employed the T-test and Chi-Square Test analysis to examine the association between a farmer and their propensity to provide financial backing to extension services.

The possibility of having both harvests available for a particular output influences the farmer's choice about crop sales. There is a connection between the choice to sell groundnuts to a small grain merchant and the choice to sell soya to the same buyer, despite the contrasting characteristics of these two options. The error terms associated with these judgments exhibit correlation. Therefore, the Seemingly Unrelated Regression (SUR) model will be employed as the analytical approach. The simultaneous analysis of two linear regression functions, as conducted by Urgessa (2011) in their study on the supply of teff in Ethiopia, will be undertaken. Urgessa (2011) employed multiple regression analysis in his study, assuming that the decisions being examined were not associated. Rafoneke et al. (2020) employed the Bivariate Probit model, a statistical technique that examines several regression functions and their associated errors. It is important to mention that the dependent variable used in their experiments is binary. The chosen dependent variable for this study is SUR, which is a continuous variable. A hypothesis proposes that the error terms in the model exhibit correlation. The equations can be formulated as follows

The equation can be represented as $y\_g = \beta\_g + \beta\_g\ distanceg + \beta\_g\ sort + \beta\_g\ quality + \beta\_g\ pay\_del + \beta\_g\ loan + \beta\_g\ nego + \beta\_g\ priceg + \mu\_g$.

The equation may be expressed as $y\_s = \beta\_s + \beta\_s\ distances + \beta\_s\ sort + \beta\_s\ quality + \beta\_s\ pay\_del + \beta\_s\ loan + \beta\_s\ nego + \beta\_s\ prices + \mu\_s$.

The variable y represents the quantity of sales made to small grain traders, measured in kilos. The parameter β is utilized for estimation purposes, while μ denotes the error component in the equation. The use of the underscore symbol "g" signifies the variable being examined in the context of a groundnut farmer. In contrast, the underscore symbol "s" denotes the variable of a producer of soya.

Distance to the alternative market. The objective of this study is to ascertain the precise functions performed by small-scale grain traders in the process of gathering and consolidating agricultural products. An inherent benefit of small-scale grain dealers is their ability to provide market access to smallholder farmers. The measurement of market accessibility in terms of distance, as demonstrated by Bekele Shiferaw (2008) in Kenya, is utilized to assess the market excess for off-takers. The variables are denoted as "distanceg" to represent the measure of accessibility to alternative markets for groundnuts, and "distances" to represent the measure of accessibility to other markets for soya. The study aims to assess the effects of reducing the distance between the farm gate and markets. The study conducted by Renkowa and the team investigated the various factors that impact a farmer's decision to sell their agricultural products at approved markets. The study focused on examining the impact of reducing the proximity between the farm gate and the authorized produce market. The study involved participants who were instructed to assess the distance to the nearest alternative formal produce markets. Their evaluation was recorded as a continuous variable. Hence, the variable under investigation in this study is the closeness to an alternate authorized agricultural market. Given that the dependent variable is continuous, a simple regression model is employed in the subsequent manner:

The equation can be represented as $y = \alpha + \beta transc + \beta bicycle +$

The dependent variable in our investigation, denoted by the symbol y, is distance. It is necessary to estimate the parameters α and β, whereas the residual term is indicated by ε. The independent variable "transc" represents the monetary value associated with transportation expenses, which is a continuous variable that quantifies the expenses incurred when delivering groundnuts or soya to the formal produce market. According to Takechi's 2016 study, a positive association was observed between transport costs and distance. The dummy variables

bicycle, lorry, motorbike, and head represent the several transportation modes employed by the farmer to convey the food from the farm gate to the official product market. A value of 1 indicates the use of the specified method of transportation, while a value of 0 indicates non-use. In their study, Renkowa et al. (2004) found that the adoption of transport models had no statistically significant impact on reducing the distance to the market. The variables saleqg and saleqs denote the sales quantity in kilograms for groundnuts and soya, respectively. The study undertaken by Renkowa et al. (2004) analyses the sales quantity to provide insights into the volume of products sold in the formal produce market.

Sorting and grading. This study aims to investigate the impact of small grain dealers on the reinstatement of sorting or grading protocols prior to the sale of commodities. The grading will be assessed by employing the variable "sort," which serves as a dummy variable indicating whether the product has been sorted prior to its sale. There is currently no universally accepted metric for categorizing sorting practices. In their study, Rafoneke et la (2020) employed the method of sorting and grading expenses to establish the criteria for sorting and examine the impact of transaction costs on peach sales in Lesotho. Typically, the sorting variable lacks a universally accepted measure of description. The quality variable, like the sort variable, is binary. A value of 1 signifies that the identical quality was sold to an alternative market, whereas a value of 0 shows that a distinct quality was supplied to an alternative market. The study of quality seeks to determine the degree to which farmers still acknowledge its importance in the market. Rafoneke et al. (2020) did a recent study that has emphasized the examination of quality in the value chains of fruits and vegetables. This study intends to assess if farmers' decision is impacted by the sorting done by small traders.

Pay on Delivery. The inquiry employed the dummy variable "pay-del," which signifies the remuneration received on delivery of the produce. The study aims to analyse the potential

influence of receiving immediate payments on farmers' market selection, specifically evaluating whether such payments would motivate farmers to sell their products in local or distant marketplaces. The value of 1 denotes receipt of payment, and the value of 0 denotes non-receipt of payment.

Access to loan. Likewise, the magnitude of the loan obtained by an individual will fluctuate in response to the proximity of formal markets to the agricultural producer. The variable "loan" represents the continuous amount of the loan. The credit criteria included in this analysis were drawn from the research work conducted by Shiferaw et al. (2008), taking into account the many sources from which farmers may obtain loans. The participant was queried about the minimum and maximum loan sums obtained throughout the agricultural cycle, and subsequently, the average of these two sums will be computed to determine the ultimate loan amount. utilized a dummy variable to investigate the correlation between a farmer's financial access and their involvement in the cotton market. According to Shiferaw et al. (2008), there is a widely held belief that providing financial resources to small grain traders and smallholder farmers contributes to enhancing the farmers' overall welfare.

Negotiation. The study of negotiation aimed to examine whether farmers have the opportunity to negotiate for a price higher than the prevailing market rate. This study aims to analyse the impact of negotiation on the expansion of sales to small traders. The variable in question “nego” is a binary indicator that assigns a value of 1 to individuals who made an effort to participate in negotiation, and a value of 0 to those who did not. Fafchamps and Gabre-Madhin (2006) observed that a significant proportion of farmers in Malawi reside in close proximity to local small-scale grain traders, with whom they engage in negotiations for the sale of their agricultural produce. The present study aims to provide further evidence in support of this observation.

Price offered. The notion of price is widely recognized and acknowledged in numerous market research studies (Takechi, 2016; Renkowa et al., 2004). The purpose of this study is to investigate whether farmers' decisions to sell their goods in close proximity to their homes or in far-off markets are substantially influenced by pricing. The variable "price" represents a continuous quantity measured in Malawi kwacha, the official currency of Malawi. The present study also incorporates continuous variables obtained from the minimum and maximum prices reported by the respondents during the interview. “Priceg” is the mean price at which groundnuts farmers sell their produce, while “prices” reflects the mean prices at which soya farmers sell their crops.

3.6 Procedures and Ethics

3.6.1 *Approval by UREC*

The Unicaf Study Ethics Committee (UREC) provided ethical approval for the study instruments on 16 September 2021. The accepted materials comprised many components, including the research ethics application form (REAF), a gatekeeper letter, an informed consent form, and data collection tools. The data collection tools included customized questionnaires for smallholder farmers and small grain dealers, as well as focus group discussion guides, interview instructions for grain off-takers, and interview guides for policy makers. At national level, the data collection tools were approved by the National Committee on Research in the Social Sciences and Humanities (NCRSH) of Malawi.

3.6.2 *Protocol for data collection*

The researcher started with seeking consent to conduct the study from the gate keepers before commencing the survey with smallholder farmers. The district Directors of Agriculture and Natural Resource Management for Mchinji and Kasungu were asked in writing through the gatekeeper letter. The directors subsequently notified the heads of the relevant EPAs.

Following the introduction of the study at the district level, the researcher then interacted with the Agricultural Extension Development Coordinator (AEDC) in their respective EPAs.

A semi-structured questionnaire was used to collect real and in-depth data from smallholder farmers and small traders. This mixed format allowed for flexibility while ensuring consistency in data collection (Fetters & Molina-Azorin, 2019). The questionnaires were first tested at the Kapyopyo Section of Mkanda EPA to make sure they were clear, relevant, and easy to understand. This pre-testing was aimed at ensuring that the questions make sense to the people who answer them and lower the chance of response bias or misinterpretation (Vogl et al., 2020).

In addition to administering questionnaires to smallholder farmers, the study also randomly selected two small grain traders from each of the selected sections in the three EPAs. These traders purchase goods directly from farmers or local markets and are crucial for informal trade. The data from the traders was used to triangulate data collected from the farmers and provided an opportunity for a balanced view.

During the data collection from farmers and traders in the EPAs, the researcher was accompanied by an agricultural extension and development officer (AEDO) who was familiar with the geographical location of the sections. Convenience for the participants was ensured by collecting data from smallholder farmers and small grain traders at their individual sites. Upon initial contact with the research participant, the AEDO introduced the researcher to the participating farmer. Subsequently, the researcher presented a concise summary detailing the research objectives and procedures, followed by a request for informed consent from the participant. The survey was conducted after securing consent from the participant. The surveys were undertaken through in-person semi-structured interviews. The researcher's mobile device had the KoBo Collect data collection application installed, and the questionnaire was uploaded

onto it. The investigator employed a comparable methodology to conduct in-person semi-structured interviews with the small grain dealers.

Three focus group discussions (FGDs) were conducted, involving smallholder farmers, small grain traders, and agriculture extension development coordinators (AEDCs) and agriculture extension development officers (AEDOs), who are heads of extension services at the EPA level and in charge of extension work in a specific section of an EPA, respectively. FGDs are used to gain insights into a phenomenon, as they create an environment where people can freely discuss their group norms, values, and shared experiences, especially when social ties have a significant impact on market decisions (Nowell et al., 2017). The FGDs were conducted after collecting data from the surveys, allowing the focus group discussions to serve as an explanatory tool. The focus group discussion teams were heterogeneous, including farmers, traders, and agricultural extension officers from the EPA. The outcome was a participant count of between 13 and 16 individuals. The farmers and small grain traders were invited to participate in focus group discussions (FGDs) organized by the Agricultural Extension and Development Coordinator and the Agricultural Extension and Development Officer. The selection approach included purposive sampling to guarantee the participation of farmers and small grain traders living within a five-kilometre radius of the EPAs. The researcher led each discussion and used a guide that focused on topics such as trust in trade, price disagreements, seasonal habits, and collaboration.

The study also employed structured interviews with key informants to gather their opinions on policies and institutions. Participants who were interviewed included officials from the Ministry of Agriculture, representatives from grain trade associations, processors and exporters of groundnuts and soya. These actors are crucial in the value chains for setting prices and determining policy direction, which affect smallholder market access. Including them

helped to put the experiences of farmers and traders in the context of larger agriculture crop marketing systems and policies (Chirwa & Dorward, 2013). These interviews were performed in person. Appointments for KIIs were scheduled over the phone, and respondents were asked to propose a time for the meeting. The researcher and the interviewee agreed on the expected duration of the discussion. Prior to the interviews, a concise summary of the research, including its objectives, research questions, and planned application of the findings, was communicated to the recipients via email to ensure their readiness. In addition, before starting each interview, the researcher briefed the interviewees on the purpose of the interview and asked for their consent to proceed and agreed on the duration of the interview.

3.6.3 *Ethical Assurances*

Research involving human participants requires careful attention to ethical considerations throughout all phases of the study—from conceptualization and design to data collection, analysis, and dissemination (Matandika et la., 2022). In line with this requirement, the current study acknowledged the centrality of the interaction between the researcher and the research participants, particularly given its focus on smallholder farmers and small grain traders, whose socio-economic realities and market experiences are highly contextual and sensitive. Ethical research conduct was therefore essential for safeguarding participant welfare, ensuring informed participation, and maintaining the integrity of the findings.

Research ethics refer to the principles and norms that govern the researcher-participant relationship, ensuring that all activities adhere to standards of professional conduct, transparency, fairness, and accountability (Tracy, 2020). Ethical research not only protects human subjects but also enhances the credibility, reliability, and societal value of the research process (Iphofen, 2019). In applied social science, particularly within rural development

contexts, ethical rigor ensures that disadvantaged populations—like smallholder farmers—are not further marginalized by research practices.

According to the American Psychological Association's (2022) latest ethical guidelines, five core ethical principles should guide all human subject research:

1. Beneficence and Non-maleficence
2. Fidelity and Responsibility
3. Integrity
4. Justice
5. Respect for People's Rights and Dignity

The researcher adopted these principles throughout the fieldwork to ensure ethical compliance at all stages. Ethical approval was obtained from the University Research Ethics Committee (UREC), and the research tools were pre-tested to minimize the risk of undue harm or confusion.

Beneficence and Non-maleficence. The principle of beneficence emphasizes the need to maximize benefits and minimize potential harm to research participants. In contrast, non-maleficence underscores the obligation to avoid causing harm, whether physical, psychological, or reputational (Resnik & Elliott, 2019). In this study, participants were assured that their involvement posed no foreseeable risks, and several steps were taken to minimize discomfort or inconvenience.

The researcher adhered to the scheduled time for interview and focus group to prevent unnecessary delays and participant fatigue. Transport allowances were provided to reimburse participants for any costs incurred, and refreshments were made available during FGDs to

ensure a comfortable environment. These efforts were designed to honour participants' time and reduce the financial and emotional burden of participation. As noted by Banks & Brydon-Miller (2019) small incentives, when applied ethically, can promote equity in participatory research without coercion. All key informant interviews were conducted at the participants' place of work to minimize the inconvenience to the interviewees.

Names and other identifying information were deliberately excluded from all notes and transcripts to protect participant anonymity. This measure further ensured that no data could be traced back to individual participants, especially given the possibility of reputational risks when discussing sensitive issues such as trader dishonesty, pricing manipulation, or exclusion from negotiations.

Fidelity and Responsibility. This principle entails building relationships of trust, reliability, and professional accountability with participants and the research community. The researcher maintained transparency throughout the research process, clearly outlining the study objectives, the voluntary nature of participation, and the procedures for confidentiality. Follow-ups were made to verify consent and clarify any questions raised by participants during the data collection period.

Where sensitive insights were shared—particularly criticisms of market actors—the researcher took special care to contextualize such responses without misrepresenting or sensationalizing the participants' perspectives. This practice aligns with the ethical obligations in field-based studies to avoid the misuse or misrepresentation of participant voices, as noted by Israel and colleagues in their study (Hay & Israel, 2021).

Integrity. Integrity in research requires that the researcher remain honest, transparent, and methodologically rigorous at all times. This includes accurately reporting findings,

avoiding data manipulation, and refraining from plagiarism or selective disclosure. The researcher consistently adhered to these standards throughout the fieldwork and analysis phases.

No instances of fabrication, misrepresentation, or withholding of relevant data occurred. The original transcripts, recordings, and coding matrices have been retained securely for audit purposes, in accordance with the institution's data retention policies and the applicable data protection laws in Malawi. As emphasized by Sikes and Piper (2020), such record-keeping is critical for maintaining audit trails and methodological transparency in qualitative and mixed-methods research.

Moreover, the researcher provided accurate documentation of procedures, coding frameworks, and data triangulation methods, allowing for a clear link between empirical findings and analytical interpretations. All sources of funding, institutional affiliations, and methodological limitations were disclosed in the final report to enhance transparency and replicability.

Justice. Justice involves ensuring equitable treatment and representation of all participants, with specific attention to avoiding exploitation or undue exclusion. This principle guided participant selection, ensuring that both male and female farmers, youth, and those from remote extension planning areas (EPAs) were represented. However, to protect vulnerable groups and minimize ethical risks, children and individuals with cognitive impairments were excluded from the study.

Participant inclusion was based on relevance to the research objectives—namely, the ability to provide informed perspectives on the sale of Soya and groundnuts to small traders.

This approach ensured fairness in the sampling process and guarded against the instrumentalisation of marginalized voices for academic purposes (Mertens, 2020).

Furthermore, the findings were disaggregated by gender and geographical locations to ensure visibility of different group experiences, notably since the study revealed that women farmers often experience reduced negotiation power in markets. This reflects the principle of substantive justice—not just equal participation, but equal voice in analysis and interpretation.

Respect for People's Rights and Dignity. This principle emphasizes the researcher's duty to respect participants' autonomy, privacy, and right to make informed decisions. In compliance with this principle, informed consent was obtained from every participant prior to engagement. Participants were briefed on the study's aims, their right to withdraw at any time, and the voluntary nature of their involvement. Consent was obtained in written form for literate participants and verbally for those who preferred oral communication, with an independent witness present.

In line with data protection protocols, no personal identifiers were recorded or published. The researcher also sought verbal consent before initiating any audio recordings, and participants had the right to request cessation of recordings at any time. Cultural sensitivity was practiced throughout fieldwork, including the use of local language in the research area (Chichewa) and consultation with village leaders to ensure contextual appropriateness and community trust.

In conclusion, the ethical framework guiding this research was implemented in full alignment with international best practices and national guidelines on human subject research. The application of the APA's ethical principles, along with localized cultural sensitivity, helped foster trust-based, participatory, and non-exploitative relationships between the researcher and

participants. Moreover, the study was conducted with a strong commitment to transparency, equity, and scientific integrity, ensuring that the insights derived from smallholder experiences contribute meaningfully to policy discourse without compromising the dignity or well-being of the individuals involved.

3.7 Data Collection and Analysis

3.7.1 *Data collection*

The study, titled "The roles of small grain traders in groundnuts and soya value chains: The case of Mchinji and Kasungu districts," used both quantitative and qualitative approaches. The data collection approach involved a sample size of 136 smallholder farmers, who responded to a set of questionnaire with closed and open questions. In addition, 19 small traders also participated through questionnaires with open and closed questions. The two sets of questionnaires collected both quantitative and qualitative data. In addition, the study collected qualitative data through focus group discussions (FDGs). 48 individuals participated in 3 FGDs conducted, one in each EPA. The FGDs participants included 10 farmers, 3 small traders and 3 agriculture extension officers for each FDG. Five KIIs were conducted with officials from Ministry of Agriculture – the ministry responsible for crop pricing, Ministry of Trade and Industries - the ministry responsible for trade regulations including mandate for export bans and export and import controls, Grain Traders and Processors Association – a grouping of players in the grain marketing, a processor and an exporter.

The surveys were uploaded onto Android-operated software, notably the Kobo Collect platform, which allowed for quick consolidation of the collected data. The surveys utilized a blend of closed and open-ended inquiries, where closed questions were formulated to collect

quantitative data and open questions were formulated to collect qualitative data. The data collection procedure was guided by two research questions in the following manner:

a) What influences smallholder farmers' perception of small traders of groundnut and soya?

b) What influences the decision of smallholder farmers to sell groundnut and soya to small traders in Mchinji and Kasungu?

This inquiry seeks to elucidate the various functions fulfilled by small-scale traders in relation to (i) shortening the geographical gap between smallholder farmers and markets, (ii) sorting and grading soya and groundnut crops, (iii) paying on delivery, (iv) Accessing credit to smallholder farmers, (v) establishing price negotiation points for smallholder farmers, and (vi) the price offered.

3.7.2 *Quantitative analysis*

To analyse the first research question, "what factors influence smallholder farmers' perception of small traders," Multinomial regression was applied. The perception of smallholder farmers regarding small grain traders is a critical factor in this understanding. Perception influences how individuals view and react to various situations, objects, and individuals. It is the process by which individuals interpret and organize information to comprehend their environment (Panadés & Yuguero, 2025). Given that perceptions can vary significantly among individuals observing the same issue, it is challenging to quantify the impact of perception on other factors. Consequently, qualitative research methods are often preferred for this purpose. However, in quantitative research, one practical approach to understanding perception is through categorization, as demonstrated by Agyeman et la (2021). In that study, farmers' perceptions of improved Bambara groundnuts were categorised as Strongly Disagree, Disagree, Neutral, Agree, and Strongly Agree. In this study, smallholder

farmers were asked whether they strongly agree, somewhat agree, or do not agree with the statement that small grain traders are dishonest. While direct answers are not obtained from such questions, this method facilitates quantitative analysis by simplifying the interpretation of perceptions.

Multinomial regression is an appropriate statistical method for situations where the dependent variable is categorical with more than two outcomes. It allows for the analysis of decisions and the relative importance of each factor influencing these decisions. Unlike binary logistic regression, which can only accommodate dichotomous outcomes, multinomial logistic regression estimates the likelihood of choosing among three or more mutually exclusive options (Hosmer et al., 2021).

In this study, the model helps uncover how specific farm-level and market-level characteristics influence a farmer's perception of trader honesty. Manda (2021) employed multinomial regression to investigate the influence of farmers' perceptions on single and multiple commodity markets in Tanzania. The study found that farmers derived the most significant benefits when they perceived and participated in multiple-commodity markets, highlighting the significance of policies that promote diversification in crop income sources to enhance welfare and food security.

In the context of this study, the dependent variable is the perception of smallholder farmers (categorized as strongly agree, somewhat agree, and do not agree). The independent variables include distance to the nearest market, product quality, payment terms, access to loans, negotiation capabilities, and prices for groundnuts and soybeans. In this study, the model helps uncover how specific farm-level and market-level characteristics influence a farmer's perception of trader honesty. This model’s robustness is further supported by its ability to estimate relative risk ratios, allowing clear interpretation of the strength of each predictor.

The multinomial logistic regression model can be expressed as:

$$\text{Pro}\, Y_j = \beta_0 + \beta_{1j}X_1 + \beta_{2j}X_2 + \cdots + \beta_{nj}X_n + e_j$$

Where $\text{Pro}\, Y_j$ is the probability of perceiving the small grain traders as j which is; strongly agree, somewhat agree, and do not agree. The β_0 is the intercept for perceiving j, β_{nj} are the coefficients associated with the independent variables X_n for perceiving j, and e_j are error terms.

The independent variables are:

ii. Distance to nearest soya market X_1 and distance to nearest groundnuts market X_2

- The distance to the nearest market is a crucial logistical factor influencing smallholder farmers' perceptions. Research indicates that proximity to markets facilitates constant communication with grain traders, thereby building relationships and making it more attractive for farmers to sell their produce (Chamberlin & Jayne, 2020). In Malawi, where infrastructure is often underdeveloped, having closer markets can significantly reduce the transaction costs associated with trading groundnuts and soybeans.

iii. Sorting X_3 and Quality Product X_4

- Product quality is another pivotal factor. While it might be expected that traders would offer better prices for high-quality produce that meets certain standards, this is not the case in Malawi. Following the liberalisation of commodity markets, the practice of buying based on grades ceased, resulting in commodities being purchased at the same price regardless of their quality. This disincentivises quality improvement and fosters distrust,

especially when farmers feel that their efforts in maintaining quality are not rewarded (Tembo et al., 2023)

iv. Paying on Delivery X_5

- Cash on delivery is highly valued by smallholder farmers, many of whom have limited cash reserves and need prompt payments to meet their household needs. Delays in payment lead farmers to perceive traders as dishonest, making them prefer other markets that offer immediate payment, even if the price is slightly lower.

v. Access to Loans X_6

- Access to loans can significantly shape smallholder farmers' perceptions of small grain traders as honest. Farmers with access to financial resources are better positioned to invest in quality improvements and can afford to wait for better market conditions before selling (Salima et al., 2022). However, many smallholders lack access to formal credit and become dependent on trader advances, leading to power imbalances and sometimes exploitative conditions that negatively affect perception.

vi. Ability to Negotiate X_7

- Traders who provide a platform for negotiation positively influence smallholder farmers' perceptions of their honesty. Smallholder farmers often struggle to negotiate favourable terms, particularly when dealing with more experienced traders, which can negatively impact their perception of trader honesty. However, traders who offer a platform where farmers can compare or suggest prices help secure better deals, leading farmers to perceive these traders as honest (Burke et al., 2021).

vii. Price for Groundnuts X_8 and Soya X_9

- Increases in prices influence smallholder farmers to strongly agree that small grain traders are honest. Price is a crucial factor in the decision-making process, with farmers continuously comparing prices offered by different markets for groundnuts and soybeans. Studies have shown that price discrepancies can lead to market inefficiencies and dissatisfaction among farmers (Tadesse et al., 2021). Therefore, price transparency and access to market information are essential for helping farmers make informed decisions.

The second objective of the study is to investigate the second research question, “"What roles do SGTs play in influencing the decisions of smallholder farmers to sell their produce to them? The study employed the Seemingly Unrelated Regression (SUR) model.

The decision-making processes of smallholder farmers in Malawi's groundnut and soybean value chains frequently encompass various interconnected marketing outcomes that cannot be comprehensively examined in isolation. For example, farmers may concurrently determine whether to sell to small traders, the quantity of produce to allot to them, and the nature of contractual agreements to establish. These decisions are influenced by a standard set of underlying factors, including market access, price incentives, grading requirements, liquidity demands, and social networks involving traders (Barrett et al., 2021; Omulo & Wambugu, 2021).

In these settings, employing distinct Ordinary Least Squares (OLS) regressions for each decision equation may result in statistical inefficiency if the error terms across equations are interrelated (Zellner, 1962). This association is probable in the Malawian context, because unobserved variables—such as a farmer's risk aversion, previous interactions with traders, or exposure to extension communications—can simultaneously affect many marketing decisions.

A sudden localised transport disruption or an unforeseen price change at the farm gate may influence both the decision to sell to a trader and the proportion of produce sold via that channel.

The Seemingly Unrelated Regression (SUR) model is well-suited for this situation, as it facilitates the concurrent estimation of several equations, each with distinct dependent variables and explanatory variables, while considering the connection among the error components (Greene, 2018). This method has two principal advantages. The SUR model enhances the efficiency of parameter estimates compared to estimating equations independently when error terms exhibit correlation. The second advantage is that it allows for the simultaneous testing of hypotheses across different equations, which is crucial for evaluating whether certain explanatory variables—such as market distance, payment timeliness, or access to trader credit—exert consistent or divergent impacts on various marketing decisions (Gujarati & Porter, 2019).

The marketing environment for groundnuts and soybeans in the Kasungu and Mchinji districts is defined by structural connections among market outlets. Increased sales to a small trader typically result in decreased sales to a cooperative or processor; nevertheless, these distributions are influenced by analogous fundamental factors, such as seasonal cash requirements, household food security conditions, and storage facility availability (Simtowe et al., 2019). Policy and development initiatives, exemplified by the TRADE Programme, typically affect many marketing behaviours simultaneously, hence necessitating a modelling framework that acknowledges the interdependence of decisions.

Empirical research on smallholder marketing in Sub-Saharan Africa supports the appropriateness of the SUR methodology. Omulo and Wambugu (2021) revealed that SUR

produces efficiency improvements in simulating smallholder engagement across several market channels. Barrett et al. (2021) highlighted that smallholder market involvement is frequently a jointly determined phenomenon, where neglecting cross-equation error correlations may lead to skewed policy implications. Likewise, Simtowe et al. (2019) discovered that unobserved farmer-specific attributes across Malawi's legume value chains concurrently affect various marketing outcomes, rendering Seemingly Unrelated Regression (SUR) a practical analytical approach.

Considering the multi-equational complexity of the research issue, the potential for correlated unobserved factors, and the necessity for efficient estimation and rigorous hypothesis testing, the SUR model represents a statistically and contextually appropriate option for analysing the determinants affecting smallholder farmers' decisions to sell to small traders in Malawi.

In this case, the dependent variables are the quantities of groundnuts (*saleqg*) and soybeans (*saleqs*) sold to SGTs. Below is a table of the Description of Dependent and Independent Variables.

Table 8

Description of Independent and Dependent Variables for SUR

Variable	Explanation	Category	Value
	Dependent Variables		
Salesqg	Quantity of groundnut sales made with a small grain trader	Continuous	Kilograms
Salesqs	Quantity of soya sales made with a small grain trader	Continuous	Kilograms
	Independent Variables		
Distanceg	The distance between small grain traders and alternative markets for groundnuts	Continuous	Kilometres
Distances	The distance between small grain traders and alternative markets for soya	Continuous	Kilometres
Sort	Whether groundnuts or soya is graded before selling to the small grain trader	Dummy	1= Yes, 0= No
Quality	If the same quality sold to small grain traders is sold to other markets	Dummy	1= Yes, 0= No
pay_del	Whether one received an advance payment for the commodities	Dummy	1= Yes, 0= No
Loan	Average of loans received during the growing season	Continuous	Kwacha
Nego	Did the farmer negotiate for the selling price during that marketing season?	Dummy	1= Yes, 0= No
Priceg	Average price sold of groundnuts to small grain traders	Continuous	Kwacha

Prices	Average price sold of soya to small grain traders	Continuous	Kwacha
Age	Age of the farmer	Continuous	Years
Gender	Sex of the respondent	Dummy	1= Male, 0= Female
Dependants	Number of people in the household	Continuous	Number
Edu	Education level of the farmer	Categorized	1= None, 2= Attended primary school, and 3= Attended secondary school

Find below brief explanations of the independent variables:

Distanceg & Distances. Continuous variables ‘distanceg’ and ‘distances’ denote the proximity to the nearest alternative groundnut and soya markets, respectively. Manda et la (2020) observed that market accessibility is a crucial factor influencing farmer participation in Malawi's legume value chains (Manda et la., 2020). Longer distances to alternative markets are hypothesized to increase sales to SGTs, as they offer convenience at the risk of accepting suboptimal terms. According to the methodology established by Shiferaw et al. (2008) in Kenya, the variable is quantified as a continuous metric, represented in kilometers.

The impact of decreasing market distance is investigated to ascertain if closeness affects farmers' market choices. Following recent research by Ntakyo et al. (2022), which indicated that reduced distances to markets markedly enhance the probability of smallholder engagement in formal trade, distance is analysed in conjunction with transportation costs (transc) and transportation modes—dummy variables for bicycle, lorry, motorbike, and head-loading. Transport expenses are anticipated to correlate positively with distance. Consistent with Renkow et al. (2004), the analysis incorporates sales quantities (saleqg for

groundnuts and saleqs for soya) to investigate possible correlations among distance and marketed excess.

Sort & Quality. 'Sort and Quality' was used as a binary variable assessing whether the produce was sorted or graded. High-quality produce may attract better prices, improving trader engagement, although this is contingent on trader recognition (Tembo et al., 2023). Recent data by Rafoneke et al. (2020) in Lesotho substantiates that sorting and grading expenses can substantially affect farmers' sales choices in fresh product markets. A pertinent quality variable is incorporated, coded as 1 if the identical quality was marketed to an alternate market and 0 if disparate qualities were provided. This enables the study to evaluate if perceived product quality continues to be a significant determinant in farmer–trader transactions, as proposed by Ochieng et al. (2021) in legume value chains.

In examining whether the quality of the produce brought to the market influences the farmers' decision to sell to the traders, the independent variable "sort" was analysed against the dependent variables "saleqg" and "saleqs".

Opportunity to Negotiate. Negotiation is expected to positively influence trade volumes with SGTs (Burke et al., 2021). Variable "Nego" was used to represent whether the farmer had the opportunity to negotiate for prices. The "nego" variable is binary, receiving a value of 1 if the farmer sought to negotiate a price exceeding the existing market rate, and 0 otherwise. This study examines the extent to which bargaining efforts enhance sales volumes to small traders.

Prices offered. Price is a fundamental factor influencing market selection, especially in competitive smallholder market systems (Kassie et al., 2020). The price variable is continuous, denoted in Malawi kwacha, and is determined as the mean of the reported

minimum and maximum prices obtained throughout the season. Distinct price metrics—priceg for groundnuts and prices for soya—are incorporated to account for commodity-specific influences. A recent evaluation suggests that elevated pricing may encourage farmers to participate in sales within more remote or formal markets, contingent upon transaction costs and buyer affiliations. Higher prices should logically increase quantities sold to a particular trader group (Geffersa & Tabe-Ojong Jr., 2023). The variables represent the mean prices at which groundnuts and soya were traded, denoted as "priceg" and "prices", respectively.

Pay on delivery. Immediate payment upon delivery is a prevalent practice in Malawi's informal agricultural trade, which may influence farmers' willingness to sell to small traders. The “pay-del” variable is binary, assuming a value of 1 if payment was received upon delivery and 0 if not. It is argued that immediate payment for smallholder farmers has the potential to influence their market decisions due to the cash flow challenges they face, among other benefits (AGRA, 2020). This study examines whether pay-on-delivery incentives increase the likelihood of farmers selling to local dealers rather than more distant markets.

Loan Access. Access to credit is a vital facilitator of agricultural marketing, particularly in situations where liquidity constraints affect sales decisions (AGRA 2020). The “loan” variable represents the continuous value of loans acquired by the farmer from a small trader to be repaid at the time of sales. However, loans from traders have the potential to create market imbalances between smallholders and farmers.

3.7.3 *Qualitative Data Analysis*

This section describes the methodology used to analyse the qualitative information acquired during the study's fieldwork phase. In line with the study's adoption of a mixed-methods research design underpinned by the pragmatic paradigm, qualitative data analysis was conducted to complement the quantitative findings and provide a deeper understanding of

smallholder farmers' perceptions and decision-making processes regarding small grain traders. This methodological integration acknowledges that quantitative approaches alone may not adequately capture the complexity of behavioural and attitudinal dynamics that influence smallholder engagement in Malawi's legume value chains (Creswell & Creswell, 2023).

Smallholder farmers and small-scale grain traders (SGTs) in the districts of Mchinji and Kasungu participated in semi-structured interviews, open-ended survey responses, and focus group discussions (FGDs) as part of the study's manual qualitative data analysis methodology. Because qualitative research is interpretive in nature and because of the amount of textual data collected, a thorough and open approach was created to guarantee that the results were reliable, grounded in context, and consistent with the goals of the study. Following the collection of qualitative data through semi-structured interviews, focus group discussions (FGDs), and open-ended survey responses, the study employed a thematic analysis to interpret and categorize the responses systematically. The thematic analytical approach was found to be well-suited for exploring subjective perceptions and unstructured narratives in agricultural market studies (Kiger & Varpio, 2020). The core aim was to generate themes that illustrate how smallholder farmers interpret the behaviour of small grain traders and how these interpretations influence their marketing choices.

The analysis was guided by the two research questions and the conceptual framework established in Chapter Two. According to Assarroudi et la, deductive analysis is particularly appropriate when the structure of analysis is pre-informed by theoretical or empirical literature (Assarroudi et al., 2018). This contrasts with inductive approaches, where categories emerge solely from the data. Given the study's objective to test specific hypotheses about the influence of trader practices on farmer perceptions and market engagement, a structured, deductive framework was deemed appropriate.

3.7.3.1 **Rationale for Manual Qualitative Analysis.** The researcher chose to use manual qualitative data analysis. Several theoretical and practical factors contributed to the decision to employ manual qualitative analysis. First, using software like NVivo or ATLAS was unnecessary and possibly inefficient due to the sample size and structure of the qualitative data, which included open-ended responses and a small number of focus groups (Miles et la., 2020). Second, the researcher was able to identify subtle patterns and meanings that automated coding processes might otherwise miss, due to the close familiarity with the data that a manual process offered (Silverman, 2020). Because manual coding enabled interaction with the data in a more iterative, reflective, and interpretive manner, the themes that emerged were grounded in the real-world experiences of smallholder farmers and grain traders in the selected EPAs of Mkanda, Chulu, and Chiosya.

3.7.3.2 **Sources of Qualitative Data.** The qualitative data analysed in this study were derived from three primary sources:

1. Open-ended questions in the farmer and trader questionnaires;
2. Focus Group Discussions (FGDs) conducted with selected smallholder farmer groups in Chiosya, Chulu, and Nkanda;
3. Key Informant Interviews (KIIs) with extension officers and local market actors.

These diverse data sources enabled triangulation, enhancing the validity and trustworthiness of the study findings (Flick, 2019). The qualitative questions focused on understanding farmers' perceptions of grain traders, decision-making rationales, experiences with grading and packaging, trust and transaction dynamics, and the enabling or constraining factors within the Soya and groundnuts value chains.

3.7.3.3 **Stages of the Manual Coding Process.** The qualitative data analysis was conducted through an iterative six-stage process as outlined below, drawing on guidelines proposed by Braun and Clarke (2021) and refined to suit the research context.

Stage 1: Data Familiarization. The process began with repeated readings of the raw textual data extracted from FGDs, survey responses, and KIIs. Field notes were also reviewed to contextualize the participants' spoken narratives. This immersion stage helped in developing an initial sense of patterns, contradictions, and key issues.

Stage 2: Preliminary Coding. Each text file was read line by line, and initial codes were written in the margins or highlighted within a Word document. Codes at this stage were descriptive and closely aligned with the data, such as "delays in payment," "lack of price transparency," or "grading done by traders." In total, over 150 initial codes were generated across all data sets.

Stage 3: Grouping and Consolidation of Codes. After preliminary coding, the researcher reviewed and grouped similar codes to form broader code categories or clusters, such as "trader conduct," "market access barriers," "trust issues," "price negotiations," and "trader-farmer relationships." Codes that appeared frequently or that expressed powerful sentiments were prioritized during this stage.

Stage 4: Theme Development. Themes were developed by examining the relationships between code categories and interpreting the significance of the grouped data in relation to the study's objectives. For instance, recurring issues of "delayed payments," "weighing scale manipulation," and "verbal agreements" were consolidated under the overarching theme of "transactional uncertainty."

Stage 5: Refinement and Validation. Each theme was reviewed for internal consistency and distinctiveness from other themes. The researcher revisited the original data extracts to validate that the themes accurately captured participants' meanings. Where necessary, themes were merged, renamed, or split into subthemes to better represent the data.

Stage 6: Thematic Representation: Finally, the themes were narrated and supported using representative quotes from participants. These verbatim quotes were carefully selected to ensure diversity of voices (gender, location, actor type) and to illustrate the key arguments being made. Where needed, vernacular responses were translated into English while preserving original meaning.

3.7.3.4 **Trustworthiness and Rigour in Manual Analysis.** To uphold the credibility, dependability, and transferability of the findings, several strategies were employed throughout the manual analysis process:

- Triangulation of data from different sources (FGDs, KIIs, open-ended responses);
- Peer debriefing, where selected portions of the coded data were shared with AEDOs and AEDCs to confirm coding consistency;
- Audit trail through the systematic documentation of coding steps, theme development, and decisions made during analysis;
- Member checking**,** whereby selected participants were consulted to verify the accuracy of interpretations (Nowell et al., 2017).

These measures ensured that the qualitative findings were not only empirically grounded but also reflected the real-world experiences and perceptions of smallholder farmers and traders in the Soya and groundnuts markets of rural Malawi.

3.7.3.5 **Relevance to the Thematic Analysis to the Research Objectives.** The thematic analysis approach enabled the identification of core explanatory patterns regarding smallholder market participation, the influence of trader behaviour on farmers' decision-making, and the governance dynamics of the legume value chains. The themes provided essential explanatory power in complementing the quantitative findings, particularly in contextualizing variations in trust, price satisfaction, and trader preference. For example, the prevalence of "verbal agreements" and "non-payment experiences" explains farmer reluctance to engage repeatedly with itinerant traders. This issue directly links to Research Objective 2 on factors influencing farmers' choice of market channel.

Moreover, the themes contribute to policy and intervention design by highlighting non-price factors, such as trust, grading procedures, and trader reputation, that shape insights into smallholder commercialisation pathways, which would be challenging to capture through quantitative analysis alone.

To further align with the study's research questions and hypotheses**,** the qualitative component explicitly explored how perceptions of dishonesty, payment delays, or failure to grade produce influence smallholder marketing decisions. For example, in response to the question, "What are your views about the honesty of traders you deal with?", one farmer in Mkanda stated:

"They come with weighing scales that are not standardised. They come to steal from us."

Such expressions were coded under the theme "distrust due to tampering with weighing scales" and were frequently mentioned in interviews, particularly among farmers located farther from formal markets.

Additionally, some participants positively perceived SGTs when they allowed negotiation and returned bags:

"This one trader always lets us discuss the price. He even gives bags back. That is why I sell to him every season."

This quote was coded under the theme "trust-enhancing practices."

In conclusion, the qualitative data analysis followed a structured, manual process rooted in established methodological literature and tailored to the context of this study. The qualitative data analysis significantly enhanced the depth of the study by offering insight into the lived experiences and relational dynamics that shape smallholder decisions. By systematically analysing participant narratives through a deductive thematic analysis, the study identified patterns of perception and behaviour that quantitative-driven models alone may have missed. The combination of iterative coding, deductive theme development, and triangulation across data sources ensured analytical depth and validity. The themes derived served as a vital interpretive layer, enriching the understanding of how smallholder farmers in Kasungu and Mchinji districts navigate decisions related to selling soya and groundnuts, and how their perceptions of grain traders shape market outcomes. The insights from the qualitative analysis contribute meaningfully to the understanding of informal market governance, farmer behaviour, and value chain participation in developing country contexts. Below is a summary table of key themes, subthemes, and representative quotes**.**

Table 9

Summary of Key Themes

Key Theme	Subtheme	Representative Quote
Vendor as Primary Market Channel	Accessibility and Timeliness	Vendor is the most useful...vendor is available for a long period...ADMARC starts buying late – They start in as late as August and yet soya is ready in April May.
Trust and Distrust of Vendors	Mixed Perceptions	Vendor is a good person to farmers because they come in to assist the farmer in times of need...The vendor is a thief. God must forgive him.
Market Power Imbalance	Price Setting and Margins	Farmers complain of the prices because farmers get money in advance...vendor comes with a price...how do they come up with a price when they have not been involved in the production?
Service Provision by Vendors	Grading, Transport, and Loans	Vendor can lend money for personal needs like matenda for you to pay later through soya/groundnuts...Vendor grades e.g groundnuts if mixed variety, vendor would sort the g/nuts accordingly.
Grievances Against Vendors	Scale Manipulation	Scale is tempered with... vendors sometimes take your bag and immediately tell you that it is weighing so much... there must be a chance to read the scale.
Role of Government and ADMARC	Limited Support and Delayed Response	We trust the government, but it is unable to meet the market needs of farmers...ADMARC is just a name.
Cooperative Marketing Challenges	Delayed Sales and Unrealistic Price Expectations	Cooperatives take a long time because they target a market and they wait for the price agreed already...members were already told a reasonable price...keep on waiting.
Market Transparency and Power Dynamics	Information Asymmetry and Exclusion	The buyers do not reach farmers to buy the soya when it is aggregated; vendors explore the prices and know where to sell. It is a secret of the vendors.

Vendor as Primary Market Channel	Vendor Availability in Remote Areas	We sell to vendors because they come to the villages. ADMARC is not present here when we need to sell.
Trust and Distrust of Vendors	Vendor's Support vs. Exploitation	Some vendors help during hard times, but others cheat weights and pay less.
Service Provision by Vendors	Immediate Cash Payments	ADMARC delays but vendors pay immediately at the farmgate.
Market Power Imbalance	Lack of Bargaining Power	The vendor comes with their own price, and the farmer accepts because they are desperate.
Cooperative Marketing Challenges	Weak Management and Accountability	Sometimes the cooperative management is not transparent with sales and payment timelines.
Grievances Against Vendors	Delayed Balances and Underpayments	Vendor promises more money later but never comes back. We are left cheated.
Government Role	Need for Regulation and Oversight	We need government to monitor vendor activities and ensure fair prices.

4 CHAPTER FOUR: RESEARCH FINDINGS

The goal of this study was to investigate factors that drive smallholder farmers to use small traders as their off-takers in the groundnuts and soya value chains. The study also wanted to identify factors that motivate smallholder farmers' perception of small grain dealers. The study yielded two main results. First, the study has demonstrated that the use of improper weighing scales or tampering on small grain traders who are involved in the soya and groundnuts value chains. This result is based on the analysis of both qualitative and quantitative data. Further, the analysis of quantitative data suggests that the negative perceptions are strongly influenced by the actions and conduct of the traders. Some of the practices of concern by the traders are using of improper weighing scales or tempering with scales during weighing processes and delaying payments.

Second, the study demonstrates that despite these challenges, small traders play a significant role in the legume value chains, particularly in the groundnut and soya value chains. The key roles include facilitating easy market access for farmers, sorting and grading commodities thereby allowing smallholder farmers to sell soya and groundnuts that is not sorted or graded, making immediate cash payments at the point of sale, giving informal credit or input advances to smallholder farmers, and creating a platform for price negotiations which is rare for the formal market where prices are generally centralized (Van den Broeck et la., 2023, p. 9; Baulch et la., 2021, p. 18).

The study investigated two research questions to get a better understanding of the subject matter:

(i) What factors, among the functional tasks of traders, influence smallholder farmers' perception of small traders?

(ii) What factors influence smallholder farmers of groundnuts and soya in Mchinji and Kasungu districts to trade with them?

Five main parts constitute this chapter, each of which contributes to the description of the findings from this study. The first part discusses the trustworthiness of this study, laying the groundwork for the formulation of qualitative results and justifying why these results are worth discussing in academic circles, as well as the basis for considering applications. This part explains how the study attains standards to claim full credibility, dependability, confirmability, transferability, and authenticity. Amankwaa (2021) argues that the reliability of data should be considered in line with the five elements above (p. 3). This argument aligns with Moser & Korstjens, who suggest that this may entail verifying whether coding decisions are consistent, identifying emerging patterns, and confirming interpretations by comparing data from other sources (Moser & Korstjens, 2022, p. 2).

The next section of the chapter presents confirmation of the study's validity and reliability, with a particular focus on the quantitative research. The part explores internal validity by assessing the strength of the causal reasoning and how the linkages between important variables, such as trader behaviour and farmer loyalty, are established. The section also presents and confirms the external validity of the findings by suggesting the relevance and generalizability of the study beyond the sampled EPAs of Chiosya, Chulu, and Mkanda.

The central part of the chapter provides a clear overview of the outcomes, organized in response to the two research questions. For each, both quantitative and qualitative data are presented together to highlight similarities, differences, and the broader context of the results' meaning. The chapter concludes with the evaluation of findings that consolidate the literature review, expected results, and actual results of the study. The chapter makes crucial observations

regarding the complexity of the roles played by traders in the smallholder marketing of legumes in Malawi, while also noting that these roles are sometimes conflicting. The results suggest that small traders facilitate commercial linkages between smallholder producers and the market, while at the same time being viewed as obstacles to market fairness. The results indicate that Malawi's smallholder farmers require improved coordination along the value chain, greater transparency in trading practices, and policies that strike a balance between market efficiency and fairness.

4.1 Trustworthiness

As indicated earlier, this study on the involvement of small grain dealers in the soya and groundnuts value chains in Malawi was based on the pragmatist research paradigm. According to this paradigm, the nature of the study determines the research methodologies applied and is flexible, not to be committed to a pre-selected philosophical view (Shannon-Baker, 2020). This paradigm aligns with the study's goal of gaining a deeper understanding of the behaviours of individuals involved in agricultural value chains, particularly in settings where a combination of economic, social, and institutional factors influences market participation.

The study employed a deductive approach, beginning with the testing of two hypotheses using quantitative methods. However, as a mixed methodology, qualitative data was used to get in-depth explanations from real-world data. This approach worked effectively since value chain interactions are inherently complex. Through qualitative data, the study identified themes related to the connections between traders and farmers, power imbalances, and the functioning of transactions in the real world (Wahyuni, 2021, p. 14).

Because informal agricultural markets are complex, the study employed a case study design to gain a comprehensive and detailed understanding of how small grain traders operate in the soy and groundnut markets. Yazan (2022) suggests that case studies work best when trying to answer the "how" and "why" questions about complex social events (Yazan, 2022, p. 2). The method enabled the combination of views from different stakeholders, including the researcher and the participants.

The study employed methodological triangulation, which involves utilizing both qualitative and quantitative data sources, to obtain a comprehensive picture. This approach enabled the confirmation of results by checking them against other sources, providing a better understanding of how value chains work (Guetterman et la., 2021, p. 12). The study's conclusions were both complementary and confirmable because they used multiple sources of data, including surveys, focus groups, and interviews with key informants.

The research sample included smallholder farmers (SHFs) who were actively growing and selling soya and groundnuts, as well as small grain merchants (SGTs) who acted as buyers, aggregators, or middlemen. Farmers who were not involved in either the production or selling of soya and or groundnuts were not included in the study. The primary methods for collecting data were semi-structured questionnaires tailored to SHFs and SGTs, respectively. These tools used both closed-ended and open-ended questions to get structured quantitative data and more nuanced qualitative observations. This method facilitated participants' expression while ensuring that all responses were comparable (Castillo-Montoya, 2016, p. 819).

Additionally, collecting data required working with frontline agricultural professionals, such as Agricultural Extension Development Officers (AEDOs) and Agricultural Extension Development Coordinators (AEDCs) who worked in the EPAs of Chiosya and Mkanda

(Mchinji District) and Chulu (Kasungu District). During focus group discussions (FGDs), these local authorities shared critical information about how institutions operate, which provided a broader picture of governance and policy to the results.

An interview guide was used to gather more qualitative data from key informants. These included three major exporters and processors involved in the soya and groundnuts trade, as well as representatives from the Ministry of Trade, the Ministry of Agriculture, and the Grain Traders Association. By including these stakeholders, the study was able to gather the perspectives of both grassroots and higher-level policy and market players.

During the research procedure, the researcher ensured that reliability considerations were critical. In qualitative assessments, trustworthiness is a broad terminology that sums up credibility (how accurate the results are), dependability (how stable the data is over time), confirmability (how objective the results are), transferability (how well the results can be used in other situations), and authenticity (how well the results show different voices) (Amankwaa, 2019, p. 123). Several approaches were employed in the study to ensure that it conforms to the above-listed elements of trustworthiness. For instance, the research tools were carefully aligned with the study's goals, and respondent validation was employed to verify consistency in interpretations, thereby enhancing the study's credibility. All processes were documented to guarantee dependability, and the sample context and participant selection criteria were detailed to ensure transferability. The study also met the authenticity standard by considering the researcher's position and incorporating other perspectives from various stakeholders. This provided a comprehensive and multifaceted understanding of value chain linkages in Malawi. Below is the discussion on how the research addressed the elements of trustworthiness.

4.1.1 *Credibility*

The study supports the modern theory that the evaluation of research quality and credibility depends on the context and is primarily influenced by the audience's expectations and the study's goal (Levitt et al., 2018, p. 9). The study aimed to gather opinions from a diverse range of stakeholders to address the pervasive unfavourable perception of small grain dealers. These included those accused of engaging in fraudulent activities (called “cheaters” in local vernacular), farmers who believed they had been defrauded (“cheated”), middlemen or brokers of grain transactions (“grain up-takers”), and organisations responsible for monitoring trade activities and market regulation (“regulators” or “referees”).

The study employed three different research tools—structured questionnaires, focus group discussions (FGDs), and key informant interviews—to gather trustworthy data from these groups. By enabling the triangulation of results across methods and respondent categories, this multi-method approach was essential to enhancing the study's validity and credibility (Fetters & Molina-Azorin, 2020, p. 298). The study enhanced cross-validation, complementarity, and analytical depth by incorporating a range of data sources—all crucial for establishing credibility in mixed-methods research (Noble & Heale, 2019, p. 67).

The study successfully captured a dual perspective by including smallholder farmers and grain traders, which helped advance our understanding of trade interactions, transactional trust, and perceptions of fairness in the legume value chains (Donovan et la., 2022). Clarifying contradictory narratives and identifying discrepancies in stakeholder perspectives were two areas in which this dual engagement proved especially helpful.

The researcher personally distributed questionnaires to the respondents in an attempt to optimise understanding and data accuracy. This practical method helped reduce the possibility

of incomplete or misunderstood responses, a known problem in self-administered surveys, and allowed for real-time clarification of ambiguities (Squires et al., 2021, p. 4). In situations where follow-up prompts were appropriate, this also enabled richer explanations and increased respondent confidence.

Additionally, KoBoCollect, a mobile-based data collection tool designed for field-based research, was utilized in the study to enhance data reliability and minimize the risk of loss or distortion. The tool made it possible to digitise responses instantly, which expedited the data management process and reduced errors that could have been caused by delayed entry or manual transcription. In development and humanitarian research, KoBoCollect has gained recognition for improving the effectiveness, security, and precision of primary data collection, especially in rural or remote areas (Van den Homberg et la., 2020, p. 216).

Lastly, the main research questions of the study served as the framework for organising and integrating the qualitative and quantitative data. Each component of the analysis addressed a distinct line of inquiry. Using a mixed-methods approach made it easier to align the data gathered with the study's goals. This intentional methodological organisation strengthened the study's overall credibility and scholarly contribution by enhancing the internal coherence and robustness of the findings.

4.1.2 *Dependability*

Three focus group dialogues were conducted, one in each of the three Extension Planning Areas (EPAs), in order to consolidate data from three distinct sets of focus group discussions. Prior to the sessions, all participants gave their informed consent after being informed that the conversations would be recorded for transcription and analysis. Additionally, participants had the opportunity to confirm and elaborate on their statements, a best practice in

qualitative research that enhances participants' trust and data accuracy (O'Brien et la., 2019, p. 3).

Smallholder farmers, who are often portrayed as vulnerable in grain trading relationships, were among the diverse cross-section of participants in the focus group discussions, alongside small traders. In rural markets with lax enforcement, many people view small grain dealers as opportunistic or exploitative individuals. The conversations also included local government representatives responsible for monitoring fair trading practices, as well as these very traders, whose behaviour on the market is frequently closely examined. This diversity of participants facilitated the triangulation of viewpoints, which enhanced the legitimacy, genuineness, and clarity of the thematic data (Creswell & Poth, 2018, p. 259).

The questionnaires were administered in the presence of an Agricultural Extension Development Officer (AEDO), a public official responsible for the EPA. This approach yielded two main benefits. Firstly, this approach aimed to earn the trust of the respondents. As observed by Cohen and colleagues, trust and a non-threatening atmosphere are crucial for encouraging respondents to divulge candid and comprehensive information, particularly when discussing sensitive or contentious subjects (Cohen et la., 2021, p. 347). Secondly, one of AEDO's responsibilities was to assist with translating the questionnaire into a local cultural context. This made it possible for respondents, who included smallholder farmers and small-scale traders, to better understand each question and provide answers within the cultural and environmental context. In a study by Squires and colleagues, data reliability and cultural sensitivity were enhanced by the inclusion of an official translator who was fluent in the local dialect and familiar with the research setting (Squires et al., 2021, p. 5).

4.1.3 *Transferability*

This study falls under the category of smallholder crop marketing, specifically concentrating on the value chains of groundnuts and soya. It examines situations where cooperative marketing agreements are absent and assesses the impact on the roles that small grain dealers play. The roles of small grain traders may be impacted by the presence or absence of cooperatives along the value chain in several ways, including decreased, altered, or increased involvement. This study does not thoroughly examine the internal dynamics of such cooperative structures, despite acknowledging the growing significance of farmer organisations and collective marketing in enhancing market participation.

Three Extension Planning Areas (EPAs)—Chiosya, Chulu, and Mkanda—were selected for the study using purposive sampling due to their notable levels of groundnut and soya production and trading in Malawi. Farmers were selected at random from both near and distant areas of these EPAs, ensuring that the sample represented a range of market access and logistical circumstances. This sampling strategy enhanced the study's findings' applicability and contextual relevance by providing a balanced representation of smallholder experiences across diverse spatial contexts (Palinkas et al., 2019, p. 536).

The study's conclusions apply to Malawi's groundnut and soya value chains and may be relevant to other sub-Saharan African nations where smallholder production predominates in the legume farming industry. However, care must be taken when evaluating the external validity of the findings. It is important to consider local agro-ecological, institutional, and market conditions before extrapolating these findings to other contexts (Smith et al., 2021, p. 45). Specifically, in environments where large-scale commercial farming systems control agricultural supply chains, the presence and function of small grain traders may differ significantly—or even be redundant (Van den Broeck et la., 2023, p. 9).

This study is valuable because it focuses on Malawi's small-scale farmers and their vital roles in the country's decentralised legume markets. It clarifies how price-negotiation strategies, trader-farmer interactions, and market access obstacles influence commercialisation routes in resource-constrained settings. Due to similarities in actor structures, support networks, and market arrangements, many of the research's conclusions may apply to a broader range of grain commodities in both Mchinji and Kasungu districts, even though the study was limited to soya and groundnuts (Baulch et la., 2021, p. 18).

4.1.4 *Confirmation*

To facilitate triangulation, validation, and complementarity of findings, the study employed a mixed-methods approach, combining qualitative and quantitative data collection instruments. The researcher was able to cross-verify findings from various data sources and respondent groups and investigate the intricacies of value chain relationships due to this design (Guetterman et la., 2021, p. 12). The mixed-methods approach enabled the study to capture rich, contextual insights as well as statistically significant trends.

Smallholder farmers and small-scale grain traders were given structured questionnaires through a random sampling process. The random sampling made it possible to guarantee that the quantitative data represented each targeted EPA to a certain extent. However, to intentionally engage participants with first-hand knowledge of groundnuts and soya market transactions and to ensure diversity of views, purposive sampling was used for the focus group discussions (FGDs) (Palinkas et al., 2019, p. 536).

Despite these efforts, resource limitations restricted the scope of the study's sampling. There were only three FGDs, one in each of the chosen EPAs (Chiosya, Chulu, and Mkanda). This made it more challenging to include a greater range of geographic backgrounds,

particularly for rural respondents who lived farther away from EPA headquarters. According to comparable rural market research, the sample may have been biased towards more approachable farmers and traders due to the proximity-based selection process (Sovacool et la., 2020, p. 6).

However, by combining purposive and random sampling, the study successfully struck a balance between depth and breadth. The qualitative component offered detailed explanations of trust, negotiation, and transactional behaviour in informal grain markets, while the quantitative component recorded broad trends in trader-farmer interactions. Fetters and Molina-Azorin suggest that the complementarity of the two methods strengthens the dependability and interpretive power of the findings (Fetters & Molina-Azorin, 2020, p. 298).

The triangulated data collection methods, language accessibility, and multi-actor participation all greatly enhanced the process's resilience. The study ensured that the results were representative of the stakeholder dynamics found in Malawi's groundnuts and soya value chains, and were contextually grounded by establishing a safe environment for discussion, resolving any ambiguities, and encouraging inclusive participation.

4.2 Reliability and Validity of Data

4.2.1 *Validity*

In modern research, validity refers to the extent to which an instrument accurately captures the intended construct and how well the results align with the study's objectives (Taherdoost, 2019, p. 7). This encompasses the suitability of the instruments employed, the validity of the data collection procedure, and the precision of the conclusions and applications derived from the findings (Creswell & Poth, 2018, p. 259). Essentially, the key test for validity is whether the data actually answer the original research questions and whether the chosen

measurement tools accurately capture the theoretical concepts they were designed to evaluate (Mohajan, 2020, p. 25).

Convergent validity, or the degree to which various approaches to measuring the same construct produce comparable results, is also supported by recent research as being essential to confirming the accuracy and rigour of studies (Korstjens & Moser, 2018, p. 121). Accordingly, triangulation is acknowledged as a crucial tactic for enhancing construct validity and credibility, especially in mixed-methods research (Guetterman et la., 2020, p. 13). Triangulation was employed in this study to ensure that results from multiple data sources converged, facilitating the synthesis of insights, the elucidation of discrepancies, and the support of conclusions.

Structured questionnaire responses and data from focus group discussions (FGDs) were cross-analysed. Smallholder farmers primarily depend on small grain traders as their primary market outlet, according to this consistent pattern. Interviews with exporters and processors further supported this conclusion by confirming the importance of unofficial trading networks in rural legume markets. Thus, the mixed methods approach enhanced the analysis's depth and breadth, enabling methodological and data triangulation to validate the findings (Fetters & Molina-Azorin, 2020, p. 296).

Both smallholder farmers and small grain traders were given semi-structured questionnaires, which allowed for the collection of both qualitative and quantitative data that allowed concurrent triangulation to be possible, whereby qualitative information improved the understanding of quantitative patterns and vice versa. Additionally, gathering viewpoints from a variety of stakeholders, including exporters, processors, and policymakers, facilitated cross-sectoral comprehension and cooperative interpretation of market dynamics. These varied

viewpoints encouraged agreement and complementarity in the results by supporting both horizontal and vertical triangulation.

FGDs provided participants with a platform to freely share a variety of experiences and viewpoints, particularly regarding their relationships with grain dealers, their perceptions of pricing fairness, and the dynamics of trust. Similar to one-on-one interviews, these conversations featured both guided and open-ended questions, designed to facilitate in-depth discussions of important topics. The study was able to uncover multifaceted insights that would be difficult to obtain through a single method or homogeneous participant group, as it included a variety of participant groups, including farmers, traders, and local policy actors (Ravitch & Carl, 2021, p. 142).

4.2.2 *Reliability*

The degree to which a study yields consistent results when conducted again by different researchers or under comparable circumstances is known as reliability. It represents the degree to which a measurement tool produces consistent results over time, free from bias or random error, as well as the stability, consistency, and reproducibility of research findings (Taherdoost, 2019, p. 7). A trustworthy study guarantees the validity of the data collection tools and the consistency of the results obtained from repeated use.

The question of whether a study's conclusions would hold up if it were conducted again using the same methodology, in the same setting, and with comparable participants is known as reliability in qualitative research (Korstjens & Moser, 2018, p. 121). To put it another way, it demonstrates the predictability and traceability of the research process and findings. Demonstrating a logical, documented connection between data collection, analysis, and

conclusions is necessary to establish dependability, enabling others to understand the reasoning behind the interpretations (Ravitch & Carl, 2021, p. 122).

According to recent methodological literature, reliability involves proving coherence between research questions, data collection instruments, and the analysis that is produced, in addition to statistical repeatability (Creswell & Creswell, 2023; Flick, 2022). To evaluate this, the researcher employed structured questionnaires and focus group discussions (FGDs), both of which were tailored to align with the study's goals and main research questions.

To ensure internal consistency across tools and sessions, these instruments were carefully designed to reflect the study's themes and constructs. Strong evidence of reliability is provided by the convergence of results from both focus group discussions and questionnaire responses, as consistent themes were independently identified using various data collection techniques. This type of methodological triangulation enhances the credibility and robustness of the conclusions, while also strengthening reliability (Guetterman et la., 2020, p. 13).

The reliability of the research tools is assessed by examining how well the study goals, questionnaire items, and coding system align with each other. The results are more reliable when mixed-method triangulation, detailed audit trails, and member checks are used (Lincoln, Lynham, & Guba, 2020, p. 166). This study meets the criteria for reliability, as the relevant approval bodies of the University and national research authorities approved the tools used. The study process was conducted in a credible manner, complying with international protocols, and the processes can be traced. Additionally, all research participants can be checked and verified. This provides confidence in the replicability of the study, which would likely produce results comparable to the alignment of data sources and the observed convergence of findings across participants and instruments, if conducted in a similar setting.

The following section provides a detailed analysis of the results, beginning with a demographic profile of the sample. This includes information about the respondents' age, gender, number of dependents, education levels, and marital status. For small traders, the demographic data also includes the number of years in business and areas of operation. Demographic information is crucial for a deeper understanding of the context in which farmers and dealers operate and make decisions.

4.3 Results of the Study

This section presents an analysis of the outcomes of the operations of small grain dealers in connection with the two research inquiries that have directed this study. The analysis is dependent on the qualitative and quantitative data that have been collected. The findings of this study provide valuable insights and potential solutions to the research issues that guided the investigation of the two research questions.

(i) What factors influence smallholder farmers' perception of small traders in the Soya and groundnuts value chain in Malawi?

(ii) What factors influence smallholder farmers' decision to sell groundnuts and Soya to small grain traders?

The findings are subdivided into three main subsections, including (i) demographic findings, (ii) quantitative findings presenting inferential and descriptive statistics, and (iii) findings from qualitative data.

4.3.1 *Demographic findings*

The study's participants were selected from the population of small-scale farmers engaged in the cultivation of Soybeans and groundnuts in three agricultural extension planning areas (EPAs), namely Mkanda and Chiosya in Mchinji District, and Chulu in Kasungu District.

The three EPAs encompass a population of 64,869 farming households (FHHs). 41,594 (64%) FHHs were involved in groundnut production, while 24,934 (38%) FHHs were engaged in the production of Soya in the 2020-2021 production season. For further information, see Table 9 below.

Table 2

Results of Demographic Data Analysis

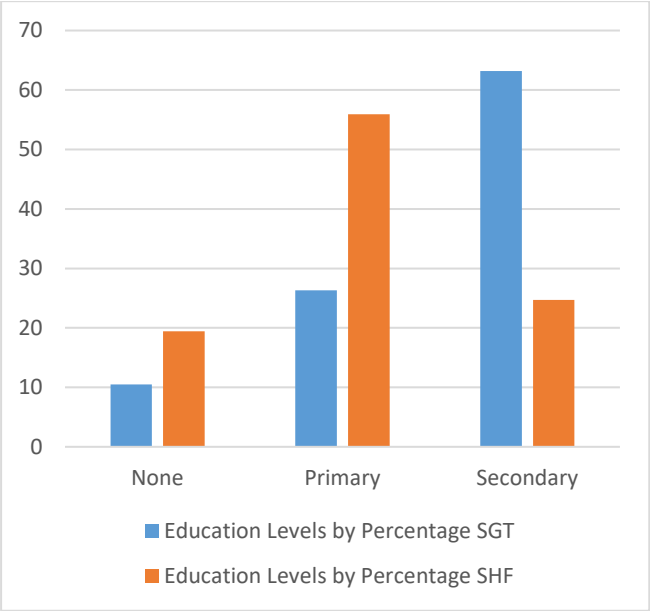
	Smallholder Farmers		Small Grain Traders	
	No	**%age**	**No.**	**%age**
Total Sample	136	100 %	19	100 %
Male	102	75%	18	95%
Female	34	25%	1	5%
Marital Status				
Married	123	90%	18	95%
Divorced	2	2%	1	5%
Widowed	4	3%	0	0%
Single	7	5%	0	0%
Education Levels				
None	18	19%	2	11%
Primary	52	56%	5	26%
Secondary	23	25%	12	63%
Age				
Average	40		41	
Maximum	78		53	
Minimum	18		24	
Median	39		41	
Dependents				
Average number of dependents	5		6	
Occupation				
Farming	136	100 %	10	53%
Input trading	1	1%	12	63%
Other businesses	15	11%	9	47%
Formal employment	1	1%	3	16%
other occupations	2	1%	1	5%

The socioeconomic characteristics of the small-scale producers and small grain merchants' samples demonstrate similarities, with the exception of gender, education, and occupation. Out of the 136 smallholder farmers interviewed, 102 (75%) were identified as male, with the remaining farmers being female. In contrast, from the sample of 19 grain traders, female representation is only one, constituting a mere 5% of the total representation. This observation suggests that male traders predominantly occupy the domain of grain dealing. The

sole female small grain merchant experienced divorce, whereas all of her male counterparts were married. Among the total of 136 smallholder farmers surveyed, it was found that 123 individuals, accounting for almost 90 percent, were married. The remaining individuals were classified as either unmarried, divorced, or widowed.

Figure 5

Education Level of Participants by Percentage



A total of 93 smallholder farmers responded to the inquiry regarding education. Out of the total sample size, 18 individuals (19%) reported a lack of formal education or incomplete primary education, while 52 individuals (56%) successfully finished primary school. A smaller proportion of the sample, specifically 23 individuals (25%), reported completion of secondary education. In contrast to the educational attainment of small grain dealers, the findings from a sample of 19 individuals indicate that 63% (n=12) had completed secondary education, 26% (n=5) had completed primary education, and 11% (n=2) either lacked formal education or had not completed primary education. The results suggest that small traders generally have higher levels of schooling compared to farmers. (refer to Figure 1).

The study also noted that a majority of small grain traders are located within the same Extension Planning Area (EPA) where they do their business, and nearly all of them originate from the same area. According to the given statistics, it is evident that most of the sample, precisely 15 persons (constituting 79% of the total), came from the same EPAs. Additionally, a smaller proportion of the sample, consisting of 3 individuals (representing 16% of the total), came from the same district. In contrast, only 1 individual (representing 5% of the total) was sourced from outside the district. This factor may influence the dynamics of business interactions between smallholder farmers and traders, as they can have a bearing on trust matters.

Concerning age, it is observed that both smallholder farmers and small grain traders have an average age of approximately 41 years. It is worth noting that the smallholder farmers in the sample had ages ranging from 18 to 78 years, with a median age of 39. The small grain traders in question had ages ranging from 24 to 53 years, with a median age of 41. This observation suggests that there are specific criteria in the small grain industry that place age limitations on those who can actively engage in this role. When considering the number of dependents, it appears that small traders tend to have a greater average number of dependents compared to smallholder farmers. Specifically, small traders have an average of 6 dependents, whereas smallholder farmers have an average of 5 dependents.

4.3.2 *Findings for RQ1: Research question 1: What influences the perception of smallholder farmers towards the small traders?*

Research Question 1 examines the factors that influence smallholders' perceptions of small traders. The findings for this research question are in three categories: (i) findings relating to demographics, (ii) findings relating to statistical analysis, and (iii) findings relating to qualitative data.

The study selected key demographic variables to test their correlation with the farmers' perception. The Chi-square test results assessing the relationship between farmers' perceptions of small traders and key demographic factors (gender, age, education, distance to market indicated that:

- No statistically significant associations (all p-values > 0.05), suggesting that these demographic variables do not significantly influence general perceptions of trust.
- However, Education and Gender had comparatively lower p-values, which might warrant further exploration using multivariate techniques (e.g., logistic regression).

Table 11

Chi-Square Test Results

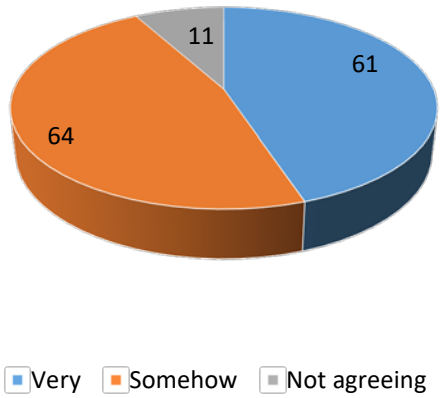
Perception Variable	Demographic Variable	Chi2 Stat	p-value	Degrees of Freedom
Trust_in_Traders	Gender	3.046393621	0.080916638	1
Trust_in_Traders	Age	2.170161643	0.537849485	3
Trust_in_Traders	Education	11.45443099	0.323225859	10

4.3.2.1 **Statistical Findings.** Due to the difficulty in quantifying perception, the study employed the categorization approach used by Agyeman and colleagues (2021), where farmers' perceptions of Bambara groundnuts were categorized into five categories: Strongly Disagree, Disagree, Neutral, Agree, and Strongly Agree. In this study, a three-point Likert Scale was used, where respondents were asked to select either "Do not agree", "Somewhat agree", or "Very agree" to the statement, "Small traders are cheaters." The specific question used was, "Do you consider small traders as cheaters?" The study employed multinomial regression with perception as the dependent variable. Multinomial regression was considered as appropriate because "perception" is a categorical variable with more than two outcomes as suggested by Manda and others (2021). The independent variables used are distance to the nearest market, product quality, payment terms, access to loans, negotiation capabilities, and prices for groundnuts and soya. The results of this assessment are discussed below.

47% (n =64) smallholder farmers somehow agree to the sentiments that small traders are cheaters while 45% (n = 61) fully agree, and only 8% (n=11) do not agree. This is not consistent with the responses in the first question open question that asked the respondents to list what was perceived as the role of trader where 94% of the respondents identified positive roles only.

Figure 6

Opinion of Smallholder Farmers on Traders



4.3.2.2 **Findings from the Analysis of Multinomial Regression.** The statistical analysis using Multinomial regression suggests that all the selected independent variables that include distances to alternative market for groundnuts and soya, sorting, quality assurance, pay on delivery, access to loans from traders, opportunity to negotiation, and prices for soya and groundnuts have the potential to influence farmers to perceive small traders either as cheaters or not cheaters but with minimal margins.

Table 11 below presents the results of the multinomial logistic regression analysis, which examined the correlation between smallholder farmers' perceptions of traders and selected explanatory variables, with "Somehow" serving as the base outcome. The results have shown that the likelihood of farmers reporting "Not agreeing" or "Very agreeing" positive perceptions of traders relative to the baseline of "Somehow," given their responses on factors such as distance, sorting requirements, quality assessments, payment on delivery conditions, access to loans, negotiation, and price differences.

For the comparison between "Not agreeing" and "Somehow," none of the explanatory variables demonstrated a statistically significant relationship at the standard 5% level.

Coefficients were generally small to moderate in magnitude, with significant standard errors and wide confidence intervals that included zero, suggesting there is minimal effect of the independent variables on the depend variable of perception (Schielzeth, et al., 2020). The inclusion of zero suggests the possibility of no effect. For example, *Pay_Del* (payment and delivery conditions) had a coefficient of 0.795 ($p = 0.427$), while *Loan* access showed a negligible adverse effect (–0.00019; $p = 0.187$). These findings suggest that, overall, the included variables did not meaningfully differentiate farmers who expressed disagreement with traders from those who held neutral perceptions.

On the other hand, the comparison between "Very" positive perception and "Somehow" revealed a marginally significant association for *Pay_Del*. The coefficient for *Pay_Del* was 0.973 with a p-value of 0.080, indicating that more favourable payment and delivery conditions were associated with increased odds of farmers holding strongly positive views of traders, relative to a neutral stance. While this effect did not reach conventional significance thresholds ($p < 0.05$), it suggests a potential area of importance for trader–farmer relations that may merit further investigation.

Other variables in this assessment failed to show statistically significant effects, with p-values exceeding 0.1 and confidence intervals encompassing zero. For instance, variables capturing distance to alternative market for groundnuts and soya (*Distancesgalt*, *Distancessalt*), sorting requirements (*Sort*), perceived quality (*Quali*), loan access (*Loan*), negotiation (*nego1*), and price differences (*Priceg*, *Prices*) all showed non-significant associations with farmers' perceptions.

Overall, the regression results indicate limited evidence of systematic relationships between most of the examined variables and smallholder farmers' perceptions of traders. The

exception is *Pay_Del*, which demonstrated a suggestive but not definitive positive effect on strongly favourable perceptions. These findings highlight the complexity of trader–farmer relationships and suggest that while payment and delivery arrangements may be influential, other unmeasured factors such as trust, social capital, and past experiences might also shape perceptions and merit further qualitative or quantitative study.

Table 12

Multinomial logistic regression results

Extent	Coef.	Std. Err.	z	P>z	[95% Conf.	Interval]
Not agreeing						
Distancesgalt	.1735251	.3670516	0.47	0.636	-.5458828	.892933
Distancessalt	-.1505734	.3764979	-0.40	0.689	-.8884957	.5873489
Sort	-.81983	1.407791	-0.58	0.560	-3.579051	1.939391
Quali	.2655124	1.22101	0.22	0.828	-2.127623	2.658648
Pay_Del	.7950268	1.000156	0.79	0.427	-1.165244	2.755297
Loan	-.0001878	.0001423	-1.32	0.187	-.0004667	.0000911
nego1	.4658322	.8313106	0.56	0.575	-1.163507	2.095171
Priceg	.0018934	.0022424	0.84	0.398	-.0025015	.0062884
Prices	.0004413	.0036914	0.12	0.905	-.0067938	.0076764
_cons	-3.657961	2.272782	-1.61	0.108	-8.112533	.7966103
Somehow	(base outcome)					
Very						
Distancesgalt	.1349624	.0984417	1.37	0.170	-.0579798	.3279046
Distancessalt	-.0851969	.1033143	-0.82	0.410	-.2876893	.1172954
Sort	-.3439381	.6633438	-0.52	0.604	-1.644068	.9561919
Quali	.4854189	.605907	0.80	0.423	-.702137	1.672975
Pay_Del	.9727605	.555867	1.75	0.080*	-.1167188	2.06224
Loan	-.0000221	.0000165	-1.34	0.182	-.0000545	.0000103
nego1	-.5605614	.4193897	-1.34	0.181	-1.38255	.2614273
Priceg	-.0009409	.0009889	-0.95	0.341	-.0028792	.0009974
Prices	-.0020441	.0021488	-0.95	0.341	-.0062557	.0021675
_cons	1.002779	1.132997	0.89	0.376	-1.217855	3.223412

4.3.2.3 **Findings from Qualitative Data – RQ1.** To complement the quantitative results, qualitative data from focus group discussions (FGDs) and open-ended survey responses were analysed thematically to identify key factors shaping smallholder farmers' perceptions of small traders in the groundnuts and Soya value chains. The findings revealed complex and contrasting views, probably shaped by past trading experiences, access to market information, quality-related practices, and social trust.

(i) Trust and Reliability of Small Traders: A key theme across the FGDs was concerns about trust in trader behaviour. Many farmers expressed worries about the lack of transparency in weighing methods and prices offered by small traders.

"Most traders come with their scales, and we do not understand how they weigh our bags. We feel cheated but have no choice." – FGD participant, Chiosya EPA.

Trust was closely linked to repeated interactions. Farmers who had established consistent relationships with specific traders were more likely to report positive perceptions**,** associating those traders with fair dealings and timely payments.

(i) Price Determination and Negotiation Power: Another recurring theme was dissatisfaction with pricing arrangements**.** Farmers perceived small traders as price-setters who rarely allowed room for negotiation:

"They just come and say, 'We are buying at 500 Kwacha today.' Whether the market has changed or not, we are forced to accept." – FGD participant, Chulu EPA.

Some respondents acknowledged that traders took risks and incurred transport costs, but still felt that the price margins were too wide, especially during peak harvest times when farm-gate prices fell sharply.

(ii) Perception of Market Accessibility through Traders: For many smallholders, small traders are seen as the only accessible market channel, particularly for remote farmers with no access to formal markets or aggregation centres. This perception was both enabling and limiting**.**

"Without these traders, we wouldn't sell anything. But sometimes I wish we had a place to take our produce and know the real price." – FGD participant, Mkanda EPA.

This mixed view reflects a dependency-based relationship where farmers appreciate the role of traders in reducing transaction costs but simultaneously feel exploited due to information asymmetry.

(iii)Quality Requirements and Trader Practices: Farmers' perception was also shaped by how traders handled grading and quality assessment**.** Many felt that small traders used inconsistent or subjective criteria, particularly for aflatoxin concerns in groundnuts:

"They say our groundnuts have aflatoxin, but they do not even test them. They just reduce the price." – FGD participant, Chulu EPA.

This fostered mistrust and a perception that small traders unfairly penalize farmers for quality issues without providing them with education or feedback on how to improve.

(iv)Timeliness of Payment and Service Delivery: Perceptions were also influenced by how quickly traders paid after collecting produce. In some instances, traders delayed payments, which hurt the farmers' ability to meet urgent household needs.

"Some of them take the soya and say they'll pay in two weeks. If they do not return, we lose everything." – FGD participant, Mkanda FGD.

Where payment was made on the spot, perceptions were more favourable. Farmers viewed such traders as more professional and dependable**.**

(v) Social and community ties: Interestingly, in several communities, perceptions were more favourable toward local or known traders. Familiarity bred accountability:

"When we know the trader is from our area, we trust them more. They are less likely to cheat us." – FGD participant, Chiosya EPA.

This suggests that social embeddedness and local accountability play a key role in shaping farmer perceptions, consistent with insights from relational contracting theory.

Table 13

Summary of Emerging Themes

Theme	Sub-Themes	Representative Insight
Trust and reliability	Weighing systems, payment consistency	"We feel cheated but have no choice."
Price fairness	Price determination, negotiation limitations	"We are forced to accept."
Accessibility and alternatives	Market dependency, lack of alternatives	"Without these traders, we wouldn't sell anything."
Quality assessment	Inconsistent grading, lack of feedback	"They do not even test… just reduce the price."
Timeliness of payments	Immediate vs delayed payment	"If they do not return, we lose everything."
Community embeddedness	Familiarity, local accountability	"We trust traders from our area more."

On the negative side, the research learnt that some vendors tamper with weighing scales to give false readings to their advantage. The small traders in the group confirm that it is possible to tamper with weighing scales even where the scales are certified. Trustworthy based on processors' experiences. The Grain Traders and Processors Association regards small traders as integral participants in the value chain, engaging in a challenging endeavour and operating with the same profit-driven motives as other businesspersons. The government acknowledges the contributions made by small merchants, although it notes that their primary focus on profit generation may limit their effectiveness in certain areas. The small-scale traders themselves acknowledge that there are certain areas in which they may improve, but they assert that the smallholder farmers depend on them for accessing the market.

4.3.3 *Findings on Research Question 2*

4.3.3.1 **Quantitative Findings.** This section presents quantitative results of the study for Research Question Two. It begins with presenting the results of the assessment of smallholder farmers' demographic factors that may influence their decision to sell to them. The demographic characteristics such as "gender", "age," "education," "marital status," "number of dependants," and "occupation" were used as independent variables assessed against the dependent variable of the "decision to sell to small traders" measured by the actual volume of sales of groundnuts (salesqg) and soya (salesqs). The purpose of the study was to determine whether any of the listed household characteristics above had an impact on the market preference of small grain dealers for groundnuts or soya.

A total of 136 soya and groundnut farmers were questioned to ascertain the type of market they used to sell their crop over the previous three years. A total of 117 agricultural producers participated in the survey, revealing that 86% of them reported selling their products through vendors, while the remaining 14% said that they sold to alternative distribution channels. Among the individuals who participated in the interviews, 75% (n = 102) were identified as male, while 25% (n = 34) were identified as female.

The researcher employed two sets of tests to assess variations in household demographics and determine the characteristics that influence the decision to sell to small traders. Specifically, the study assessed differences in household characteristics between smallholder farmers who sell to small grain traders (SGTs) and those who do not, using two-sample t-tests and chi-square tests. The two tests were selected as the most appropriate for the nature of the variables examined. The two-sample t-test was deemed appropriate for comparing continuous variables, such as age and number of dependents, between the two independent groups (those selling to small traders and those not selling to small traders), providing a suitable

method for testing whether mean differences were statistically significant (Field, 2018). The chi-square test of independence was employed to analyse categorical variables, including education level, gender, and marital status, enabling an assessment of whether the distribution of these categories differed significantly between the two groups (Agresti, 2019). This combined analytical approach ensured that the choice of statistical tests was consistent with the level of measurement of the variables, supported the validity of inferences about group differences, and offered a complete understanding of the demographic and socio-economic factors potentially influencing farmers' decisions to engage with small grain traders (Glen, 2023). The results of the T-Test and Chi-Square test are as indicated in Table 14 below.

Table 14

Correlation of household variables and the decision to sell to small grain trader

	Variable	Mean SGT	Mean Others	Ha diff=0
1	Age	40	36	0.15
2	Dependant	5	4	0.017**
		%age(Frequency) SGT	%age(Frequency) Others	
3	Education- non	42% (49)	63(12)	0.08*
	Education- primary	43% (50)	11%(2)	0.007***
	Education –secondary	15% (18)	26% (5)	0.24
4	Gender – Male	75% (88)	74% (14)	0.88
	- Female	25% (		
5	Marital Status – Married	91% (107)	84% (16)	0.32
	- Single	5%	5%	0.98
	- Divorced	1%	5%	0.14
	- Widowed	3%	6%	0.52

Table 13 presents the comparison of household-level variables between smallholder farmers who sold to small grain traders (SGTs) and those who did not, using independent-samples T-Tests for continuous variables of "Age" and "Number of Dependants" and Chi-Square tests of independence for categorical variables of "Education level", "Gender", and "Marital Status".

The results indicate that for Variable 1 (Age), the mean age of farmers selling to SGTs was 40 years compared to 36 years for those not selling to SGTs, with a p-value of 0.15. This result is not statistically significant, suggesting no meaningful difference in age between the two groups. On the other hand, Variable 2, which is "Number of Dependants," showed a statistically significant difference ($p = 0.017$), with SGT sellers averaging five dependents compared to four among non-sellers. This suggests that households with more dependents may be more likely to participate in selling to small grain traders, potentially reflecting greater household labour availability or a higher need for cash income to support larger families.

For "Education level" (Variable 3), chi-square tests revealed significant differences in educational attainment between the groups. The proportion of farmers with no education was lower among SGT sellers (42%) than others (63%), with $p = 0.08$*, while those with primary education were more common among SGT sellers (43%) compared to non-sellers (11%), with a highly significant p-value of 0.007***. This suggests that the association between incomplete primary school education is statistically significant at the 10% level. Conversely, for individuals who have completed primary school, the correlation is statistically significant at a more stringent significance level of 1%. This suggests that farmers with at least primary education are more likely to sell to small traders, possibly due to improved literacy, record-keeping, or marketing skills that facilitate engagement with trade networks. However, secondary education did not show significant differences ($p = 0.24$), demonstrating that the impact was negligible among individuals who have successfully finished their secondary education.

For "Gender" (Variable 4), there was no significant difference between groups ($p = 0.88$), with both SGT sellers and non-sellers being predominantly male-headed (75% and 74%, respectively). Similarly, "Marital Status" (Variable 5) did not show significant differences

across categories, with married farmers making up 91% of SGT sellers and 84% of non-sellers ($p = 0.32$), and other categories, such as single, divorced, and widowed, showing uniformly non-significant differences (p-values ranging from 0.14 to 0.98).

Overall, these results suggest that household size (as measured by dependants) and education level (especially primary education) are significantly associated with the decision to sell to small grain traders**.** At the same time, age, gender, and marital status are not significant differentiating factors. This suggests that interventions aimed at increasing smallholder participation in trader-based markets may benefit from targeting households with lower education levels or smaller household sizes, while acknowledging that gender and marital status may be less predictive in this context.

4.3.3.2 **Findings from the Seemingly Unrelated Regression Analysis.** To assess factors that influence the decision of smallholder farmers to sell to small traders, there was a need to understand how the selected variables related to the decision of the farmer. Based on the liberalisation policy, each player on the market has the same right to accept or reject the sale. Similarly, the smallholder farmer has a choice of where to sell the produce. To account for the fact that previous transactions influence the decision to sell to a trader and also that the same trader can purchase both groundnuts and soya, the study used the Seemingly Unrelated Regression (SUR) to understand smallholder farmers' decisions to transact with the trader. The SUR also calculates the extent to which this influence is.

Model fit test

To demonstrate that the model used is the correct one, the study conducted a model fit test and employed the Breusch-Pagan test of independence. The error terms are tested to find their correlation. The results from the Breusch-Pagan test of independence are in Table 15 below.

Table 15

Breusch-Pagan test of independence

	avsalesgv	Avsalessv
avsalesgv	1.0000	
avsalessv	0.2722	1.0000

Notes: Breusch-Pagan test of independence: chi2(1) = 10.073, Pr = 0.0015

The Breusch-Pagan test of independence found that the correlation of error terms in the groundnuts and soya equations is 0.2722. The study rejects the hypothesis that the correlation is zero, indicating that the model fits at a 1% significance level. The model understood 136 observations.

SUR Analysis Results for Groundnuts. The study examined the statistical relationships between the volumes of groundnut sales to small traders and six variables considered as functional roles in the study. These included *distance to market, being paid cash on delivery, provision of loans, sorting and quality management, offering platform for negotiation, and prices* to establish variables that influence smallholder farmers' decision to sell groundnuts to a small trader.

The results from the Seemingly Unrelated regression are presented in Table 16 below.

Table 16

Results from SUR for Smallholder Farmers' Decision to Use Small Traders - Groundnuts

	Coef.	Std. Err.	Z	P>z
Groundnuts Sales				
Distance to alternative Groundnuts Market	-1.474171	1.358267	-1.09	0.278
Sorted	-39.10843	34.70594	-1.13	0.260
Same Quality	36.89514	32.01783	1.15	0.249
Paid on Delivery	97.07543	27.82934	3.49	0.000
Loan	-.0026017	.0008538	-3.05	0.002
Negotiated	40.52971	22.27707	1.82	0.069
Groundnuts Price	.1117788	.0453442	2.47	0.014
_cons	-11.74245	47.10673	-0.25	0.803

Based on the statistical analysis, the factors influencing smallholders to use small traders include (i) to provide instant cash during the marketing season (*paid on delivery)*, (ii) provide loans during the off-marketing season (*access to loans)*, (iii) provide a platform where smallholder farmers can negotiate for a price (*negotiation)*, and (iv) also providing competitive *prices* in the groundnuts value chain. The sorting of soya and groundnuts was negative and insignificant. Selling the same quality of groundnuts as those sold to alternative markets, such as cooperatives and ADMARC, was found to be positive, but also insignificant, meaning that there is not enough evidence to suggest it may influence smallholder farmers' decisions. Groundnut traders provide instant cash to smallholder farmers, and this is significant at a 1% level. The relation between the volumes of sales towards the trader and being paid on delivery is positive. This means that farmers would sell groundnuts to traders because they are paid in cash.

The study has found that one of the roles of traders is to provide a platform where farmers can negotiate a price. This platform is accessible through the traders as alternative markets, such as ADMARC, usually have a pre-set price by the government and is uniform across the country, while the cooperatives set the price in advance before the marketing season. Being able to provide a platform to negotiate with smallholder farmers was found to be significant at 10% level. The relationship between the volume of groundnuts sold to a trader and offering a platform to negotiate is positive, indicating that offering a platform for negotiations increases the volume that a farmer sells to the trader.

The study also examined how the prices offered by small traders influence the decision of smallholder farmers to sell to them. The study finds a positive correlation between price and quantity sold, which is significant at the 5% level. An increase in price by 11 tambala increases the volumes sold to the trader by 1kg. This study found that the prices offered by the traders encourage smallholder farmers to trade more with them.

Regarding the relationship between distance to alternative markets and farmers, the research observes a negative correlation, indicating that smallholder farmers sell larger volumes of groundnuts to traders closer to them. When they have more, they opt to sell to traders near them. This finding contradicts an earlier study by Urgessa (2011), which showed a positive correlation. This indicates that smallholder farmers sell more volume of groundnuts to traders near their homes. When they have harvested more and want to sell more, they opt to sell to markets near their homes, where many traders are located. This observation could be because most farmers take unshelled groundnuts to a sheller and mainly sell them at the shelling point, rather than taking them to another market. Another reason could be that the hoarding cost of groundnuts is high due to the threat of aflatoxin. Hence, they sell to the nearest market, which is the traders. This area needs further study.

The relationship between the quantity sold to the trader and whether the produce was sorted was found to be negative. This indicates that selling to traders does not encourage one to sort their groundnut produce. This is consistent with the observations from focus group discussions and smallholder farmer questionnaires, where respondents confirmed that selling to smallholder traders does not require sorting the groundnuts.

SUR Analysis for Soya. The research undertook a statistical analysis of the relationships of volumes of sales of soya to small traders against seven variables, including distance to alternative market, being paid cash on delivery, provision of loans, sorting, same quality, offering platform for negotiation, and prices, to establish variables that influence smallholder farmers' decision to sell soya to a small trader. The assumption is that smallholder farmers would take their soya to small traders if the traders play a role in the value chain. The research reveals that factors significantly influencing the decision of smallholder farmers to sell to small traders included distance to the market, payment on delivery, and price (See Table 17 below).

Table 17

Results from SUR for Smallholder Farmers' Decision to Use Small Traders - Soya

	Coef.	**Std. Err.**	**Z**	**P>z**
Soya Sales				
Distance to alternative Soya Market	8.126728	4.549729	1.79	0.074
Sorted	58.39777	111.1353	0.53	0.599
Same Quality	39.37205	101.9585	0.39	0.699
Paid on Delivery	194.0224	88.32007	2.20	0.028
Loan	-.0030678	.002692	-1.14	0.254
Negotiated	101.0581	69.16639	1.46	0.144
Soya Price	1.157902	.3360936	3.45	0.001
_cons	-409.1355	165.1387	-2.48	0.013

Unlike for groundnuts, the *distance to market* for soya had a positive correlation with quantity of soya sold and was significant at 10%. Meaning that farmers would opt to sell soya to small traders when the distance to an alternative market is long. The longer the distance to alternative market the more likelihood that smallholders will sell their soya to small traders. The closer market option is provided by small traders thereby also reducing the risk of farmers associated with the high value markets (Devaux et la., 2018, p. 103).

Just like for groundnuts, the research has observed that *paying* farmers *on delivery* influences the decision to sell to small traders as paid on delivery correlates positively with sales volumes and is significant at 5%. This supports the statistical analysis results presented above. It was learnt that deliveries to cooperatives demand waiting up until the final off-taker collects and pays the cooperative before a farmer is paid. With ADMARC, a farmer would wait for money to be available to make a delivery or deliver and wait for the fund allocation to the respective ADMARC depot.

Also, the price offered correlates positively and significantly at the 1% level. This means that farmers would be attracted to sell a larger quantity of soya when prices are high, and that small traders are also playing a significant role in providing competitive prices for soya. The farmer's decision to sell to a small trader is also influenced by the price offered.

The study shows that the offering of a *platform for negotiation* of prices, *sorting of soya* before taking it to the market, and *quality* of soya have potential to positively influence the decision of the farmers to sell through small traders, but was found insignificant suggesting that they do not influence the decision of the smallholder farmer to sell to the trader. Providing financial support *(loans/credit)* to smallholder farmers indicates a negative correlation with the quantities of soya sold to small traders, suggesting that there is potential that farmers would sell less to small traders when they have a loan from the traders, but it is insignificant. Those smallholder farmers who sell more to the traders have less or no loans to service with the traders. It was found that access to finance by both small grain traders and smallholder farmers improves the well-being of the farmers (Shiferaw et al., 2008). The loans enable smallholder farmers to access inputs for groundnuts and farm implements, as well as support the purchase of food. The negative sign indicates that those who receive higher loans from traders tend to sell little to them. This requires further research, as it is believed that this could be due to several factors, including side selling, where farmers decide to sell to alternative markets to avoid repaying the loan. Another reason could be that the farmers only sell enough to repay the loan and the rest to alternative markets, as the negotiated prices at the time of obtaining the loan may be significantly lower than the ruling prices at the time of sale. Another reason could be that farmers who take loans have a lower capacity to produce high volumes, thereby reflecting lower volumes.

The econometric analysis suggests that factors that influence the decision of smallholder farmers to sell soya to small traders are limited to paying on delivery of soya, distances to alternative markets, and the *price offered*.

Market Access for smallholder groundnuts and soya farmers

Descriptive statistical analysis from the study suggests that small traders are the leading market outlets for smallholder farmers for groundnuts and soya. The majority of smallholder farmers, specifically 108 individuals accounting for 79% of the sample, perceive small grain dealers as the primary market alternative. In contrast, just 62 farmers (46%) view ADMARC as a viable choice, while 28 farmers (21%) consider outlets of large enterprises as a potential market, and a mere four farmers (3%) express confidence in this option. Small grain dealers are widely regarded as the most favourable market choice for smallholder farmers.

Table 18

Smallholder market options for soya and groundnuts

	Number of Responses	Percentage
Vendors	108	79%
Admarc	62	46%
Cooperatives	28	21%
Outlets of Large Firms	4	3%

Small merchants serve as the primary market channel for smallholder farmers in the Mkanda EPA and Chiosya EPA of Mchinji District, as well as the Chulu EPA in Kasungu District, for the sale of soybeans and groundnuts. 117 (85%) smallholder groundnut farmers reported selling their groundnuts to small traders during the 2020/2021 crop season, and 95 (92%) soya farmers reported the same. In terms of quantity, groundnuts and soya sold to small traders accounted for 92% and 80%, respectively (See Figures 7-8 and Table 18). The assertion that small grain traders continue to serve as the primary market for smallholder farmers aligns

with the findings of Sitko and Jayne (2019), who observed that in the majority of developing nations, approximately 80-90% of agricultural commodities are traded by smallholder traders (Sitko & Jayne, 2019).

Figure 7

Percentage of SHFs, Soya sold to SGTs

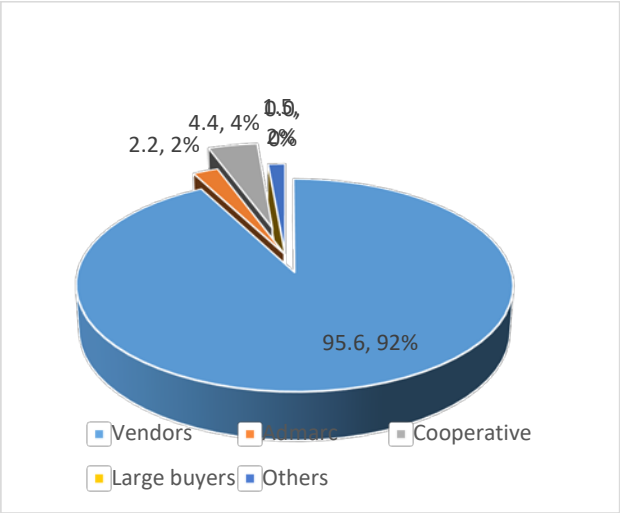


Figure 8

Percentage of SHFs' Groundnuts sold to SGT

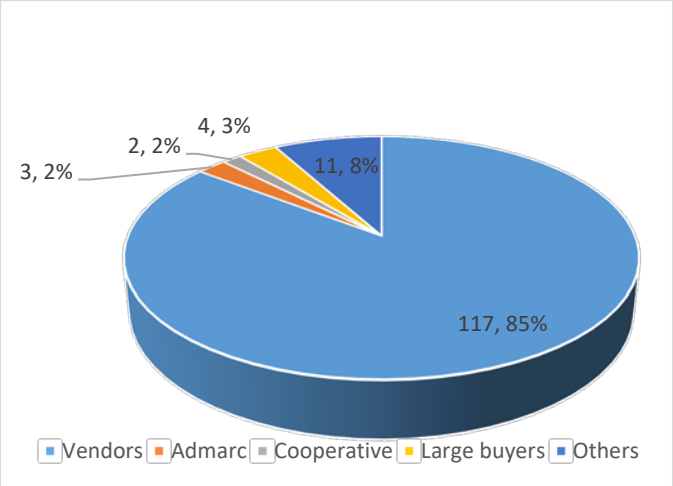


Table 19

Percentage of SHFs' Groundnuts sold to SGT

	Number of Responses	Percentage
Vendors	108	79%
Admarc	62	46%
Cooperatives	28	21%
Outlets of Large Firms	4	3%

Distance to the market

The study found four possible market opportunities for smallholder farmers: small traders, ADMARC, cooperatives, and large-scale traders (see Table 18). ADMARC was the most popular choice among alternative options. To evaluate distance reduction, the study grouped other market options besides small merchants into the category of "alternative markets."

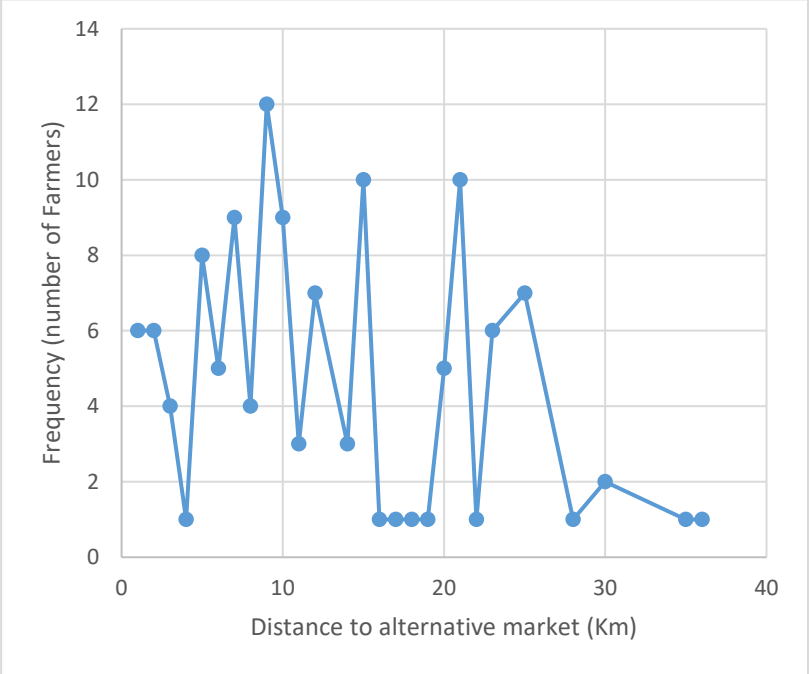
From Table 18 above, smallholders prefer small merchants when it comes to groundnuts and soya. Approximately 80% of the 108 respondents reported that they had sold their soy and groundnuts to small traders in the past three years. Second in preference was ADMARC, with 46% of respondents reporting trading within the same period, and 21% (28 people) reporting selling to cooperatives.

The study's results show that the distance to smallholder alternative markets ranged from 1 to 36 kilometres, as shown in Figure 9 below. Further analysis of the frequency of travel to alternative markets indicates a mean distance of 11.33 kilometres, with a median of 10 Kilometres, suggesting that about half of the population travels for over 10 kilometres. A mode of 21km shows that 21 km was the single most frequently reported distance, suggesting some

farmers cluster at a more extended travel range, which may indicate limited local market access for some participants.

Figure 9

Smallholder distance to alternative market



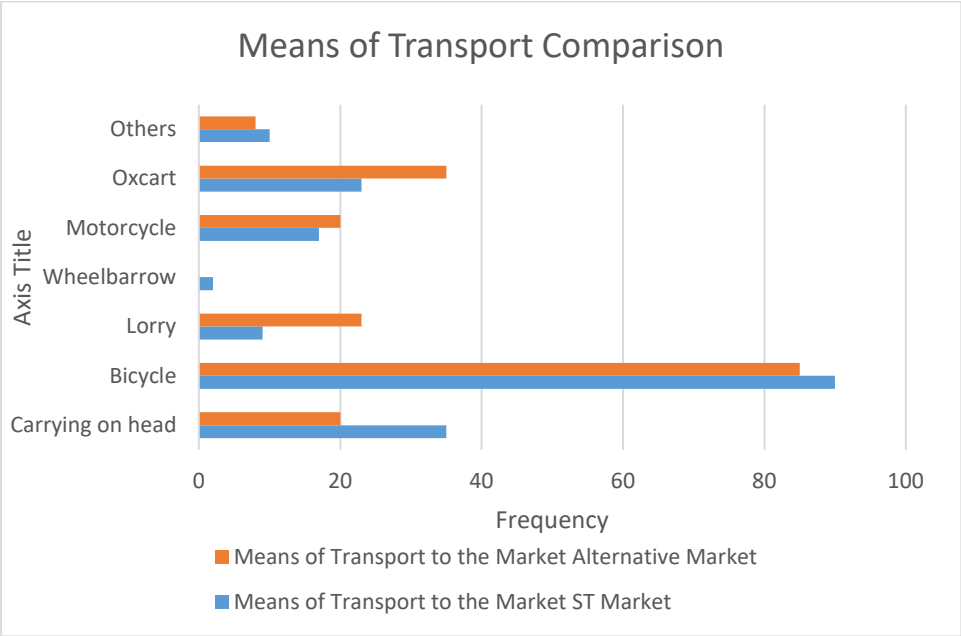
How are groundnuts and soya transported to the market?

The study analysed the transportation methods used by farmers of soya and groundnuts to transport their commodities to vendors and alternative markets. The study found that there is less disparity in transportation methods when selling to small traders compared to selling to the alternative markets. The primary mode of transportation was reported to be bicycles for both small trader marketplaces (90%) and alternative markets (85%). However, a significant disparity was observed in the practice of carrying goods on the head between small trader markets, which received 35 responses, and alternative markets, which received only 20 responses. In contrast, the utilization of lorry transport is more prevalent in alternative

marketplaces, as seen by 23 instances compared to only 9 instances in the small trader market. Another significant disparity was observed in the utilization of oxcarts, which increased from 23 instances in the small trader market to 35 instances in alternative markets. Refer to Figure 10 presented below.

Figure 10

Means of transport to markets



Cost of transporting soya and groundnuts to the market

The research also considered whether using alternative markets would affect the cost of transporting to the market on the part of the smallholders. The sampled smallholders recorded an average cost of K1,462.12 for transporting their produce to small traders, with about 38 reporting zero cost. Most of these smallholders sell from home, carry their goods on their heads, and use push bicycles. On the other hand, the cost of taking soya or groundnuts to the alternative market was estimated at an average of K3,046.37 per trip (208% of the small

trader market), with 25 registering zero cost, as these farmers used their own push bikes. Smallholders were not able to attach a cost to the use of their own bicycle or oxcart, resulting in giving zero cost estimates. In the absence of distance to small traders, the cost of transport was used as a proxy for the reduction of distance to the market.

The study employed Seemingly Unrelated Regression to examine the relationship between the quantity of groundnuts sold to small traders by smallholders and the distance to alternative markets, assessing whether distance indeed influences farmers' decisions to sell to small traders. The hypothesis was that farmers would sell more to the small traders when the distance to the alternative market is long. The results suggest an insignificant negative correlation for groundnuts. A similar assessment for soy indicates a positive correlation and is significant at the 10% level.

While this study confirms that small traders play a role in reducing distance to markets for smallholder farmers of groundnuts and soya in the three EPAs of study, based on reduced transport costs and the nature of transport, distance to alternative markets has indicated no statistical influence on groundnut farmers but on soya farmers.

Smallholder prices

The research explored if the farmers were satisfied with the prices offered by the small traders. According to the prices of groundnuts sold to small traders by the sampled smallholder farmers during the season 2020 to 2021, the minimum price for groundnuts averaged at K430.00 per kilogram, and the maximum price averaged K675.00 per kilogram. For soya, the prices for the same season ranged from K150.00 to K1,000 per kilogram. On average, farmers received a minimum price of K211.00 per kilogram and an average maximum price of K356. The price range for soya, according to the farmers, was from K80.00 to K660.00 per kilogram.

The results of the survey show that from a total of 115 groundnut farmers, 65 (57%) were satisfied with the prices, while 50 (43%) were not satisfied with the prices. With the price range of K150.00 to K1,000.00 per kilogram, the study observed mixed feelings with regard to price satisfaction. Using the minimum prices reported by the smallholders and the comments on whether they were satisfied with the prices, we observed that the lower the minimum prices received by the smallholder farmers, the higher the number of farmers who were not satisfied with the prices. Out of 43 smallholders who received a minimum price of between K150.00 and K350.00 per kilogram for groundnuts, 31 (72%) registered to be unsatisfied with the prices, while out of 56 farmers who received a price of between K350.00 and K550.00 per kilogram, only 17 (30%) reported being unsatisfied with the prices. Of the 16 farmers who reported a minimum price of above K550, only 2 (12%) indicated a form of non-satisfaction with the price (see Table 10 and Figure 14 below). This demonstrates that the satisfaction with prices by smallholder farmers increases with the level of the price.

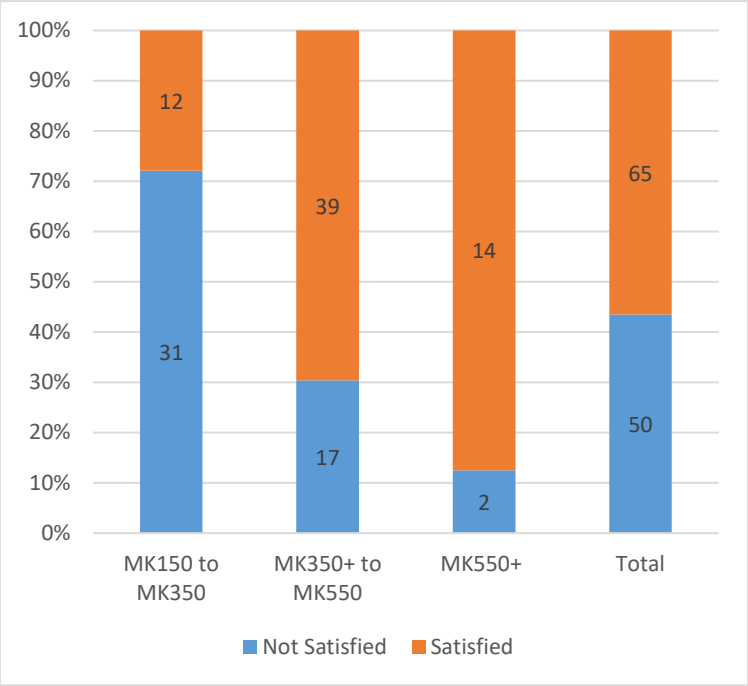
Table 20

Farmers' satisfaction with groundnuts prices

Price Range	Not Satisfied	Satisfied	Total
MK150 to MK350	31	12	**43**
MK350+ to MK550	17	39	**56**
MK550+	2	14	**16**
Total	**50**	**65**	**115**

Figure 11

Farmers' satisfaction with minimum prices - Groundnuts



The trend of farmers' satisfaction with the prices of groundnuts is not different from that of soya. Based on the survey results, from a total of 129 soya farmers 71 (55%) stated being satisfied with the prices while 58 (45%) were not satisfied with the prices. With the price range of K150.00 to K1,000.00 per kilogram, the study observed mixed feeling with regards to price satisfaction as well. Table 12 and Figure 15 below show that at a price between MK80 to K150.00 per kilogram 22 farmers out of 37 were not satisfied with the price, representing 59%.

At a price between MK150 and MK300 per kilogram, 30 out of 74 farmers were not satisfied, representing 40% and only 6 out of 18 farmers who sold at over MK300 per kilogram were not satisfied, representing 33% (See Table 11 and Figure 16 below).

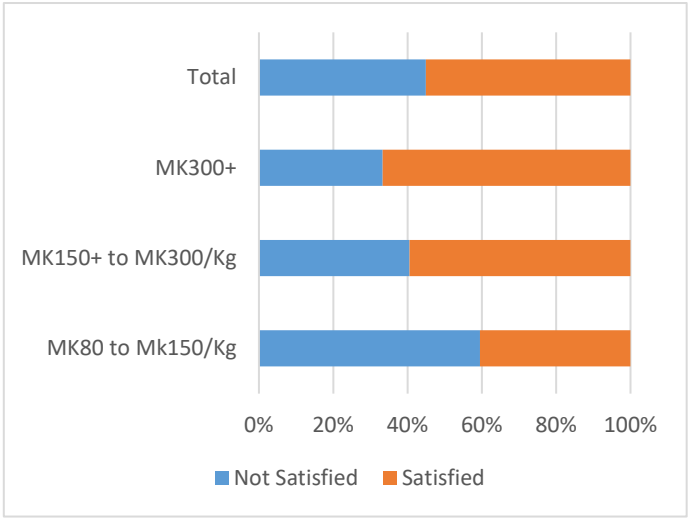
Table 21

Farmers' satisfaction and minimum prices – Soya

Minimum Price Range	Not Satisfied	Satisfied	Total
MK80 to Mk150/Kg	22	15	**37**
MK150+ to MK300/Kg	30	44	**74**
MK300+	6	12	**18**
Total	**58**	**71**	**129**

Figure 12

Farmers' satisfaction and minimum prices – soya



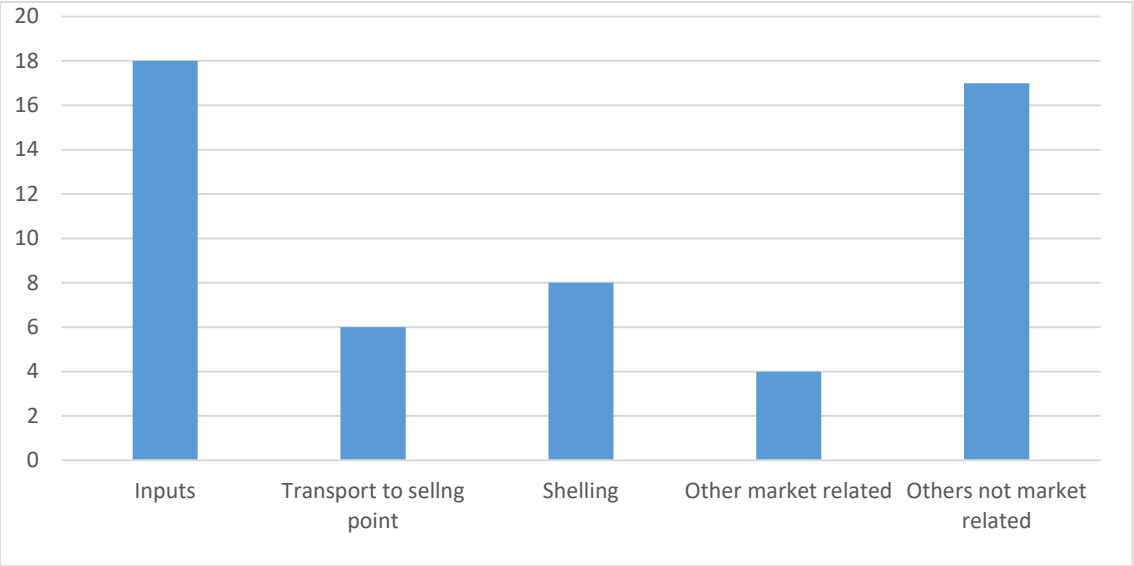
Access to traders' provided loans

The finding from this study is that smallholders are supported with seasonal loans by small traders. SUR analysis for groundnuts suggested that the loans negatively significantly

influence the decision of smallholders, while for soya, SUR analysis suggested that the negative influence is not significant. While it was expected that access to loans would influence the transactions between the traders and farmers, the negative correlation may have implications for further studies. Several observations have been made from this study.

Out of the selected group of smallholders, 39 respondents (29%) reported having previously received an advance payment, referred to as a loan in this study, from small traders prior to the sale of soya or groundnuts. Among the loan recipients, it was found that 32 individuals, accounting for 82% of the sample, reported receiving the loan in the form of cash. Conversely, just seven individuals, representing 18% of the sample, reported receiving the loan in kind. The small-scale traders surveyed confirmed that they provide financial assistance, both in the form of cash and in-kind, to smallholder farmers for various reasons. Approximately 49% of the small-scale traders indicated that they provided resources for inputs to support smallholders, while 46% reported having previously offered advances to smallholders for non-value chain-related domestic purposes. A total of 22% of the traders indicated that they had previously offered an advance payment for shelling. Additionally, 16% and 11% of the traders reported providing advance payments to smallholders for transportation to the market and other market-related activities, respectively. The majority of in-kind loans were allocated towards agricultural inputs, with a particular emphasis on seed provision. See Figure 13 below.

Figure *5the loans received from SGTs*

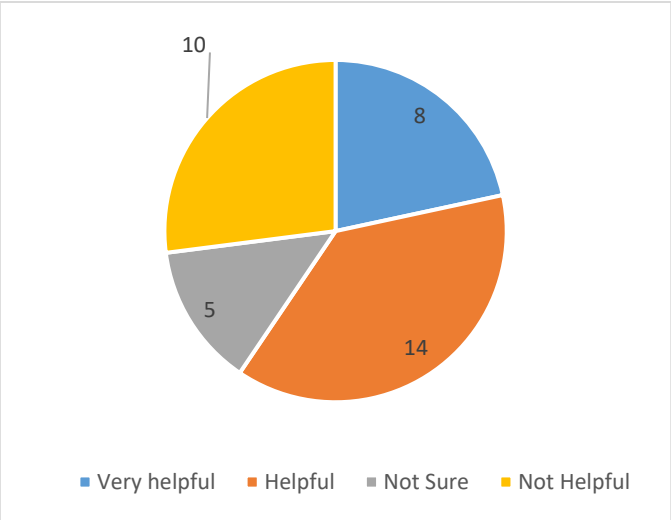


This study investigated the significance of the financial support provided to smallholder farmers by small-scale traders. The range of loan values offered by small traders to smallholders varies significantly. The smallholder farmers received loans with a minimum value ranging from K2,000 to K50,000, while the maximum loan value received by each household ranged from K5,000 to K150,000. The mean minimum value is K11,600, and the mean maximum value is K44,800.

The study also investigated the extent to which smallholders perceived loans from traders as beneficial. A closed question was employed to evaluate the degree of helpfulness, utilizing a four-stage scale consisting of the categories "very helpful," "helpful," "not sure," and "not helpful." The study revealed that the majority of respondents, specifically 22 individuals or 59% of the total sample, expressed that the loans provided significant assistance or were at least somewhat beneficial. Conversely, a smaller proportion of respondents, specifically 10 individuals or 27% of the total sample, indicated that the loans were not helpful.

Figure 6

Smallholders' opinion on the helpfulness of loans from SGTs



The smallholders' perception of the loan's utility appears to be influenced by various factors, including the intended purpose for which the loan was acquired. The category with the most significant number of loans was for inputs, totalling 17, followed by loans for other requirements, which amounted to 9. Out of the 17 individuals who obtained loans for inputs, 11 (65%) found the loans to be beneficial and highly beneficial. Conversely, among the 9 individuals who acquired loans for reasons unrelated to the value chain, only 5 (56%) found the loans to be useful and highly helpful, while 3 (33%) expressed that the loans were not helpful at all. The loans that provided the most outstanding assistance were those allocated for inputs, whereas the loans designated for transportation were found to be the least beneficial. Specifically, 85% of the respondents who obtained loans for transportation expressed dissatisfaction with the usefulness of these loans (see to Table 22 for further details).

Table 21

Helpfulness of different types of loans obtained from SGTs

	Inputs	Transport	Shelling	Other Marketing	Other Needs	Total
Very Helpful	7	1	1	1	1	11
Helpful	4	1	3	2	4	14
Not Sure	3	1	2	0	1	7
Not Helpful	3	3		1	3	10
Total	17	6	6	4	9	42

Figure 15

Helpfulness of Loans against Usage

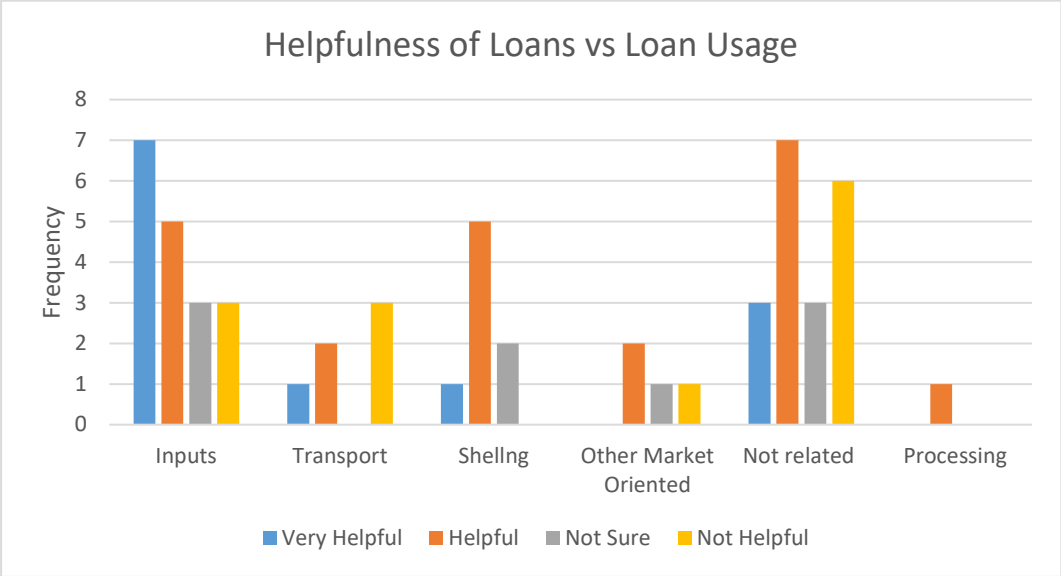


Figure 15 suggests that most respondents who used the loans for inputs found them very helpful. Those who used the loans for issues not related to the value chain provided mixed feedback with the same number of responses for “helpful” and “very helpful” on one side and “not helpful” and “not sure” on the other side.

The smallholders' dissatisfaction with the loans can be attributed to two interrelated factors. The smallholder's decision to accept an advance from the small trader results in an obligation to exclusively sell their produce to the trader until the loan amount is completely repaid through the sale of the commodity.

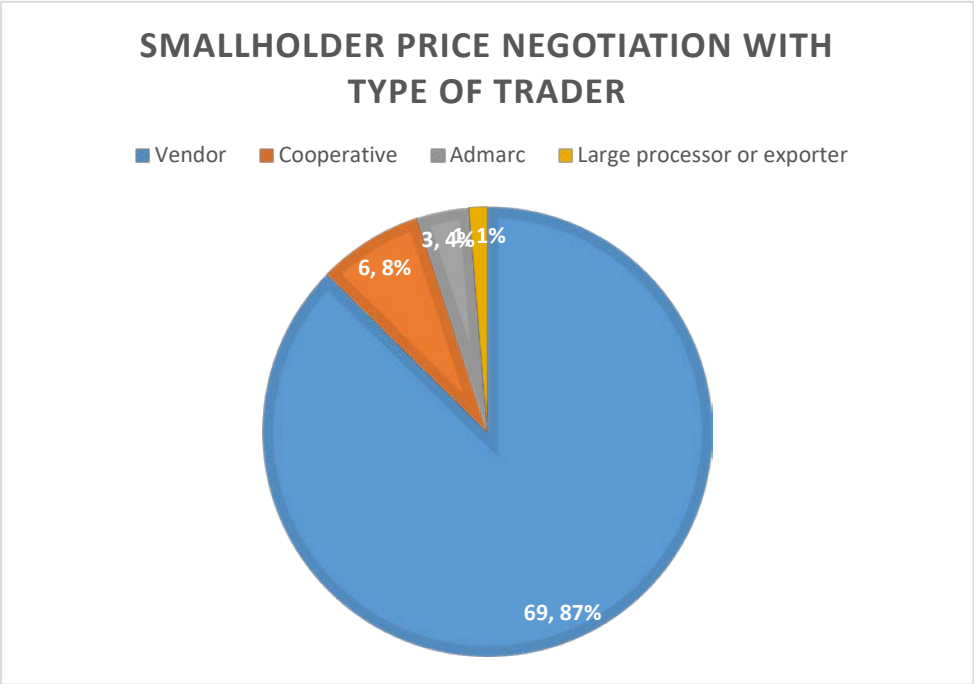
Opportunity for price negotiations

The study examined whether smallholders have the opportunity to negotiate prices when selling commodities at the market. When farmers were asked if they had ever negotiated for prices at the market, 79 out of 136 respondents indicated that they had negotiated prices before. Out of the 79 who negotiated for prices, 67 (87%) negotiated with small traders, with the rest with other alternative buyers, while 7 (8%), 3) 4%, and 1 (1%) negotiated with cooperatives, ADMARC, and large buyers, respectively. This indicates that there is an opportunity to negotiate with small traders and alternative markets alike. The 87% involved in negotiations with small traders is consistent with the fact that about 86% of groundnuts and 96% of soya is sold through small traders, as indicated in 4.4.2 above.

The study has found that one of the roles of traders is to provide a platform where farmers can negotiate a price. This platform is accessible to traders, as alternative markets such as ADMARC usually have pre-set prices that are uniform across the country. At the same time, cooperatives set prices in advance before the marketing season. The relationship between the volume of groundnuts sold to a trader and offering a platform to negotiate is positive, but was found insignificant for both groundnuts and soya, suggesting that the likelihood of impacting on the decision of smallholder farmers is very remote.

Figure 16

Price negotiation and type of market



Quality and Sorting

Econometric analysis revealed an insignificant negative correlation between sorting and sales to small traders for groundnuts and a positive correlation for soya, suggesting that while small traders play a role in this process, sorting does not significantly impact the decision of smallholder farmers to sell to small traders. This is consistent with what was expected, as small traders reported that they buy regardless of whether the commodity is sorted or not.

The study observed that approximately 70% of smallholder farmers take their produce to small traders without sorting, and 64% agree that their soya or groundnuts would not be accepted at an alternative market without being sorted or properly dried. While farmers have traditional knowledge of assessing whether groundnuts or soya are dry enough to take to the market, the quality of the grains taken to the small traders is compromised. Traders collaborated with smallholders that an average of 68.1% of groundnuts and 60.6% of soya received from

smallholder farmers require sorting and drying before being re-bagged. According to the responses from the small traders' questionnaire, foreign bodies removed from soya at the grading stage range from 1% to 20% with a mean of 7.3%, while the foreign bodies in groundnuts is within the same range, with the mean at 10.3% suggesting that groundnuts come with more foreign bodies than soya.

4.3.3.3 **Qualitative Findings – RQ 2.** This section presents qualitative findings for Research Question 2: "What influences smallholder farmers' decision to sell to small traders in the Soya and groundnuts value chains?" Drawing on focus group discussions (FGDs) conducted in Chioshya, Chulu, and Nkanda EPAs, as well as open questions from questionnaires and key informant interviews, this section presents qualitative data that provide insights into what influences the transactional relationship between small traders and smallholder farmers. The section is organised based on a thematic analysis framework providing rich insights across six dominant themes: market proximity, payment immediacy, grading and sorting, forum of price negotiation, provision of loans, and price offered.

From qualitative feedback from questionnaires, FGDs, smallholders, and KIIs, the study results demonstrate that small traders play significant positive roles in the value chains that involve smallholder farmers in grain marketing, specifically in soya and groundnuts. The data suggest that small traders play a significant role in smallholder market access by, among other things:

- Creating smallholder markets - creation of easy and convenient markets for the smallholder farmers;
- Create positive market competition;
- Time convenience for the marketing of groundnuts and soya. Small traders come in to buy early of the season;

- Aggregation: Small traders are viewed as aggregators with the role of buying in small units as little as 1kg from a farmer and aggregating for the market at the next level;
- Farmers also view small traders as those who play the role of linking smallholders to markets or bridging the market gap for smallholder commodities, act as middlemen, and bring the market close to farmers.

This section also presents a thematic analysis of qualitative data from questionnaires, FGDs, and KIIs. The development of the themes was guided by the independent variable of the quantitative study to provide more insights into the quantitative analysis and other emerging themes from the qualitative data. The discussions in the sections begin with the presentation of a table that summarizes the thematic analysis of qualitative data relevant to Research Question 2. See Table 22 below. The rest of the session presents the details of the findings in each theme.

Table 22

Summary of Themes and Insights

Theme	Sub-Themes	Insight Statements / Quotes
Immediate Payment	Advance sales Urgent needs for cash Early market when farmers need money	"Vendor has money all the time... you can take money in advance, say you have a sick child." (Chulu FGD) "Vendor can lend money for personal needs like matenda for you to pay later through soya/groundnuts." (Chioshya FGD) "Vendors come to the market early in the season at the time vendors need money." "Soya is ready by the end of March, but ADMARC comes as late as July."
Distance to Market/ Market Accessibility	Market proximity Transport savings Readily available market Easy and convenient market	"We go without need of transport; it is very near." (Chioshya FGD) "ADMARC, you have to take the commodity to them while a vendor, you can be invited to the farmers' doorsteps." (Chulu FGD)

Theme	Sub-Themes	Insight Statements / Quotes
	Limited alternative market	"I had to sell my crops to a vendor because he was the only buyer I could find."(Mkanda FGD) “We only depend on one market during the harvest period.”(Chioshya FGD) “they (small grain traders) create an easy market for us farmers.”(Chulu FGD) “you don’t have to que to sell.” You come, you sell immediately.”(Mkanda FGD)
Grading, Sorting & Quality	Flexibility with ungraded produce Quality control for formal markets Incentives for quality	“We do not grade when selling to a vendor but when selling to ADMARC, we need to grade properly.” (Nkanda FGD) “We need to sort our grain before we can sell to the alternative market.” (Survey response) “Selling graded and sorted soya and groundnuts to ADMARC does not add value as there is no price difference.” (FGD Chioshya)
Price Negotiation	Vendor-driven pricing Farmer powerlessness	“Price setting – we do not make prices but the vendor instead provides the market.” (Chioshya FGD) “Buyer decides.” (Survey structured response)
Access to Loans	Advance payments as credit Informal finance gaps	“Some farmers receive money in advance – The farmers want to address the immediate problems such as school fees, matenda, mavuto.” (Nkanda FGD) “Some of the money was used for food.” (Survey response)
Price Offered	Vendor margins Perceived unfairness	“Vendors come to buy at say K250/kg but take and sell at about K750/kg.” (Chulu FGD) “Farmers complain of the prices because they get money in advance.” (Chioshya FGD)
Pricing Dynamics & Real-Time Adjustments	Market volatility Demand/supply effects Price determination Export ban	“Govt prices do not really translate on the market due to market forces.” (Chulu FGD) “Vendors are guided by where they sell. When prices go up, they also increase and when buyers reduce prices they also reduce.” (Chioshya FGD)

Theme	Sub-Themes	Insight Statements / Quotes
	Effectiveness of government announced prices Smallholder price satisfaction	"People think vendors make prices. Vendors do not make prices. Mostly for soya, they make K20 –k30 per kilogram. Prices are directed by the final taker. If the price increases, the vendor pushes the price back to farmers. All what the vendor does is to make sure that he does not lose" (GTPA) "The cooperative offered 750 per kg, but payment took two months. The vendor gave 650 and paid that day." – FGD, Chioshya. "Sometimes they offer lower prices, but they take any quantity. You do not have to sort or wait for quality checks." – FGD, Nkanda. "Export bans usually result in a reduction of prices at the farm gate level" (GTPA). "The prices (government announced minimum prices) never translate to reality on the market due to market forces" (Chulu FGD). "Prices are good at the end of the season when farmers have already sold all the crops. As a result, farmers fail to get these good prices as they take a long time to be realized. Therefore, no profits are made by the farmers"(Mkanda FGD)
Collective Action Constraints	Coordination failure Group selling barriers	"Challenges of collective marketing are that farmers have different ambitions and needs." (Chulu FGD) "Problem with member cooperatives is that decision making is slow, resulting in missing opportunities." (Chioshya FGD)
Relational Trust & Social Embeddedness	Vendor–farmer ties Ambivalent perceptions	"Vendor is a good person to farmers because they come in to assist… Vendor is a thief." (Chulu FGD) "Good person who supports our business," but also "They manipulate the scales." (Chioshya FGD)
Institutional Distrust & Structural Gaps	ADMARC delays Policy inconsistency	"Govt can produce a good price but cannot buy. A vendor produces a price and buys." (Chulu FGD) "Admarc market is just a name 'ndi dzina chabe'… Admarc is also very corrupt." (Nkanda FGD)

Immediate Payment. A consistent narrative across all FGDs was that immediate cash payments at the time of sale serve as the most compelling reason for smallholder farmers to choose small traders. Farmers described a context of seasonal income pressures, with critical obligations such as school fees, medical bills, labour payments, and loan servicing coinciding with harvest time. In this scenario, even a marginal price trade-off is seen as worthwhile if cash is instantly available.

"We do not have the luxury to wait. When the produce is ready, money is needed. The vendors give it the same day." – FGD, Chioshya.

"If you delay selling even by a week, there will be more pressure because the children may miss school, or you may default on a VSL loan." – FGD, Chulu.

Farmers frequently contrasted this with ADMARC and institutional buyers, who often delayed payments or imposed minimum quantity thresholds, which excluded many smallholders. In Nkanda, some farmers reported receiving payment from vendors even before the crop had thoroughly dried—a practice that carries risks but fulfils urgent financial needs.

Smallholder farmers valued having instant cash as soon as they sell, as one of the roles the traders play in the groundnuts and soya value chains. Farmers, especially from the central region, where the research took place, participate in tobacco farming, in which it takes time for their incomes to be remitted to them immediately after sales, since they sell through a well-structured auction system of the market. The farmers harvest tobacco, wait for it to be dried, and then it is pressed and transported to the auction floors. At the auction floors, the tobacco is

sold through auctioning, and the farmer waits for about 1 to 3 days for the money to be deposited into their accounts.

In the groundnuts and soya value chains, the alternative market also takes time for the smallholder to be paid. In cooperatives, the groundnuts are delivered to a warehouse or aggregation centre, and the cooperative waits for a buyer to offtake the produce. Farmers have to wait firstly for all farmers to put their commodities together and secondly for the buyer to come and collect the produce. To reduce the burden of waiting for payment, like in the case of collective selling through cooperatives, warehouse receipt systems were introduced in some parts of the study areas. However, this system is only in selected areas and is not accessible to all cooperatives. Where the system is available, it has some challenges that are yet to be resolved. At ADMARC, it was reported that the organisation has faced liquidity challenges many times, and farmers are told to wait until funds are available for a sale to occur.

Early market when farmers need money. Smallholder farmers say they sell their crops to small traders because these traders tend to enter the market early, often before the harvest season. Of all the answers we got from smallholder questionnaires, 29 (21%) said that smallholders sell their crops to small grain traders because they are already in the market during the buying season. Additionally, the farmers emphasized that arriving early is crucial because it is when they need money after waiting the entire season. A farmer in the focus group discussed the importance of receiving money immediately upon selling. Alternative markets, such as cooperatives and ADMARC, typically enter the market late, which means that smallholder farmers often lack options for selling their crops early. Because of this, these farmers have to sell their goods to small grain dealers.

When it comes to cooperatives, farmers must be patient until all members have collected enough grain. At that point, the cooperative will seek out suitable markets. The

smallholder farmers in the focus group discussions said that the soya harvest is usually ready by the end of March. It was also noted that ADMARC, the agricultural marketing agency, often does not start buying soya until July. On the other hand, farmers have been eagerly awaiting the harvest season to earn money and meet some of their needs. One study participant claimed that vendors tend to buy grain early on when farmers need money. As a result, farmers have to sell their grain immediately because it is the only way they can obtain money. Seventeen (13%) of the people who answered the smallholder farmer survey, when responding to why they sell to small traders, indicated that it is because they come to farmers at the time the farmers need money. Smallholder farmers try to meet their immediate needs, like school costs, that cannot be postponed.

During the focus group discussions, participants also raised other pressing needs, such as accessing medical care for a child and obtaining basic household items. The study also found that only 19 of the 136 farmers surveyed (14%) reported having other sources of income in addition to farming. This means that approximately 86% of the smallholder farmers in the area derive their income solely from farming. The planting season in Malawi typically spans from November to December, and the harvesting season occurs from May to July (Bruce, Gne, Goldberg, & Yang, 2015, p. 7).

Distance to Market/ Market Proximity. The physical accessibility of small traders emerged as another decisive factor. In remote locations such as Chioshya and Nkanda, SGTs were the only actors offering last-mile market coverage. Their ability to reach farmsteads or meet farmers on feeder roads alleviates the burden of transportation, which many farmers cannot afford. In this context, the presence of traders acts as a substitute for missing infrastructure.

"They come to the village with a motorbike or bicycle. You do not need to spend anything on transport." – FGD, Nkanda.

"ADMARC might have a shed 20 km away. That is good for people with ox-carts or pickups—not for us." – FGD, Chioshya.

Accessibility of formal markets can also be temporary. According to the experiences of farmers, vendors are often willing to transact on weekends or late in the day—something that structured markets cannot accommodate. This made traders especially relevant for remote, poor households.

The qualitative data from focus group discussions in Chioshya, Chulu, and Nkanda EPAs suggest that small traders, commonly referred to as vendors, significantly reduce the physical and logistical distance to market for smallholder farmers. Across all three study sites, participants consistently described vendors as the most accessible market channel, highlighting their proximity, flexibility, and responsiveness compared to other buyers such as ADMARC or large companies.

In Chioshya EPA, farmers explained that one of the main reasons they sell to vendors is the elimination of transport requirements: *"We go without need of transport. Is very near."* This succinct statement captures the direct reduction in market distance, as vendors effectively collapse the gap between the farm gate and the point of sale. Unlike ADMARC, which typically requires farmers to deliver produce to centralized depots, vendors often collect directly from farmers' homesteads. This localized transaction model reduces both the physical distance travelled and its associated costs.

Similarly, farmers in Chulu EPA described vendors as playing a crucial role in providing transportation services and alleviating the logistical burden on farmers. As one participant explained, *"ADMARC, you have to take the commodity to them, while as a vendor, you can be invited to the farmers' doorsteps."* This remark highlights the contrast between institutional buyers who demand that farmers bear the cost and effort of transportation, versus vendors who proactively bring the market to the farmer. Such doorstep transactions remove a significant barrier for smallholders who may lack access to reliable and affordable transportation options.

Moreover, participants in Chulu EPA elaborated on the scale and organization of vendor operations, noting that vendors often deploy large vehicles for collection. One respondent highlighted that vendors *"bring even big vehicles to collect once they get the market."* This capability not only reduces distance but also addresses volume constraints, allowing farmers with small quantities to sell without needing to aggregate at distant collection points. By contrast, cooperatives were described as slow-moving and dependent on finding external buyers willing to accept aggregated volumes, often resulting in delays of months before any sale is finalized.

Nkanda EPA farmers also affirmed the role of vendors in reducing market distance, though with a nuanced view of this dynamic. While acknowledging that selling to vendors is not always their preferred choice due to pricing concerns, participants emphasized that vendors were the only practical option given the challenges with other buyers. One participant remarked, *"Vendor is very important. There is no any other market than that of a vendor."* This statement reflects both a lack of alternatives and an appreciation of vendors' readiness to reach farmers where they are. Another participant explained, *"If the farmer has problem, he goes himself to the vendor. The vendor does not go to him."* Though this suggests some residual

need for farmers to approach vendors, it also implies that vendors operate close enough to the community to be easily accessible, unlike distant formal markets.

Processor A suggests that smallholder farmers are reliant on the presence of small traders to access the off-taker market, which includes processors and exporters. Although farmers can take their crops to processors, practical capacity issues have been a hindrance from accessing such a market.

> "Farmers can come directly (to the processor), but they come with small quantities, and in that case, they need cooperatives or vendors. Farmers are not getting the best price unless they sell their commodities directly to the market. Farmers often struggle to bring their products to market. There is a challenge of trust among cooperative members. They do not trust each other. If farmers want to go for good prices, they must form cooperatives and learn to trust one another," Processor A argues.

Readily Available Market. The study's findings indicate that smallholder producers are inclined to favour small grain traders due to the scarcity of market alternatives. Of the smallholder survey participants, 44% stated that they have no other market options besides small merchants, and 100% identified the small merchant as the sole primary market option. This was collaborated in all the three focus group discussions.

Small grain traders are said to be readily available. Availability means being present or ready to use right away (Bhagwan et la., 2003, p. 256), which stresses the need for timeliness. Being the only market is affected by both how close you are to it and how relevant it is at the time. One study participant said, "I had to sell my crops to a vendor because he was the only buyer I could find." In short, it was the only market option in the area. The farmers confirmed that vendors were always available, which is a big reason why they get so many Soya and

groundnuts. The grain board has not bought groundnuts and soya in the past few years, according to information from the farmers. A farmer said that they only depend on one market during the harvest period to sell their crops.

During certain times of the farming season, the agricultural community has observed that alternative markets, such as ADMARC and cooperatives, are more challenging to access. A participant in a focus group stated that people believe organisations like ADMARC and cooperatives are distant and tend to start buying crops late in the season. As a result, farmers have to sell their crops to vendors. Some farmers feel that if small traders do not buy groundnuts from them, they would not have any other way to sell them. One participant in the focus group discussion attests that farmers consider individual vendors as their primary market, as opposed to cooperatives and other formal markets.

Easy and convenient Market. Smallholder farmers have found trading with small grain traders convenient and easy. Both from the questionnaires and the focus group discussions, several farmers confirmed that one reason they opt to sell to small traders is that the market is easy. One respondent answering what he sees as the role of small traders responded, “They (small grain traders) create an easy market for us farmers.” The easiness is explained by the other farmer participants stating that grain traders help farmers to access the market within the area easily; they can buy even in small quantities as little as one kilogram and from the doorsteps of the farmers. As such, they are considered by the farmers they provide a convenient market in the community. Farmers have also indicated that small grain traders provide a quicker service compared to other market alternatives, where one is given cash immediately after weighing the commodity. While other markets receive only well-graded and sorted commodities, small grain traders purchase even grain that is not graded, and in most cases, they do not inspect its quality. Farmers indicated that one reason small grain traders are considered

easy and convenient is that they allow farmers to pay in advance, which is particularly beneficial when farmers have pressing issues to resolve before the harvest is ready. Furthermore, farmers confirmed that, unlike other types of markets, a small trader can be invited to buy from home. With vendors, “you do not have to queue to sell.” You come, you sell immediately.” In a broad sense, smallholder farmers have identified the small trader market as a readily accessible and convenient market within their respective regions.

Limited alternative markets are available. Out of the 136 surveys collected from smallholder farmers, 17 respondents (13%) reported a lack of alternative markets or a lack of superior alternative markets. During a focus group discussion within the Chulu EPA, a farmer expressed the viewpoint that vendors play a beneficial role in assisting farmers during times of need. It has been observed that small-scale grain dealers have the capacity to provide financial assistance to smallholder farmers for personal purposes, such as covering medical expenses for a family member. This assistance is typically provided in the form of a loan, which is expected to be repaid by the smallholder farmer through the provision of soya or groundnuts well in advance of the harvest season. It has been observed that specific individuals may consider exploring alternate marketplaces. However, due to the absence of operational opportunities during the desired selling period, they are compelled to resort to small grain traders as the sole available market. Several individuals have suggested that the small trader is the only alternative accessible owing to the absence of a functional ADMARC.

Grading and sorting groundnuts and soya. Through FGDs and qualitative data from the questionnaires, the study investigated the role of traders in grading commodities. Additionally, it examined the level of importance smallholder farmers have in ensuring the meeting of quality standards.

Out of the smallholders interviewed, it was found that 95 individuals, accounting for 70% of the sample, do not sort their groundnuts and soya prior to selling them in the market. The individuals in question demonstrate a lack of regard for the quality of the grain they supply to local merchants. 64% (87) smallholder farmers who participated in the survey agreed with the notion that their groundnuts and soya cannot be effectively marketed to other markets in the condition it is sold to small-scale traders.

The study found that the soya and groundnuts obtained by small-scale traders are of poor quality. Although farmers indicated that they know how to check moisture levels, out of 121 respondents, only 37, representing 31%, provided a variety of traditional methods to check the moisture levels of soya and groundnuts, suggesting a knowledge gap. These methods included feeling the grain by biting it, listening for sound by placing it in a bottle, observing moisture levels when it was in a bottle, feeling the grain by dipping a hand into a bag, attempting to peel the skin off groundnuts, breaking the grain, and many others.

According to the small trader survey results, all nineteen (19) small traders survey respondents confirm that they need to grade, sort, and dry soya and groundnuts they buy from farmers before taking them to the next market. The percentages of soybeans and groundnuts produced by smallholders that require grading ranged from 10% to 100% for soybeans and from 30% to 100% for groundnuts. The average percentage of soya that needed grading was 60.6%, and for groundnuts, it was 68.1%. Small traders said that the grading process removed between 1% and 20% of foreign bodies from soya, with an average of 7.3%. The same 1% to 20% range was found as foreign bodies in groundnuts, but the average was higher at 10.3%. These results show that groundnuts are more likely to have foreign bodies than soya.

The research investigated the potential consequences of small grain traders failing to grade their crops and instead delivering them directly to the off-taker or another marketing

channel without grading, sorting, or properly drying them. Trading would be more challenging if soya and groundnuts were not correctly graded, according to half of the traders who responded to the survey. Some of the specific feedback included the following responses: (i) "There will be no business transactions." (ii) The commodities are returnable, and (iii) "A grain that is not graded cannot be purchased in a real market." These comments indicate that there is a limited demand for ungraded/unsorted soya and groundnuts in the market, except for the small trader. This demonstrates the critical importance of initiating classification at the level of smallholder farmers or small traders. The other 50% of the merchants interviewed state that groundnuts and soya can be sold at a lower price, indicating that they will be sold for a slightly lower price. Additionally, the focus group discussions revealed that wholesalers grade, separate, and dry commodities prior to selling them to processors and exporters.

All grain undergoes moisture content testing prior to acceptance, according to the processors interviewed. If the moisture levels are determined to be unsuitable, the crop is subsequently returned. The majority of traders are knowledgeable about the requirements and maintain a satisfactory level of quality. In some instances, some traders engaged in the practice of surreptitiously introducing extraneous substances, such as stones, into sacks with the intention of deceiving processors. As a result, processors opted to establish a thorough inspection protocol for each package.

No incentives for smallholder farmers' grading. The topic of grading was further deliberated over in focus group talks. All three groups reached a consensus that small-scale traders typically do not require soya and groundnuts to be graded before they buy. The purchase price for both graded and ungraded items is the same. During the Chulu focus group discussion (FGD), a particular member stressed the notion that "there is no grading involved when selling to a merchant." Vendors purchase products, regardless of their grading status, at the same price.

Based on the insights shared by participants in the focus group discussions (FGDs), it was observed that small-scale merchants engage in the processes of grading and drying commodities to fulfil market requirements downstream the value chain, utilizing their labour.

According to a farmer participant in a focus group discussion (FGD), ADMARC must ensure that the produce is graded correctly and well-dried consistently. The participant emphasized that while small traders do not require grading, it is a necessary practice when selling to ADMARC. However, the farmers observe that selling graded groundnuts and soya to ADMARC does not appear to yield any meaningful value addition. This is primarily because on most occasions, prices offered by small traders are higher or equal to those offered by ADMARC. A smallholder farmer participating in the Mkanda Focus Group Discussion (FGD) contended that, “sometimes prices surpass those set by the ADMARC, but in certain years, prices may align with ADMARC pricing.”

In conclusion, small traders play a significant role in sorting and grading groundnuts and soya. The research found that 60% to 68% of groundnuts and soybeans from smallholder traders require grading, sorting, and drying before being sold to off-takers. Small traders purchase soya and groundnuts without regard for whether they are properly sorted, graded, and dried, thereby offering no incentive for better quality. Traders indicated that off-takers cannot buy groundnuts and soya unless they are sorted and properly dried; otherwise, they will be purchased at a significantly reduced price. Farmers indicate that they do not sort or properly dry groundnuts and soya when selling to small traders because there are no incentives for such additional investment. This suggests that the grading done by small traders adds value to the groundnuts and soya from smallholder farmers as defined by Melembe et la (Melembe, Senyolo, & Mmbwengwa, 2020, p. 1).

Price Negotiation. The analysis of focus group discussions (FGDs) held in Chioshya, Chulu, and Nkanda EPAs reveals that smallholder farmers have minimal opportunities to negotiate prices for their produce, particularly soybeans and groundnuts.

The price-setting process is predominantly vendor-driven, leaving farmers with little or no room to influence the final price they receive. This asymmetrical relationship between farmers and vendors is consistently described across all three study sites.

Participants in Chioshya EPA highlighted that vendors effectively determine prices without farmer input. As one farmer put it, "We don’t make prices but the vendor instead," underscoring that negotiation is essentially absent. Vendors base their offers on prior knowledge of where they will resell the produce, factoring in their own margins. Farmers are aware of this process, yet cannot influence it. Another participant explained, "Vendor is a clever person. He does business to get profit. Before he buys he knows where he will sell." This statement demonstrates that farmers recognize the business acumen of vendors but also acknowledges their own lack of bargaining power in these transactions.

The situation is similar in Chulu EPA, where participants explained that vendors first establish prices with large buyers and then approach farmers with pre-determined offers. One participant remarked, "Vendor first finds out prices from the big buyers like CP feeds and then comes and buys from farmers and takes to the market and make big profits—therefore he is a thief." This accusation reflects not only resentment but also a recognition of the information asymmetry that shapes price negotiations. The vendors’ access to markets and pricing information enables them to dictate terms that farmers have no choice but to accept.

In Nkanda EPA, farmers were equally clear that they do not negotiate prices but accept what is offered to them. As one farmer stated, "Selling to a vendor is not our choice because

there is no option." This reflects the structural lack of alternatives that severely undermines any possibility of negotiation. While ADMARC is theoretically an alternative market, farmers report that it is unreliable due to late buying schedules and a lack of cash. Participants explained, "ADMARC does not come with money on time, and when money comes, they buy from vendors," illustrating the state buyer's failure to provide a credible counterweight to vendors in the market.

The lack of alternative buyers forces farmers into a position of dependency on vendors. This dependency is further reinforced by the urgent and pressing cash needs faced by smallholder households. Participants in all three EPAs explained that vendors are willing to pay immediately, or even in advance, while other buyers either delay payments or arrive too late. In Chioshya EPA, a participant observed, "We just need to sell at that time to meet our pressing needs," highlighting that immediate cash requirements override any desire to hold out for better prices. Similarly, in Nkanda EPA, farmers acknowledged, "Farmers receive money in advance... We are not happy with selling at that time, but it is difficult." Such pre-harvest loans effectively lock farmers into unfavourable sale terms, as repayment is typically extracted through accepting the vendor's price at harvest, regardless of prevailing market conditions.

The fragmented and individualized nature of smallholder sales also constrains the negotiation dynamic. Farmers often sell in small quantities, making them unattractive to large buyers who prefer bulk transactions. In Chulu EPA, participants discussed the challenges of collective marketing, noting, "Cooperatives take long because they target a market and they wait for the price agreed already." Others admitted that while collective selling would theoretically improve bargaining power, practical barriers exist, including divergent needs among members and mistrust stemming from past negative experiences, such as theft of

aggregated produce. Even when aggregation occurs, farmers noted that big buyers may still not come to purchase directly at the farm gate.

Another important dimension limiting negotiation power is the opacity and perceived unfairness of vendor pricing practices. Farmers described the process as non-transparent and suspected that vendors were taking advantage of their position. For example, a participant in Chulu EPA remarked, "Vendor is a thief. God must forgive him," accusing vendors of deliberately withholding information about their selling prices to maintain their advantage. In Nkanda EPA, farmers expressed frustration that vendors organise in groups, recruit middlemen, and even block competitors offering better prices. One participant explained, "They stop those that offer better prices," indicating active collusion to suppress competition at the farm gate.

Government efforts to set minimum prices for key crops have failed to provide a meaningful basis for negotiation. Across all EPAs, farmers expressed awareness of these official prices but viewed them as irrelevant in actual transactions. In Chioshya EPA, one participant dismissed the government-announced price as ineffective, saying, "Government prices are useless; what matters is the market forces." Farmers in Nkanda EPA were similarly sceptical, describing the official farm gate price as "just book work—'ndi mau a m’papepala'," meaning words on paper with no real effect. The disconnect stems from ADMARC’s inability to purchase promptly, in sufficient quantities, or with reliable cash on hand. By the time ADMARC is operational, farmers have typically already sold to vendors out of necessity.

Taken together, the qualitative data from these FGDs show that smallholder farmers currently have no meaningful opportunity to negotiate prices. Instead, prices are dictated by vendors who exploit their monopoly position at the farm gate, the farmers’ urgent liquidity

needs, and their fragmented selling patterns. While farmers recognise these limitations, they remain trapped in a system that offers them few viable alternatives. Addressing this challenge will require not just policy changes around minimum prices but also investment in market access infrastructure, credit facilities to reduce forced sales, and robust support for collective marketing initiatives that can strengthen farmers' bargaining position.

Pricing Dynamics. In this session, we assess whether small traders influence prices and play a key role in determining the prices that smallholder farmers receive. Through quantitative and qualitative data analysis collected from various research tools, this study explores power dynamics related to pricing within the value chain. The session discusses whether the government announced prices are adhered to on the market or not. The section addresses the question of who determines prices when selling to small traders and who determines prices when selling to off-taker markets, in order to compare the involvement of small traders in determining prices with that of smallholders and onward buyers. The research examines how traders determine the prices they offer to smallholder farmers. We conclude this session by relating the key sub-themes on pricing in the qualitative results to the quantitative analysis results of this study.

Farmers held a nuanced view of pricing. Several respondents explained that they consider pricing not just as a number but as a function of timing, quantity sold, and accompanying services.

"The cooperative offered 750 per kg, but payment took two months. The vendor gave 650 and paid that day." – FGD, Chioshya.

"Sometimes they offer lower prices, but they take any quantity. You do not have to sort or wait for quality checks." – FGD, Nkanda.

Some traders were also praised for adjusting prices quickly when market conditions changed. In contrast, structured buyers, such as ADMARC, were perceived as rigid and unresponsive.

Price determination. The study made an inquiry into who determines the price offered to the smallholder farmer. What are the bases for the prices that are offered by the small traders to smallholders? Through the questionnaire, all smallholder farmers (136) except one indicated that the small traders offer prices. When selling to an alternative market, 16 farmers (12%) out of 136 indicated that they determine prices, while 120 farmers (88%) indicated that the alternative buyer determines the price, just like the small trader. This suggests that prices are mainly determined by a buyer, whether it is a small trader or an alternative market.

Small traders were asked the question, "How do you decide the price, or what influences the price you decide to offer at your buying point," and in response 9 (47%) of the nineteen small traders indicate that the prices are influenced by the prices offered by the next market they take the commodities to. Some of the answers from small traders were as follows:

"Based on what we agree with my buyer"

"Demand needed on the crops by companies etc"

"….it depends on the demand of companies looking for the same product that we are buying"

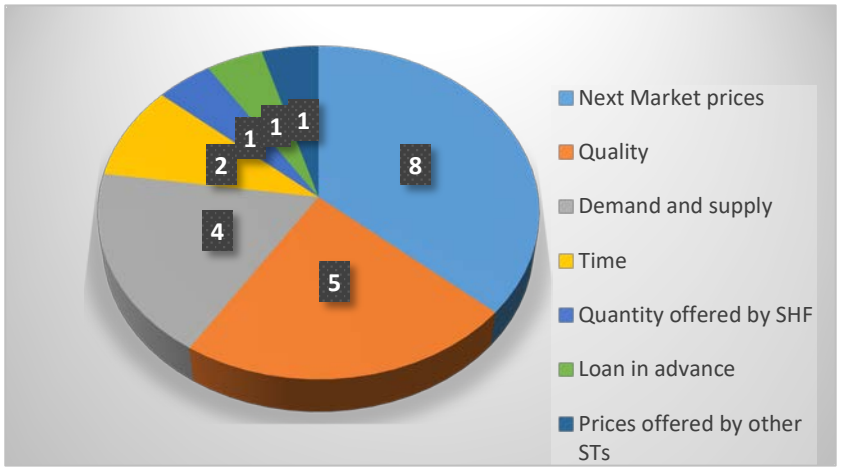
"It is the next market that influences me to decide the price. For example, if soya is being bought at K500/kg I need to buy my soya at K350/kg, K50 for grading, K50 for transportation, K50 for my profit."

"It is decided by the big market prices. We only calculate transport, sorting and storage costs to offer the price to the farmers."

"Taking into consideration the price offered by the off-taker where we are selling crops."

Figure 17

Determinants of Prices as reported by SGTs



Small traders also indicated that the quality of the grain influences the price, including its moisture content and the quality of grading (whether it is graded or not). 5 (26%) out of the 19 small traders mentioned the quality of grain as one of the factors that influence the price offered by small traders. However, in the FDGs, it was reported that small traders buy at the same price regardless of the quality of the commodity. Some traders blamed both demand and supply forces, at the smallholder market as well as the wholesale market, for determining the prices offered by traders. Out of 19 traders who participated in the study, 4 (21%) mentioned market forces as a driver for prices offered by small traders. From the supply side, they assert that "the availability of the crops in that particular season and the demand from the companies that buy the commodities" influence the price in each season. They argue that "if the demand for the product is high, prices go up a bit and if the demand is low, prices are lowered." At a minor level, the traders mentioned the time of the season the sale is made as another factor

affecting the prices. The prices are very low at the time of harvest and gradually rise as we approach the off-season for the crop.

Smallholder traders also informed the researchers that the quantity of crop sold at a particular time influences the price. For instance, when a farmer sells a large quantity, traders may offer a higher price. Low quantities may not attract a better price from the small traders. Other factors include whether some money was paid in advance or not. Implicitly, those who took loans from the traders are offered a lower price than those who did not. Some traders follow the prices that other small traders offer.

According to the experience of the Grain Traders and Processors Association, prices are set by off-takers, and all the small trader does is to ensure that he does not make a loss and argues that,

> "People think vendors set prices. Vendors do not set prices. They mostly produce K20–K30 per kilogram for soya. The final taker directs prices. If the price increases, the vendor pushes the price back to the farmers. All what the vendor does is to make sure that he does not lose"

Moving the issue of pricing to off-takers, one processor argues that prices are affected by market forces outside the country and different market dynamics. He argues that,

> "Outside buyers also influence prices. For instance, last time, outside buyers from India and other countries were buying from here with export licenses. However, there is also a cross-border trade to Tanzania, Zambia, without export licenses, and grain is going out illegally in the process. The Government is losing forex."

Export ban processes and impact. The research examined how the export bans on groundnuts and soya affected the prices offered by small traders. It was reported that the Ministry of Trade implements export bans in response to requests made by different interest groups, among other reasons, to protect the local industry. The ministry is expected to conduct broad consultations with stakeholders before implementing any ban. According to the experience of the Grain Traders and Processors Association (GTPA), "Export bans usually result in a reduction of prices at the farm gate level." GTPA indicated a lack of satisfaction with the way export bans are implemented, suggesting that traders and smallholder farmers are excluded from consultations. While the government believes that it is necessary to enforce export bans to protect local industry, GTPA observes that export bans work to the disadvantage of the smallholder farmer as they limit the competition of off-takers of grains. In some cases, it is believed that this gives local processors room to collude on prices to their benefit.

Traders reported that when export bans are implemented, large local buyers offer a very narrow range of prices from one buyer to another, supporting the possibility of collusion in pricing. In the interviews with local processors, they confirm that trade bans work to their advantage. One processor said, "Trade bans positively affect us." He further suggested that the government should inspect the borders to prevent informal exports. The government blames the absence of a fully functioning government aggregator that would absorb the market. "The main challenge for the government is how the market can be normalized in the absence of a government market board?" lamented the government official. The Ministry believes that one way to normalize the market is to set up a quasi-government commodity exchange market.

The study also wanted to find out if the government announced prices are adhered to by small traders and other buyers. The interview with government officials confirms that the government announces minimum prices for all key commodities at the beginning of each

market season, and all traders, including the small traders, are obliged to follow the minimum farm gate prices. The government uses minimum prices to regulate market practices and protect smallholder farmers. However, the compliance on the market is very questionable.

From the focus group discussions, the research confirms that both smallholder farmers and small traders are aware of the government-set minimum prices, but observed that "the prices never translate to reality on the market due to market forces." One farmer in the Chulu EPA focus group discussion argued, "Government can produce a good price but cannot buy. Vendors produce a price and buy. So a farmer would go to where one is ready to buy." Smallholder farmers' experience is that traders buy at a price they are comfortable with. This collaborates with the fact that when small traders were asked what determines the prices they offer to smallholder farmers, none of the 19 small traders mentioned government minimum prices as a factor that guides the determination of prices. "Market price is always different from government-announced prices; in some cases, higher or lower. When the demand is high and yet the supply is low, prices go up," observed a member of the focus group discussion from Mkanda EPA. When traders were asked in the focus group discussion what would happen if the government put a strong enforcement mechanism, the traders and the farmers agreed that that would have a negative implication to the very same smallholder farmers that the government intends to protect because the farmers will have no market unless the government comes to buy from them.

Smallholder price satisfaction. From the questionnaire feedback, we explored the reasons behind satisfaction with the prices or the lack thereof. As observed, the trend indicates that the lower the price, the higher the percentage of farmers who are not satisfied; the lack of satisfaction persists even with high prices. When farmers were asked how they felt about prices,

the responses revealed the reasons behind their satisfaction and dissatisfaction, extending beyond the nominal price values.

Farmers who indicated they were satisfied with the prices provided four broad reasons why they considered the prices reasonable. The first reason was from a comparative perspective, where they compared with the previous years. The common word used was "better." The prices were seen to be better than those of the previous season. "Prices were better than the previous seasons" was one of the respondents' comments. The second reason pertained to the time of the season when the sale was made, specifically whether it occurred at the beginning or end of the season. Simple comments from respondents were, "Better at that time" or "Good at that time." One farmer commented,

> "Prices are good at the end of the season when farmers have already sold all the crops. As a result, farmers fail to get these good prices as they take a long time to be realized. Therefore, no profits are made by the farmers."

The third reason farmers felt the prices were reasonable related to the convenience of the sale on the side of the farmers. Some farmers indicated that they were happy with the prices because they sold at their doorsteps. One said, "happy since I sold from home." The fourth reason farmers were happy with the prices was that they sold all their crop at once. They received all the money at once. "Happy because they bought all at once," was one of the responses from the farmers who responded to the questionnaire.

There were also different reasons why farmers were not satisfied with the prices beyond the nominal values. Three key issues emerge from the questionnaire that may be associated with dissatisfaction with the price. The first reason is business-driven. Farmers would compare the costs of inputs and returns, and those who felt the returns were low were not happy with

the prices. “Too low based on the inputs of production,” one respondent commented. The second reason was based on expectation, and if the expected price was not reached, then dissatisfaction with the price. The price “did not satisfy as expected.” The third reason for the lack of satisfaction is related to the volume sold. Some farmers were dissatisfied because they sold in low volumes. This may suggest that farmers’ satisfaction with prices can be improved by enhancing production efficiency, increasing access to price information to help them develop realistic expectations, and increasing smallholder farmers’ individual sales volumes.

In conclusion, this section demonstrates that the issue of groundnuts and soya prices offered to smallholder farmers by traders is complex in nature. The research has revealed that prices offered by small traders are based on prices set by off-takers, demand and supply at local and international markets, the quality of the produce, the time of sale during the season, and whether payment was made in advance. In sporadic times, farmers have the opportunity to negotiate for a price regardless of whether they are selling to a small trader or an alternative market. As such, small traders set prices in response to the factors mentioned above, and smallholder farmers are mostly price takers, whether they sell to small traders or alternative markets. The market price offered by small traders is always different from the government-announced prices, which can be higher or lower, depending on the factors mentioned above. The export ban has also contributed to price fluctuations, particularly responsible for low farm-gate prices for groundnuts and soya, as a result of reduced competition. However, smallholder farmers have the opportunity to negotiate for better prices with either small traders or alternative buyers. About 79% of the farmers reported being involved in price negotiations of one form or another, of which 87% of those involved were conducted with small traders.

Close to 60% of smallholder farmers indicated that they were satisfied with the prices offered by small traders during the 2020/2021 marketing season, while about 40% indicated

that they were not satisfied with the prices offered by the small traders. The majority of those who were not satisfied were those who had taken lower prices. The smallholder farmers who registered were not satisfied because the price did not meet their expectations or because the prices were low in comparison to production costs. Farmers who expressed satisfaction with the prices cited several associated factors, such as selling in large quantities at once, selling at the right time, small traders collecting from doorsteps, and receiving cash at the time of sale.

Access to Loans from traders. The study's qualitative data results reveal that farmers made several observations regarding loans obtained from traders. According to a respondent in the study, smallholders are obligated to engage in sales transactions with vendors, regardless of their personal preferences, due to loan obligations with them. This arrangement may create an exploitative context for the loans. The repayment phase occurs at the onset of the harvest season when prices are relatively depressed. The study observed that “the price of commodities was excessively low at the time of loan repayment.” “When individuals obtain loans, prices offered tend to be low as small-scale traders can exploit the borrowers more readily.” It was reported that the farmer would incur higher costs in real terms due to the low negotiated price at harvest, resulting in reduced profitability when a larger portion of the farm produce is allocated towards loan repayment,” observed farmers in the FDG at Chulu.

In contrast to perceiving the loan as unhelpful, alternative viewpoints from smallholders indicate that the availability of the funding facility was deemed valid, and in some cases, even highly beneficial. People who perceive the funding facility as helpful talk about three main areas. One important reason is that the money arrived at the same time as the household's urgent need for necessities, such as food. One of the answers to the questionnaire said, "At that time, we did not have enough food, but the financial help we got helped us to buy the food we needed." Another person reported that the money helped them to get through a tough time.

The loans were also beneficial because they supported the household's agricultural endeavours. The use of loans encompassed the provision of financial resources for inputs such as seedlings, labour costs, harvesting, shelling, and transporting commodities to the market. The research participants expressed that without sufficient funding, the activities financed by the loans would not progress or prosper. Like the individuals who expressed dissatisfaction with the loan, the smallholder household found itself in a dire situation after receiving it. One individual who received a loan stated, "I did not have any initial capital at that time." For specific individuals, obtaining money was a means of procuring seeds and ensuring their survival. They expressed their gratitude for halting a period of seed scarcity. Another reason to consider the financing advantageous is that it simplifies the process of obtaining funding for various farm duties, such as purchasing fertiliser for winter crops. One participant stated that they "applied the funds to the purchase of fertiliser for the cultivation of maize" and "required the funds to purchase fertiliser for the cultivation of horticultural crops." Some individuals believed that the loans were advantageous because they would eventually generate revenue from the business ventures they enabled. When participants were asked about their views regarding vendors, the focus group discussions revealed a mix of positive and negative opinions. The favourable perspective concentrated on the beneficial actions of vendors, who claimed that they assisted producers during their most critical periods. The focus group at Chioshya confirmed that a vendor is an individual who provides significant assistance to the farmers.

Collective Action Constraints. The failure of cooperative marketing models was cited as a key factor in the push for change. While many farmers had joined groups and attempted collective sales, experiences were often disappointing. Key barriers included delays in buyer procurement, poor group governance, and unmet price expectations.

"We stored soya in the warehouse for four months. The buyer never came. Then we sold at a loss." – FGD, Chulu.

"When we tried to sell as a group, the chairperson took bribes to choose one buyer." – FGD, Nkanda.

These stories suggest that collective action is not always practical, especially in environments of weak institutional support. Consequently, the flexibility and responsiveness of small traders become even more appealing.

The focus group discussion with farmers at Chulu EPA revealed that cooperatives struggle to sell goods because they adhere to a fixed market with stable prices. So, cooperatives usually wait until they can obtain the price they want before selling. When members of a cooperative are faced with multiple price offers, they may want to sell, but the decision-making process tends to be slow. As a result, buyers often choose to purchase directly from other smallholder farmers instead.

Farmers have also stated that collective marketing can be challenging to implement. One factor that emerged from the discussion was that farmers had different goals and needs. The different needs and goals also affect the amount of resilience required to maintain the safety of agricultural products over a long period, especially when attempting to improve the market system. The study also found, through group conversations, that past negative experiences influenced the desire of smallholder farmers to join a collective market aggregation. For instance, there are records of farmers aggregating their goods to wait for a group sale, only to have the goods stolen later. One person in the focus group at Chulu EPA expressed dissatisfaction that they could not engage in collective marketing due to negative past experiences.

Through focus group discussions at Mkanda, the study found that a cooperative at Mkanda was unable to secure a market at a reasonable price after aggregating approximately 26 tons of soya. Consequently, they were compelled to sell their produce through a vendor. On the other hand, discussions from the same focus group suggest that farmers perceive selling their produce to vendors as a less desirable option. However, they feel compelled to do so due to a lack of alternatives. One participant in the group discussion said that selling to vendors is not a voluntary decision, but rather a necessity, as there are no alternative options available. According to the findings from the focus group talks, it was claimed that ADMARC at Mkanda ceased the procurement of soya and groundnuts several years ago.

Relational Trust and Social Embeddedness. The qualitative data have revealed some interesting relational and social aspects in the value chain that need the attention of stakeholders. While there are complaints about cheating, price manipulation, and scale manipulation, many farmers made distinctions based on personal experience. Known traders, often those embedded in the local community, were seen as more trustworthy.

"If I know where he lives, he cannot run away with my money. We have done business for years." – FGD, Chioshya.

"Some are from the same village or trading centre. That means we can hold each other accountable." – FGD, Chulu.

The dynamics of relational trust and social embeddedness form a critical dimension of smallholder farmers' engagement with traders, particularly vendors, in Malawi's rural agricultural markets. Evidence from focus group discussions (FGDs) in Chioshya, Chulu, and Nkanda EPAs reveals complex relationships wherein trust is not necessarily based on

transparency or equity but is deeply embedded in social proximity, continuity of exchange, and mutual responsiveness in times of need.

Smallholder farmers consistently described vendors as both essential actors and opportunistic intermediaries. In Chioshya EPA, vendors were considered reliable due to their availability and willingness to buy even small quantities of ungraded or improperly dried produce. One farmer noted that *"vendor can lend money for personal needs like matenda [illness] for you to pay later through soya/groundnuts"* (Chioshya FGD), illustrating a personalized and flexible relationship that extends beyond market transactions. These practices establish a form of social embeddedness in which vendors assume quasi-financial roles, operating as informal credit providers and problem solvers in the absence of functional rural finance institutions. Similarly, in Chulu EPA, farmers highlighted that vendors offer immediate financial support: *"You can take money in advance… you want to take [a child] to the hospital, you can get money from a vendor"* (Chulu FGD)—such arrangements position vendors as socially responsive actors embedded within local livelihoods.

Nevertheless, despite their practical value, vendors were simultaneously described with suspicion. One farmer declared, *"Vendor is a thief. God must forgive him"* (Chulu FGD), citing hidden profits and non-transparent pricing practices. This tension points to a form of reluctant trust: vendors are tolerated—even appreciated—not for fairness, but because they are perceived as the only accessible and consistent market actors.

These socially embedded relationships were often maintained through personalized services. In Chulu and Nkanda, vendors provided transportation, collected produce at the farmers' homesteads, and accepted goods regardless of grading standards. As one participant shared, *"ADMARC, you have to grade, while vendors you sell without grading"* (Nkanda

FGD). Vendors also performed grading and sorting themselves, albeit not always transparently. This flexibility was interpreted by farmers as helpful, reinforcing relational trust even when accompanied by known disadvantages such as manipulated weighing scales. Farmers in Nkanda, for example, acknowledged vendor misconduct but still expressed loyalty: *"Vendor is a good person… if vendors move from the market, there will be no market for smallholders"* (Nkanda FGD).

Notably, embeddedness was not synonymous with equality. Vendors were consistently reported to act as gatekeepers of market information, including resale prices. According to farmers in Chulu, *"Vendors first find out prices from the big buyers like CP Feeds and then come and buy from farmers... and make big profits"* (Chulu FGD). In Nkanda, farmers lamented that vendors often recruit local middlemen to enforce opaque pricing and suppress better offers: *"Even if big buyers come and offer good prices… [vendors] stop those that offer better prices"* (Nkanda FGD). Despite these practices, the embedded trust remained, shaped by the perceived impossibility of bypassing vendors due to low volumes, lack of storage, and distance to formal markets.

Furthermore, relational trust was also shaped by the frequency and consistency of interactions. Many farmers indicated that while formal buyers like ADMARC or organized cooperatives were ideal in theory, in practice, they were inaccessible due to delayed payments, inconsistent procurement, and quantity thresholds that excluded smallholders. A farmer from Chioshya noted, *"Even if ADMARC puts good price, I cannot even sell to ADMARC—only 2 bags,"* while another added, *"ADMARC is also very corrupt. Corruption has reached ADMARC"* (Chioshya FGD). This vacuum of reliable institutional buyers compels farmers to rely on vendors, despite the flaws in the relationship.

Finally, the embeddedness of vendor-farmer relationships is reinforced by social learning and shared norms. Farmers reported knowledge of vendors who manipulated scales or offered unfair prices but emphasized community-based strategies to cope—such as avoiding known exploiters or checking weights using traditional methods (*"scale ya maso"* or "scale of the eyes"). This form of localized monitoring, albeit informal, illustrates how social embeddedness fosters a type of informal accountability within otherwise imbalanced relationships.

The relational trust that characterizes vendor-farmer relationships is not derived from fairness or shared value creation but from necessity, habitual engagement, and embedded social practices. Vendors fulfil roles beyond mere market actors—they are financiers, aggregators, and local service providers embedded within the socio-economic fabric of rural farming communities. These relationships, though structurally unequal, persist because they meet immediate needs in ways formal institutions have consistently failed to do. Policy interventions aimed at improving market outcomes must therefore address not only price fairness and transparency but also the social functions that vendors currently provide to smallholder farmers.

Institutional Distrust and Structural Gaps. A widespread theme across all FGDs was disillusionment with formal buyers and cooperatives. Complaints ranged from chronic delays in opening buying centres, late payments, selective grading practices, corruption, and political interference.

"ADMARC says they're buying, but they do not show up. Or they buy from chiefs only." – FGD, Chulu.

"Even if the cooperative gets a good price, it takes months. People get tired of waiting." – FGD, Nkanda.

This institutional failure reinforces farmer dependency on small traders. In this light, vendors are seen less as opportunistic middlemen and more as pragmatic partners operating in a vacuum created by structural failures.

The ultimate purchasers (processors and exporters) affirm their procurement of grain through traders, who are sometimes referred to as agents, as well as from cooperatives. One processor expressed a preference for cooperatives, while noting that there are no distinct incentives provided for these types of organisations. Price incentives are only applicable when specific quantities are involved. As per the perspective of off-takers, farmers are granted the liberty to engage in direct sales solely upon satisfying the prescribed minimum tonnage requirement, which typically ranges from one to five tons, contingent upon the specific off-taker in question.

Trading relationships have been established between specific small merchants and processors, resulting in some processors engaging in collaborative endeavours with these dealers for a duration exceeding 10 years. One processor explicitly said that these traders are regarded as integral members of their organisation, underscoring the depth and significance of the relationship. The processor facilitates financial support through contractual agreements with banks, enabling businesses to secure necessary funds. Additionally, it provides market price updates and estimates, empowering businesses to effectively strategize and manage their operations. The acceptable forms of payment are cash or a bank cheque, which are to be made payable on the day of delivery. Occasionally, the processor establishes an agreement with the bank to facilitate payments upon the receipt of goods, thereby enhancing convenience for the traders.

Despite the presence of functioning cooperatives in all three extension planning areas (EPAs) from which our sample was drawn, it is noteworthy that cooperatives did not emerge as a prominent market option for smallholder farmers. Farmers in Chulu EPA advised that even selling through a cooperative was not found attractive because of delays in selling. For instance, in the previous season, farmers intending to sell through a cooperative had to wait up to October waiting for the buyer who promised to buy soya at a price of K1000.00 per kilogram only to end up selling at much lower price in October/November. They lamented that cooperatives are slow in making decisions in a very dynamic market environment as they have to consult when buyers make price offers.

Future programmes could explore models for certifying trustworthy traders, providing low-cost finance for trader-farmer transactions, or strengthening farmer bargaining groups that engage directly with small traders under agreed standards. Enhancing rather than displacing this relational eco-system could offer a more sustainable path for inclusive value chain development in Malawi.

Other reasons for Farmers Choice of Small Traders. Based on the insights gathered from the conversations with smallholder farmers and other participants included in the study, it was noticed that small merchants continue to be the preferred market option for smallholder farmers when it comes to groundnuts and soya. This preference can be attributed to various factors. The financial demands faced by farmers during harvest need the presence of commodity buyers not only for the purpose of collecting the commodities, but also to provide quick payment to the farmers for their laborious efforts throughout the season. The delayed arrival of alternative markets compels farmers to sell their produce at whichever market is accessible. During this critical harvest phase, smallholders are left with limited options, as small grain traders emerge as the sole viable market. The majority of small traders are located

within smallholder communities and are readily accessible. In comparison to other markets, they are typically located at a shorter distance. In certain instances, small-scale traders engage in direct purchasing from smallholders at their place of production, thereby offering convenience and circumventing the need for transportation expenses. Moreover, the small-scale trader is willing to accept ungraded groundnuts or soya, unlike other markets. Under the prevailing circumstances, the small trader emerges as the most suitable option for smallholders, offering them the utmost convenience. No alternative market surpasses its advantages in this context.

Aggregation Function. Based on the statistical data obtained from the questionnaire administered to smallholder farmers, it was observed that during the 2020/2021 Season, the minimum quantity of groundnuts sold by a farmer at a time to small traders varied between 2 kilograms and 620 kilograms, with an average of 112 kilograms. The minimum quantity of soya delivered to a trader ranged from 2 to 1,600 kilograms, with an average of 194 kilograms. The study further observed that the quantity of groundnuts sold to small traders at a time by a farmer ranged from 10 to 800 kilograms, while the quantity of soya sold ranged from 12 to 5,800 kilograms. The average quantity sold by a farmer at a time for groundnuts was 194 kilograms, whilst for soya it was 367 kilograms (see to Table 23 for further details). The primary objective of this analysis was to establish if smallholder farmers can access bigger markets on their own.

Table 24

Summary of reported sales quantities for the 2020 season

	Groundnuts	**Soya**
Total sold (Kgs)	19,769	45,608
Average quantity sold to traders per load(Kgs)	194	367
Range of quantity sold per load (Kgs	10 - 800	12 -5,800

According to the responses obtained from the interview conducted with off-takers, it was revealed that the minimum quantity demanded at their respective markets varies between 1,000 and 5,000 kg. Among the sample of 136 smallholder farmers surveyed, a mere 7 individuals (5%) indicated that they had sold a maximum quantity of 1,000 kilograms or more of soya and groundnuts at any given time. Furthermore, just one farmer (0.7%) reported selling a maximum quantity of 5,000 tons in a single transaction. According to the findings, only 5% of the participants met the minimum quantity criterion for a single processor/exporter. In comparison, only 0.7% of the participants met the minimum quantity requirement for both processors under investigation.

The hindrance to smallholders' access to alternative markets was identified through focus group discussions with smallholders and small traders, as well as interviews with processors and stakeholders. It was revealed that the limited quantities of soya and groundnuts brought to the market by smallholder farmers contribute to this issue. When surveyed, smallholders were queried about their perspective on whether the quantities they sell to small traders could also be sold to alternative markets. Approximately 50% of respondents had an opposing viewpoint, citing the larger purchasing volumes often required by alternative markets as a limiting factor. The study posits that larger marketplaces necessitate substantial resources,

as supported by empirical evidence. Smallholder farmers have found that the limited quantities they sell to small dealers are insufficient for entry into larger markets. The majority of individuals who expressed their willingness to engage in selling activities stipulated that the requirement for doing so is the aggregation of the produce. The remarks received were along the lines of, "Indeed, if the sales are organized and consolidated," "Certainly, if the products are combined," "Yes, using collective marketing," and "The cooperative, being comprised of numerous individuals, enables access to larger markets." In essence, the underlying message conveyed is that small-scale farmers can only tap into larger or alternative markets if they consolidate their sales volume. In this particular scenario, the small-scale traders assume the responsibility of aggregating groundnuts and soya beans sourced from smallholder farmers.

This study supports the notion that small traders facilitate the aggregation of goods by smallholders. It is also worth noting that the vendors' willingness to buy in small quantities directly facilitates market access for resource-constrained smallholders. Farmers in Chioshya EPA described how vendors accept even tiny lots, explaining, *"You cannot go with small quantities to big companies. Vendors accept even two Kgs if you need immediate money."* This practice (Chioshya FGD) significantly reduces the effective distance to market for farmers with limited surpluses, who might otherwise be excluded from formal marketing channels that require bulk volumes.

4.3.3.4 **Interpretation of the Qualitative Results.** This section on qualitative results presents findings organized into key themes and sub-themes, providing insights into the dynamism of the relationship between small traders and smallholder farmers. The qualitative data exposed the feelings, emotions, and sentiments that would otherwise not be revealed through quantitative studies. The findings demonstrate that smallholder decisions to engage with small traders are driven less by ideal market conditions and more by structural realities. SGTs address liquidity shortages, offer decentralized access, provide embedded services, and often operate within the framework of social trust. In doing so, they fulfill critical functions that formal buyers cannot, particularly in underserved rural regions (Mango et al., 2021; Chinsinga & Poulton, 2022). The qualitative findings have played an explanatory role in the quantitative findings, allowing for a deeper exploration of matters that required explanation.

Farmers are not unaware of the risks. Many expressed some frustration with low prices and measurement fraud. However, these disadvantages are often outweighed by the need for immediacy, familiarity, and operational convenience. The findings suggest that interventions should focus on enhancing the ethical and technical capabilities of existing traders, rather than replacing them with unproven institutional models.

4.3.4 *Evaluation of Findings*

This section presents an evaluation of the findings, organized according to the research questions the study aimed to address. The study presents the summary of the findings from both the quantitative assessment, including the econometric assessments, and the qualitative study. The researcher further reflects on the findings in the literature review in Chapter 2 of the study. The research notes that the findings confirm most of the hypotheses while also disproving some hypotheses. Furthermore, in this section, the researcher provides a brief

explanation of any conflicting results between the literature and the findings of this study, as well as between the qualitative and quantitative findings.

The purpose of this study is to address the issue of growing dissatisfaction towards small traders who are viewed as scrupulous and cheaters in agriculture value chains involving smallholder farmers, as observed by Baulch et al. (2024, p. 1). According to Ochieng et al., those who view small traders with suspicion are proponents of public grain markets (Ochieng et la., 2020, p. 1). The purpose of this study is to investigate, firstly, the factors that influence how farmers perceive traders, and secondly, the factors that motivate or demotivate farmers from doing business with small traders in the value chains of groundnuts and soya in two districts, Mchinji and Kasungu, in Malawi. The finding will inform the development of effective policies to enhance value chains that involve both small traders and smallholder farmers.

The study identifies factors that, when manipulated, can lead to significant changes in the interaction between traders and farmers and have an impact on the business dealings between the two parties. The qualitative part of the assessment has facilitated the provision of explanations for the quantitative findings, bringing an in-depth understanding and clarification of the context on which the quantitative results are based. The study is expected to guide policymakers in creating an ecosystem within the two value chains that will ultimately benefit all key players in the chains, including small grain traders and smallholder farmers. The findings will support the development of guidelines for formulating development programmes that aim to enhance market access for smallholder farmers and explore strategies for the sustainable integration of small traders into value chains, not only for soya and groundnuts but also for other grain commodities.

The study findings are expected to be extrapolated to other grain value chains and to the groundnut and soya value chains in other parts of the country. To address this, two research questions have guided the study, and our evaluations of the findings align with these research questions.

4.3.4.1 **What factors influence the perception of smallholder farmers of small traders?** The hypothesis is that the distance to alternative markets influences farmers' perception of traders, sorting and grading requirements, being paid on delivery, access to loans, the opportunity to negotiate, and the price offered. Perception is difficult to quantify; as such, the researcher opted to categorize perception variables by introducing three scales for farmers' acceptance of a perception statement, as demonstrated by Ashagrie et al. (2025). The study used the question to smallholder farmers, "Do you agree with the opinion that small traders are cheaters?" and the answer was categorised into three categories: (i) very, (ii) somewhat, and (iii) disagree. The study found that 45% agreed, 47% somewhat agreed, and only 8% disagreed. This was triangulated with the second question being, "What do you see as the role of vendors in the value chain?" 88% indicated various positive roles. Therefore, this study confirms the hypothesis that smallholder farmers' attitudes towards small traders are generally negative. However, the positive role the traders play in the two value chains is recognized.

Generally, smallholder farmers feel that small traders play a positive role in the value chains of soya and groundnuts, with 88% of smallholder participants indicating various positive roles. However, the general perception of smallholder farmers is that the small traders are cheaters, as indicated above. This may mean that, from the perspective of farmers, they generally value the role played by small traders; however, this does not necessarily imply that they are trusted. The main reason for the smallholders' dissatisfaction with the small traders is that they believe they are offered low prices. Eighty-eight percent of farmers who perceive

small traders as having a negative role attribute this to low prices, while the remaining 12 percent attribute it to the use of uncertified scales. There is no evidence to support this (Baulch et la., 2024, p. 1). This research investigation into the role of small traders in price setting suggests that prices are influenced by multiple players and are dictated by market forces. Baulch et al. observed that proponents of public grain market boards primarily view small traders with suspicion, although

Off-takers, the Grain Traders Association, and the Ministry of Trade agree on the positive role played by small traders, and the traders also acknowledge areas where they need to improve. Off-takers believe that 80% of the small traders can be trusted. The primary concern of the government is that the unstructured market makes it difficult for the government to track foreign exchange proceeds from the exports. The government needs to develop strategies for tracking proceeds of agricultural commodities exported by any entity, regardless of the nature of the exporter.

Multinomial logistic regression was used to examine the impact of various variables on farmers' perceptions. The results suggest that only the opportunity to negotiate for a price would improve the perception of the farmers. This suggests that the perception is not originating from the factors that involve the traders, such as distance to alternative market, price offered, sorting and grading requirements, being paid on delivery, and access to loans, as expected. It is the only opportunity for negotiation that has shown a significant correlation.

We observed that smallholder farmers have three alternative options for marketing: selling through a cooperative, selling to the government grain board (ADMARC), and selling directly to off-takers (processors or exporters). Eighty-six % of the sampled groundnut farmers and ninety-six % of the soya farmers sold their produce through small traders. The quantity of

the sold groundnuts and soya to small traders by the same farmers represented 92% and 80% respectively. This finding is consistent with the observation by Baulch et al., who argue that between 80-90% of agricultural goods in most developing countries are traded by small traders (Baulch et la., 2024). This collaborates with the argument by Ochieng et al. posing that in general in the sub-Sahara Africa, farmers have four specific options for market channel that include (i) farm gate (ii) local market/ village market (iii) contract sales (iv) family and friends and further confirms that among all these, smallholders prefer the farm gate channel although this is not considered competitive probably due to high transaction cost of the alternative channels (Ochieng et la., 2020, p. 142). This could be because the longer the market chains are, the more challenges a smallholder farmer faces (Baulch et la., 2024, p. 4). Smallholder farmers interviewed confirmed that their choice for a small trader is because they are easily accessible, can accept any quantity, accept even ungraded, and pay on the spot of delivery, resulting in minimal transaction costs on the part of the smallholders (Ochieng et la., 2020, p. 140).

Our study explored the reasons why smallholder farmers continue selling to small traders amidst the upsurges that discourage them from doing so. We employed a qualitative approach to explore these reasons through open-ended questions in the questionnaire, as well as through focus group discussions with smallholder farmers in the three EPAs.

The first reason is about the convenience of time. Twenty-one % of the farmers indicated that small traders arrive at the market early when the crops are ready. This is a convenient time for farmers as they require cash. Buying early is particularly important considering that the research found that 86% of the sampled farmers have no alternative income for their households. Baulch et al. observed that a typical maize trader in Malawi buys about 80% of the crop during harvest period falling between April and July and the rest out of harvest season and stores for an average of 2.5 months for maize purchased in harvest season and an

average of 0.5 months for maize bought on lean season (Baulch et la., 2024, p. 1177). The Multinomial Regression assessment used “Immediate Payment” as one of the independent variable to perception of the farmers. The study found significant positive correlation between “immediate payment” and farmers’ perception for both soya and groundnuts. This collaborates with the studies done by Mtisunge and Chikhawo and colleagues suggesting that smallholders in Malawi prefer liquidity over price for the cash to meet immediate financial demands such as school fees, hospital bills and others (Mtisunge, 2023), (Chikhawo et la.,2024). Liverpool-Tessie and colleagues observed that spot payments to smallholder farmers would increase their trust to the small traders (Liverpool-Tessie et la., 2020).

The second reason is about the availability of the market. About 44% of the smallholder farmer participants believe that there is no alternative market, emphasizing that small traders are the readily available market at harvest season. The understanding of availability is that “the quality of being present or ready for immediate use” (Ochieng et la., 2020, p. 256). Even at times when ADMARC is open for buying, farmers have to wait for ADMARC to have cash for them to deliver or to be paid at a time convenient for ADMARC, rather than at a time convenient for the smallholder farmers. Similarly, sales through cooperatives have to wait for payment after the cooperative finds the ultimate market, while for processors and exporters, farmers have to take their produce to their places. This leaves out the small traders as the only available markets within reach of the smallholder farmer.

Proximity to the market. The third reason is about physical proximity. Smallholders find small traders to be so close that they can go without any need for transport. Farmers also reported that in some cases small traders come to collect the produce from their doorsteps. Since ADMARC closed remote markets, the presence of small traders fills the trading network gap that would otherwise be available if small traders were not present (Baulch et la., 2024, p.

21). A study by Ochieng et al. in Mozambique observed that traders buy from either the doorsteps of farmers or small buying stations near the farmers and sell to either large buyers, exporters or processors (Ochieng et la., 2020, pp. 19,23,24).

With regards to perception, the Multinomial Regression assessment on whether proximity to the market influences the perception of farmers on traders indicated mixed results. It was found to have a significant positive correlation for soya only and insignificant for groundnuts, suggesting that smallholders of soya are likely to perceive small traders positively when the distance to alternative markets is longer, whilst for groundnut farmers it could not be confirmed. Literature suggests that small traders improve access to the market for remote farmers. Barrett et al. (2021) argue that high transaction costs, a lack of strong and reliable institutions, and infrastructural limitations are responsible for deterring smallholder farmers' access to structured markets. They further suggest that small grain traders play a crucial role in linking remote farmers to markets. "High costs of market participation prevent many rural households from engaging in commercial agriculture, leaving them reliant on localized and informal trade structures." (Barrett et la., 2021, p. 14).

Demand for quality. The study observed that there is little effort by the farmers to sort, grade or dry properly soya and groundnuts before taking to the market. Farmers indicate that one of the reasons they prefer selling to small trades is that they do not have stringent quality requirements. They indicated that, “We don’t need to sort or grade our commodities when taking to small traders” (Mkanda FGD). Farmers described small traders as an easy and convenient market that does not need the soya and groundnuts brought to them graded. This observation aligns with the findings of Ochieng et al. (2020, p. 24), who noted that small traders typically perform minimal sorting and grading before selling to wholesalers. Literature argues that transaction costs are the driving factor for smallholder farmers’ participation in markets

(Baulch et la., 2024, p. 3). The factors raised by farmers as the reason for their continued use of small traders, among others, failure to sort and grade, suggests that they are hindered from accessing alternative markets due to high transaction costs and limited access to assets and services to mitigate the transaction costs (Ochieng et la., 2020, p. 141). The multinomial assessment of whether quality requirements impact the perception of farmers indicated an insignificant correlation for both commodities. For soya, it was found to have an insignificant and negative correlation. This aligns with IFRI (2023), which notes that smallholder farmers perceive quality enforcement as inconsistent and therefore develop a compromised trust in small traders.

Access to trader-provided loans. *The study yielded interesting results regarding the impact of access to trader-provided loans on* the perception of small traders. According to statistical findings, generally, farmers have a negative perception of traders when they provide loans to them. Multinomial regression results indicated a significant negative correlation between providing loans to farmers and the perception of the groundnuts value chain, but an insignificant correlation for the soya value chain. Qualitative findings present that although some farmers find the loans useful, they complain of being compelled to sell to the traders early in the market season at times when prices are low. As a result, they sell at a bottom price.

The study findings are consistent with the literature. In the study of the role of grain traders in Kenya, it was observed that small traders provide loans to smallholder farmers to bridge credit demand gap in places where access to credit is limited by structural and institutional barriers (Omulo & Wambugu, 2021). It is argued that traders facilitate access to markets for smallholder farmers who may not otherwise be able to work with structured markets by, among other things, providing farmers with inputs, market knowledge, and loans (Mango et al., 2021). While these loans address the needs of the farmers, such as inputs and

other liquidity gaps, they seem to create a power imbalance. Farmers who borrow are obliged to sell to the traders who borrow from them. In contrast, farmers may appreciate the ease and timing of the loans; however, the low prices associated with either early selling or a pre-fixed price yield a negative perception for traders (IFPRI, 2023). The loans from traders have the potential to be viewed as exploitative (Makau & Njeru, 2021).

Price negotiation. The investigation into whether the opportunity to negotiate a price influences the perception of small farmers could not be confirmed statistically using multinomial regression analysis. However, the focus group discussions and other qualitative data suggest that opportunities for price negotiations are minimal, leaving farmers unsatisfied. Qualitative data further suggest that the capacity of smallholder farmers to negotiate is compromised by the unclear basis for setting prices by traders, leading to a perception of the entire pricing process as unfair. According to the focus group discussion at Chulu EPA, farmers accuse traders of exploitative practices to an extent that one could consider them as ‘thieves'. Farmers in Mkanda EPA claim that vendors even block other buyers from offering better prices. Ironically, when farmers were asked if they ever had the opportunity to negotiate prices, about 79% of the farmers confirmed having had the opportunity to negotiate, and that 87% of those negotiations were with small traders. Literature confirms a significant gap in smallholder farmers’ capacity to negotiate prices due to various limitations (Mabaya et la 2021).

Price offered. This study confirms that the price the vendor offers to small traders influences their perception of the vendor. The statistical analysis results indicated no significant correlation between the prices offered and farmers’ perception of the traders. However, the qualitative data from FGDs suggest that trust is compromised due to dissatisfaction with prices. The study observed that nearly 60% of smallholder farmer participants were satisfied with the prices, while about 40% were unsatisfied with the prices set by the small traders. The reasons

cited for lack of satisfaction included prices being lower than expected, prices being lower than production cost, or not being significantly different from production costs. The farmers who were satisfied indicated that the reasons were selling in large quantities at once, selling at the right time, small traders collecting from the doorsteps, and getting cash at the time of sale.

There is strong evidence from studies that the price offered by a small grain merchant has a significant influence on farmers' perceptions. However, the perceptions are driven not only by the price but also by other variables that provide the context of the business transaction, including adequacy of communication, market transparency, the level of market options available, fairness, and power dynamics on the market (Chisinga & Matita, 2021). The attitude of farmers towards traders is a result of how well the price-setting systems are applied.

Barrett et la (2021) argue that traders are considered cheating when farmers feel that the prices offered are low, particularly when they rush in during harvest season. According to Barrett and colleagues, attitudes are reinforced by market power imbalances, a lack of access to market information, and a lack of capacity for farmers to negotiate prices. As a result, smallholders' trust in small traders is compromised (Barrett et la., 2021). The observation by Barrett and colleagues is corroborated by Mabaya et al. (2021), who noted that the control over pricing by traders, along with a lack of transparent and competitive pricing processes, shapes the negative opinion of smallholders towards traders (Mabaya et la., 2021). Traders act as "de facto price setters", particularly in remote areas where farmers have limited market options, ending up feeling that they are not getting fair prices due to their dependence on small traders (Mabaya et la., 2021).

The perception of farmers regarding traders' prices is also shaped by the behaviour of traders who manipulate prices through unclear grading and measurement practices, particularly

where price differentials are not explained (Omulo & Wambugu, 2021). As a result, farmers feel traders intentionally take advantage of their weak bargaining power to exploit them (Omulo & Wambugu, 2021).

In collaboration with the qualitative findings, Chinsinga and Matita (2021) argue that price alone does not always determine the nature of farmer-trader relations. In some cases, even when prices are low, farmers may maintain a neutral or even positive perception of traders if other aspects of the relationship, such as prompt cash payments, loyalty, or trust, are strong. This underscores the relational nature of these exchanges, where perceptions are shaped by a broader set of factors beyond just price (Chisinga & Matita, 2021).

This study confirms that farmers' perception of small traders is influenced not only by transactional factors but also by a range of factors related to economic rationality, relational trust, and structural and institutional limitations. This finding is consistent with the theories of Transactional Cost Economies (TCE), Williamson (1985), and Rational Choice Theory (RCT), Scott (2000). While farmers generally display negative attitudes towards small merchants, especially on price issues, the study affirms that small traders play a significant role that formal markets cannot achieve, providing liquidity, proximity, flexibility, and timely access to markets**.** This role is achievable due to the informal nature of the small merchants' market and, as such, cannot be achieved by a formal market set-up. These findings suggest that smallholder market policies and programmes should focus on improving the governance, competitiveness, and transparency of trade between smallholders and small traders, rather than considering displacement in the value chains.

4.3.4.2 **RQ 2: What factors influence the decision of smallholder farmers to sell to small traders?** In this section, the study presents a consolidated analysis of the findings related to Research Question 2, which examines the factors influencing smallholder farmers' decisions to sell to small traders. The analysis draws results from both the quantitative and qualitative data and integrates these findings with the literature study presented in Chapter Two. Based on Hypothesis Two, the section explicitly evaluates six independent variables: distance to market, immediate payment, quality requirements, loan access, opportunity to negotiate price, and price offered.

Market Proximity. The hypothesis suggested that farmers are attracted to use small traders because they are geographically more accessible than alternative markets. Quantitative analysis used the alternative distance as an independent variable for the quantity of soybeans or groundnuts sold to small traders. The hypothesis assumed a positive correlation between distance to alternative markets and the use of small traders. Using Seemingly Unrelated Regression (SUR), the study did not confirm a statistically significant correlation between distance to market and the farmers' perception of small traders' decision to sell to small traders for either soya or groundnuts. However, qualitative findings from focus group discussions and qualitative questions suggest that smallholder farmers highly value the geographical closeness of small traders leading to easy accessibility. The study reveals that farmers appreciate the convenience of accessing markets even at their doorsteps, which eventually reduces transport needs and transaction costs.

The qualitative findings are consistent with the literature. Barrett et al. (2021) argue that high transaction costs, weak institutions, and poor infrastructure often deter smallholder farmers from participating in structured markets, prompting them to turn to localized and informal trading networks (Barrett et la., 2021). Ochieng et la. (2020) observe that small

merchants serve as middlemen who venture into deep rural, hard-to-reach areas where formal markets and processors cannot reach. In the circumstances, although the distance to market is not statistically significant in influencing farmers' decisions to sell to small traders, evidence from qualitative research and the literature confirms the influence of distance in the selling process to the market. This is consistent with Transaction Cost Economies theory (Williamson, 1985).

Immediate Payment. Immediate payment, or payment on delivery, was found to have the strongest association with farmers' decision to sell to small traders for both commodities, with significance levels of 1% for groundnuts and at 5% for soya. Qualitative evidence corroborated this finding, with farmers consistently indicating a preference for spot payments to meet urgent household financial needs, such as school fees and medical expenses. This aligns with the conclusions by Mtisunge (2023), who noted that liquidity needs drive marketing decisions more than price considerations. Similarly, Liverpool-Tessie et al. (2020) observed that immediate payment increases farmers' trust in small traders. Hence, immediate payment appears to be a critical determinant of the decision to engage with small traders.

Access to Loans from Trader. Access to loans from traders was found to have a mixed influence. For groundnuts, a significant negative correlation was detected, while for soya, the relationship was statistically insignificant. Farmers who accessed loans from traders often expressed frustration at being compelled to sell their produce early, often at lower prices. Literature affirms these concerns. Omulo and Wambugu (2021) highlight that while such loans can bridge credit gaps, they also introduce exploitative dynamics that erode trust. Mango et al. (2021) argue that trader-provided loans often come with implicit conditions that restrict farmers' marketing choices. Makau and Njeru (2021) similarly observed that such credit

arrangements can compromise farmers' autonomy, confirming the negative influence on farmer decision-making.

This study confirms that small traders play a crucial role in providing access to finance for smallholder farmers. 29% of the sampled farmers confirmed having once received a loan from small traders for various purposes, including inputs, shelling, transport to the selling point, other market-related issues, and domestic needs unrelated to the market. Approximately 65% of the farmers found the loans either helpful or very helpful. The most helpful loans were for input, while the most unhelpful loans were for transport. It is observed that there are gaps in the financial needs of smallholder farmers that need to be met to increase agricultural production and productivity. The negative correlation results from the SUR test may be a reflection of some dishonest behaviours on the part of the smallholder farmers, resulting in side-selling. It is argued that smallholder farmers are likely to engage in side selling if the utility derived from selling the crop outside the contract is greater than the utility derived from selling to the contractor.

Quality Requirements. Quantitative results showed that neither sorting, grading, nor quality requirements had a significant influence on farmers' decisions. However, the qualitative data painted a different picture. Farmers appreciated the flexibility of small traders in accepting unsorted or ungraded produce, reducing the burden of post-harvest processing. The qualitative finding aligns with Ochieng et al. (2020), who observed that small traders impose minimal quality requirements and often bypass formal grading procedures. The preference for such leniency reflects the limited technical and financial capacity of smallholders to meet formal market standards. IFPRI (2023) also noted that inconsistent enforcement of quality standards undermines farmer confidence in both formal and informal traders. Traders indicated that off-takers cannot purchase groundnuts and soya unless they are sorted and properly dried. If

purchased, they will be at a significantly reduced price. Farmers indicate that they do not sort or properly dry groundnuts and soya when selling to small traders because there are no incentives for such additional investment. This suggests that the grading done by small traders adds value to the groundnuts and soya from smallholder farmers.

Econometric analysis revealed an insignificant negative correlation between sorting and sales to small traders for groundnuts and a positive correlation for soya, suggesting that while small traders play a role in this process, sorting does not significantly impact the decision of smallholder farmers to sell to small traders. This is consistent with what was expected, as small traders reported that they buy regardless of whether the commodity is sorted or not.

Opportunity to Negotiate for Price. Quantitative analysis found the correlation between 'opportunity to negotiate' and the decision to sell to small traders to be marginally significant at 10% for groundnuts only and insignificant for soya. However, focus group discussions suggest that most smallholder producers lack the capacity to negotiate for prices. Farmers indicated that small merchants dictate prices on the market. Further, the farmers reported that some traders also discourage competition by obstructing other buyers. Despite this, approximately 79% of farmers reported having opportunities to negotiate at some point, and most of these negotiations were with small traders. A study by Mabaya and colleagues observed that farmers' capacity limitations, resulting from information asymmetry and power imbalance, lead to a sense of dissatisfaction with prices among farmers (Mabaya et la., 2021). Therefore, although there is no statistically conclusive result, negotiation power plays a role in shaping farmers' perceptions and influences their decision to work with small traders.

Price Offered. The prices offered for both groundnuts and soya were found to be statistically significant in influencing farmer decisions at 5% and 1%, respectively. This finding is consistent with qualitative research that suggests dissatisfaction occurs when prices are low.

The study observed that approximately 40% of the farmers were dissatisfied with the prices, and most of those dissatisfied were those who had sold at low prices early in the season. Farmers complained about low and unpredictable prices, with some indicating that selling prices barely covered production costs.

The observation of this study is supported with the studies by Barrett et al. (2021) and Mabaya et al. (2021) who assert that small traders often have information and logistical capacities that place them at an advantageous position that enable them to manipulate prices. It is noted that lack of clear pricing mechanisms and grading standards and practices contribute significantly to exacerbate the negative price satisfaction. Although Chinsinga and Matita (2021) argue that low prices may not always yield negative perceptions when other benefits, such as trust or payment speed, are substantial, price dissatisfaction remains a crucial concern for smallholder farmers. It influences their decision to sell to small traders or not.

In concluding the findings of factors that influence the decision of small producers to sell to small traders, based on literature, quantitative analysis, and qualitative data, the study indicates that smallholder farmers' decisions to sell to small traders are primarily influenced by immediate payment, market proximity, relaxed quality standards, and the p*rice offered.* On the other hand, *loans from traders* contribute to negative decision influencers. *The negotiation opportunity proved to be a marginally significant influencer of market choice for groundnuts only, but it also demonstrated an influence on farmers' perceptions* of traders. These findings suggest that a diverse set of economic and structural factors shapes smallholder market behaviour.

4.4 Summary of Results

Chapter Four presents detailed findings from the empirical investigation into the factors influencing smallholder farmers' perceptions of small traders, and the factors that influence decisions to sell to them in the soya and groundnut value chains in Malawi. These findings are presented, taking into consideration both quantitative and qualitative approaches. The findings are presented in four key sections: (i) demographic characteristics, (ii) descriptive and inferential statistics, (iii) qualitative data insights, and (iv) synthesis and interpretation, integrating findings with existing literature. The chapter provides a response to the two research questions that guided the study:

1. What factors influence smallholder farmers' perception of small traders in the soya and groundnut value chains?
2. What factors influence the decision of smallholder farmers to sell their produce to small grain traders?

4.4.1 *Demographic Characteristics*

The survey was conducted in three Extension Planning Areas (EPAs) of Mkanda and Chiosya in Mchinji District, and Chulu in Kasungu District. The three EPAs have in total about 64,869 farming households. Among these farming households, 64% reported cultivating groundnuts, while 38% engaged in soya cultivation during the 2020–2021 agricultural season. This confirms the importance of the selected two commodities in Kasungu and Mchinji communities in Malawi.

Demographic analysis of the participants suggested that a majority of the surveyed farming households were male-headed. Out of 19 small traders who participated, only one was a female, indicating that grain trading is a male-dominated industry. The education profile

indicates that most smallholder farmers have low education levels, with only a small percentage (about 25%) able to attain primary education. This is in contrast to traders, with only 37% having attained primary school or lower education. This suggests that traders are likely to understand market dynamics more easily than smallholder farmers. Most smallholder farmer households (86%) are solely dependent on farming for their source of income, with the rest involved in minor economic activities, indicating that farmers are highly vulnerable to commodity production and marketing shocks. These socioeconomic conditions influence marketing preferences and relational dynamics in the markets that involve smallholder farmers and small traders.

4.4.2 *Quantitative Findings – Descriptive Statistics*

The findings from descriptive statistics provided a deeper understanding of the smallholder farmers' behaviour. The findings reveal that as high as 86% of groundnut farmers and 96% of soya farmers sold to small traders. The volume sold through small traders represented 92% of the groundnuts and 80% of the soya marketed by the participating households. This confirms that small traders dominate these value chains involving smallholders as market providers.

Farmers who sold to small traders provided several reasons for their decision to choose this market. About 44% of the farmers indicated that a lack of alternative markets is the main reason they sell to small traders. About 21% suggested that their reason for selling to vendors was that the vendors came to the market early during harvest time, thereby addressing their need for urgent cash. The other two reasons that featured highly are the convenience of access and the option for immediate cash payment. Soya and groundnut farmers found small traders convenient due to reduced distances that cut transport costs to the market, the lack of enforcement of quality standards, and the acceptance of tiny volumes at a time.

When asked about perceptions of small traders, 45% of respondents strongly agreed with the statement that traders are "cheaters," 47% somewhat agreed, and only 8% disagreed. However, 88% acknowledged the important functional roles traders play, including providing accessible markets, offering immediate payment, and accepting all grades of produce. The findings on trust and the functional role of traders reflect that while farmers perceive traders as providing a helpful role in the value chains, they distrust their business conduct.

In terms of quality control, 89% of respondents admitted that they do not undertake any form of grading or sorting before selling to small traders, as small traders mainly accept produce without regard to grading or sorting. With traders, there is no price differentiation for quality

Regarding price satisfaction, 60% of farmers expressed satisfaction with the prices they received, while 40% expressed dissatisfaction. Those dissatisfied cited reasons such as low prices relative to production costs, non-transparent pricing mechanisms, and lack of negotiating power.

4.4.3 *Inferential Statistics: Multinomial Logistic Regression*

The study used a Multinomial Logistic Regression model to test whether the six key independent variables (distance to market, immediate payment, quality requirements, access to loans, opportunity to negotiate for price, and price offered) influenced farmers' perception of and used Seemingly Unrelated Regression model to investigate if the same independent variable influence the decision of farmers to sell to small traders.

Immediate payment at the time of delivery (Pay_Del) is the only variable that showed a statistically significant influence on the perception of farmers. Other variables, including distance to market, quality requirements, opportunity to negotiate, and price offered, were

statistically insignificant, suggesting that the need for cash to address immediate pressing issues at the household level is critical for smallholder farmers.

Regarding the farmers' decision to sell to traders, immediate payment also showed a strong, statistically significant effect for both groundnuts and soya at the 1% and 5% levels, respectively. Also statistically significant for both commodities are the prices offered at 5% and 1%. The significance of price suggests that while farmers complain of low prices, prices offered are generally acceptable and are considered in the process of selecting the market. Loans from traders have a significantly negative influence on only groundnut farmers, suggesting that farmers may avoid selling to traders when they obtain loans from them. Similarly, loans showed a negative correlation for soya, but it was not statistically significant. The opportunity to negotiate was only significant for groundnuts, while distance was significant for soya only. Quality requirements and sorting were found to be statistically insignificant in decision-making for market selection, despite their prominence in qualitative narratives.

The findings from statistical analysis support the argument that farmers' decisions are influenced by a complex environment, including structural and practical matters, in addition to perceptions and preferences. Structural limitations, such as lack of alternative markets and liquidity constraints, appear to drive market behaviour (Barrett et al., 2021).

4.4.4 *Qualitative Findings*

Qualitative insights were deduced from open-ended survey responses, focus group discussions, and key informant interviews. These narrative discussions provided in-depth information, indicating several behavioural patterns, inspirations, and motivational drives that could not be fully captured through quantitative analysis.

The first theme that emerged was the role of timing the market. Farmers reported that small traders arrive early during harvest seasons (often from April to July), when households face acute cash needs for school fees, healthcare, and food purchases. This urgency leads farmers to prioritize liquidity over potentially higher prices from structured buyers who delay payment.

The second theme was market accessibility. Nearly 44% of participants stated that no other market actors (such as ADMARC, cooperatives, or processors) were present or reliable during the marketing season. ADMARC's limited liquidity and delayed operations were widely cited as deterrents. Similarly, cooperatives often failed to secure timely buyers or offered deferred payments that smallholders could not afford to wait for.

Physical proximity also influenced decision-making. Small traders were perceived as the most accessible buyers, often visiting farmers' homesteads directly. Farmers valued this door-to-door service, which eliminated transport costs and saved time. These convenience factors outweighed concerns over price fairness for many farmers, particularly in remote areas.

Quality requirements were another determinant. Farmers described small traders as "easy to deal with" because they accepted mixed-grade or unprocessed produce. This practice reduced transaction costs and labour inputs for farmers. However, it also perpetuated low-value sales since traders did not reward quality.

The issue of loans elicited mixed responses. Some farmers appreciated receiving advance inputs or money from traders, which helped them purchase fertilizers or pay for land preparation. However, many complained that these loans locked them into selling early at low prices, thereby increasing their financial vulnerability. This complaint explains why loans were perceived to influence farmers' decisions to sell to traders negatively.

Regarding price negotiation, many farmers expressed dissatisfaction with the lack of transparency. While 79% reported having opportunities to negotiate, most indicated that negotiations felt symbolic or were constrained by the trader's control over scales, prices, and quality assessments. Traders were often described as "setting prices unilaterally," leaving farmers with little real agency.

4.4.5 *Synthesis and Interpretation*

Consolidated findings reveal the complexity of smallholder farmers' marketing decision-making processes, which are shaped by convenience, necessity, and market asymmetries. The quantitative data indicate statistical significance of five independent variables (four variables for groundnuts and three variables for soya) for decision-making. However, qualitative findings affirm that all six hypothesized factors play a perceptible role in shaping behaviour.

These findings are consistent with existing literature on rural market dynamics in the region. Barrett et al. (2021) argue that high transaction costs, poor infrastructure, and institutional weaknesses are responsible for smallholder farmers' decision to choose informal trade channels due to their convenience and immediate availability and payment as opposed to formal markets. Mabaya et al. (2021) further emphasize that smallholders often lack the capacity or information to challenge exploitative practices, reinforcing dependence on local traders. Regarding loans provided by traders, Omulo and Wambugu (2021) observed that these loans both enable and constrain. While they facilitate access to inputs, they create unequal power relations and often result in early, low-value sales. This experience was reflected in the farmer testimonies from this study, particularly in the focus group discussions.

In conclusion, Chapter Four results confirm that smallholder farmers' decisions to sell to small traders are driven by a confluence of factors, including proximity, timing, liquidity, price, and perceived lack of alternatives. In addition to the five out of the six variables found statistically significant in soya and/or groundnuts, the qualitative evidence confirms that all six variables, including quality requirements, are responsible for shaping the behaviour of farmers on the market. This chapter provides a critical foundation for policy and programmatic interventions. Strengthening farmer-trader relations, promoting price transparency, and improving access to structured markets could enhance both perceptions and decisions. As discussed in Chapter Five, interventions must account for the embeddedness of informal trade and the nuanced trade-offs smallholders face in daily marketing decisions.

5 CHAPTER 5: IMPLICATIONS, RECOMMENDATIONS, AND CONCLUSIONS

This chapter concludes the dissertation by examining the broader implications of the results, presenting both practical and theoretical implications of the findings, and offering suggestions for stakeholders and future research endeavors. It presents the final summary of the research goals and outcomes, placing them in the context of Malawi's evolving agricultural landscape. The chapter begins with an overview of the study's main components, including the problem statement, research purpose, methodological approach, study limitations, and assurances of ethical conduct. Then it presents a summary of the findings. The overview is followed by the consequences, practical recommendations, areas that require further research, and the key points of the dissertation.

The groundnuts and soya value chains in Malawi's legume sector are plagued by long-lasting structural and institutional inefficiencies that restrict the profitable involvement of smallholders. Smallholder farmers continue to work with small grain merchants (SGTs) in informal ways despite several efforts by the government and other stakeholders to encourage farmers to access structured markets. The traders have proven to be a convenient and easily accessible market for farmers in rural areas to sell their goods; however, many people do not trust them and believe they are taking advantage of farmers (Mango et al., 2021; Phiri et al., 2023).

The primary concern of this study is that smallholder farmers are dissatisfied with and distrust SGTs, yet they continue to sell their goods through these informal channels. Concerns regarding underweighting, unclear grading, poor prices at the farm gate, and opportunistic behaviour frequently arise in policy and literature debates (Mtisunge, 2023; Chinsinga &

Matita, 2021). However, studies indicate that traders are the most reliable market for smallholders due to their flexibility, proximity, and quick payment method (IFPRI, 2023). This inconsistency reveals a lack of understanding of the complex interactions between farmers and traders in the informal market system.

The goal of the study was, firstly, to determine the factors that influence smallholder farmers' perceptions of SGTs, and secondly, to assess the factors that drive their decision to continue using them. The study hypothesized that certain trader behaviours, such as extending loans, allowing price negotiation, and paying on time, have a significant impact on how smallholders make decisions and their perceptions of these decisions. We chose groundnuts and soya as the main crops because they are important for Malawi's food security, trade, and the livelihoods of small farmers (FAO, 2024; GoM, 2023).

The goal of this study was to examine the functions of SGTs and their impact on the opinions and marketing choices of smallholder farmers in the groundnut and soya value chains in Malawi. The study aimed to determine whether farmers' persistent reliance on informal merchants is based on logical trade-offs, coercive market systems, or a combination of the two. In the end, the goal of the study was to provide ideas for value chain development that include everyone and do not ignore the day-to-day lives of smallholder farmers.

The main objectives of the study were to (i) find and evaluate the central roles that SGTs play that affect how smallholder farmers market their goods, and (ii) look at the things that make farmers think positively or negatively about these traders. Two research questions guided this study:

1. What factors influence smallholder farmers' perception of small grain traders?
2. What roles do small traders play in influencing the decisions of groundnut and soya small farmers in Kasungu and Mchinji districts to trade with them?

In order to respond to the two research questions, the study tested two hypotheses:

- H1: Farmers' perceptions of small traders are driven by distance to markets, quality requirements, payment terms, loan access, price negotiation capacity, and prices offered.
- H2: Farmers' decisions to sell to small traders are significantly influenced by distance to markets, quality requirements, payment terms, loan access, price negotiation capacity, and prices offered.

These ideas were grounded in the concepts of Transaction Cost Economics (TCE), Value Chain Theory, and Rational Choice Theory. TCE suggests that individuals in the market, including smallholder farmers, opt for choices that minimize their transaction costs, which encompass the expenses of searching, negotiating, and enforcing (Williamson, 1985; Fernandez-Stark & Gereffi, 2019). According to Devaux et la (2020), the argument under Rational Choice Theory is that economic agents make the best decisions possible with the resources and information available to them (Devaux et al., 2020). Using these frameworks, the study saw the choice to sell to SGTs as a deliberate response to the structural and relational problems in Malawi's agricultural market system.

The study employed a mixed-methods research strategy, utilizing both quantitative and qualitative methods to triangulate and enhance the understanding of the interface between traders and farmers. The quantitative part included structured surveys given to 136 smallholder farmers and 19 SGTs in the districts of Kasungu and Mchinji, in three Extension Planning Areas (EPAs): Chulu, Mkanda, and Chiosya. We employed stratified random sampling to ensure that the sample represented people from diverse socioeconomic backgrounds and genders.

The techniques for collecting data included semi-structured questionnaires that had been evaluated in advance and contained both closed-ended and open-ended questions. We

employed inferential statistics, including multinomial regression and seemingly unrelated regression models, to analyse quantitative data and assess the importance of trader-related factors in the decision-making process of smallholders. The study collected qualitative data through three focus group discussions (FGDs), one in each EPA, key informant interviews with local farmers, policy experts, and traders, and open questions in questionnaires. The analysis of qualitative data used a thematic content framework, which enabled us to examine the stories behind farmers' actions more closely.

This triangulation method enabled an integrated analysis, allowing the lived experiences of farmers to be used in context to interpret and make sense of statistical correlations. It also helps to address the complexity of informal markets, where numbers alone may not be sufficient to capture all the aspects that affect them (Bryman, 2020; Creswell & Poth, 2021).

Although the study's design was strong, it had some issues that needed to be addressed. First, the scope of the study was limited to only two districts—Kasungu and Mchinji—which, while important for legume production, may not fully reflect the range of market experiences across Malawi. The application of the results of this study in other districts in Malawi should take into consideration diversity in agricultural, ecological, and institutional contexts for a particular district or place. Second, using self-reported data could have led to biases in memory and desire. Farmers and dealers were instructed to be honest, although some may have either underreported or inflated specific activities to meet what they perceived as expectations or to protect their reputations (Sutton et al., 2019). Third, the study could not account for changes in market behaviour from year to year or season to season, as the data were only collected at a single point in time.

The study adhered to strict ethical guidelines throughout all phases of planning and execution. The University Research Ethics Committee (UREC) granted the project ethical

approval, in accordance with both institutional and international guidelines for research involving human subjects. Everyone who participated in the study was informed of its purpose, that they could leave at any time without consequences, and that they were participating voluntarily.

Before participating, each respondent provided their informed consent by signing consent forms written in their native language, ensuring they could understand the contents. Participants were informed that their answers would be kept confidential and that the data would be made anonymous when analysed and reported. KoBo gather, a secure smartphone application that allows for encrypted data storage and transfer, made it easier to gather data (Deniau et al., 2017). The use of Kobo protected the privacy and accuracy of the information provided by respondents, which built more trust between the researcher and the participants.

The study paid special attention to the ethics of working with vulnerable groups, such as those led by women and young people, to ensure their perspectives were fairly heard and respected. Researchers were taught how to do interviews in a way that was respectful of other cultures and how to avoid asking questions that could lead or suggest. It was also crucial that the research method was morally sound, particularly in areas where people are sceptical of researchers and institutions due to past negative experiences (Chinsinga & Poulton, 2022).

Next, the chapter proceeds to examine the study's results in terms of their academic, policy, and practical implications. It discusses how the research contributes to theoretical frameworks, such as TCE and value chain governance, as well as the implications of its results for agricultural development policy in Malawi and similar contexts. It also discusses how the findings of this study can help make interventions in legume value chains more inclusive, practical, and trust-building.

The chapter then provides suggestions on how to utilize the information, targeting various groups, including policymakers, development partners, farmer organizations, and

traders themselves. These include actions that can be taken immediately, such as making weighing more transparent, facilitating trader registration, enhancing market information systems, and fostering trust between traders and smallholders. This chapter also provides suggestions for future research studies, including the consideration of longitudinal studies that encompass a broader range of locations, longer time series, and more in-depth gender analysis, as well as economic modelling of trader profitability and risk management.

Finally, the chapter concludes with a summary of the most significant findings and the dissertation's main point. This final part reiterates that, although small grain traders may not be flawless, they play a crucial role in a marketing system that is not yet fully developed. Instead of pushing them to the edges or eliminating them, agricultural policies and programs should aim to include them and enhance their performance to create robust, open, and equitable value chains for smallholder farmers in Malawi.

5.1 Research Implications

This section presents findings and their implications for the broader context, drawing on the research questions, conceptual framework, limitations, and contributions to the academic and policy literature. This part is divided into five sections: (1) logical conclusions based on the study's results; (2) how limitations affect results; (3) whether the results fit with the study's purpose and conceptual framework; (4) whether the results were what was expected or not; and (5) how the results add to the body of knowledge at the doctoral level.

5.1.1 *Logical Conclusions Based on Research Questions and Study Findings*

The study had two main research questions: (1) What factors affect how smallholder farmers view small grain merchants (SGTs)? and (2) What are the most essential things that SGTs do that make smallholders want to sell to them?

The results show that smallholder farmers in the Kasungu and Mchinji areas have doubts about SGTs and sometimes perceive them as unfair and opportunistic. However, these same traders continue to be the primary buyers in informal grain markets. The study showed that perception alone does not fully explain how people act when they sell. Timely payment, proximity to the farm-gate, the ability to negotiate rates, and flexible aggregation rules were all key reasons why farmers chose to sell to SGTs. This finding indicates that farmers make informed decisions, even when faced with challenges such as poor infrastructure, limited market access, and few alternative buyers.

Seemingly Unrelated Regression (SUR) analysis revealed strong links between the dependent variable (the decision to sell to SGTs) and independent variables, including farm-gate price, payment method (such as instant cash), and the ease of access to market outlets. For groundnuts, factors such as "price," "paid on delivery," and "platform for negotiation" were found to correlate positively with sales volumes, suggesting that they influence the decision to sell to SGTs. However, "loan access" had a statistically significant negative correlation, indicating that farmers are reluctant to sell to traders when they obtain loans from them. For Soya, "price," "paid on delivery," and "distance to alternative market" were the most critical factors that explained the differences.

Based on these results, the study concludes that smallholder farmers are not only passive victims of market pressures; they are making intelligent trade-offs. These results support the idea that small traders fulfill important tasks as middlemen, such as collecting, moving, and assuming risk, which formal actors in the value chain typically do not perform.

5.1.2 *Influence of Limitations on the Interpretation of Results*

The study's results are robust, but several limitations should be considered, as they may influence the interpretation of the findings. First, the study only examined Kasungu and

Mchinji, focusing on three EPAs: Chiosya, Chulu, and Mkanda. This restriction makes it more challenging to generalize because market behaviour and institutional assistance can vary across different legume-growing locations. For example, EPAs that are more developed and have cooperatives or robust contract farming programmes may not need SGTs as much.

Second, the study utilized data from a single marketing season, which was collected at different times. As a result, changes in pricing behaviour over time, weather occurrences, or policy changes that affect the relationship between buyers and farmers were not recorded. Longitudinal data could have helped us understand better how changes in prices over time and improvements in institutions affect long-term interactions between traders.

Third, both farmers and traders may have been affected by social desirability bias and strategic replying. For instance, some people who answered might have exaggerated their complaints or benefits about trading based on how much help they thought they would receive from donors or the government in the future. Additionally, trader margins were not examined directly because the data were sensitive, which made it more challenging to identify power imbalances from both sides of the deal.

5.1.3 *Alignment with Study Purpose, Conceptual Framework, and Literature*

The study was based on Transaction Cost Economics (TCE), Value Chain Governance, and Rational Choice Theory. According to these theories, individuals working in the market, such as smallholder farmers, attempt to reduce costs and risks while increasing utility in markets that are not ideal (Williamson, 1985; Gereffi & Lee, 2020). The results fit well with this way of thinking. Farmers liked SGTs not so much because they trusted them more, but because SGTs made it easier and cheaper to do business by giving people easy access to the market.

The study's goal was to carefully examine whether the operational roles of SGTs are more important than the risks and mistrust that farmers perceive they face. The results provide evidence for this claim. Farmers appreciate services like on-farm aggregation, quick payment, and quality leniency, all of which help lower transaction costs and make it more certain that they will be able to do business in the market. These results support the idea behind TCE and Rational Choice Theory, which posits that people choose actions that yield the most significant net benefit, given their structural limitations (Devaux et al., 2020; Poulton & Chinsinga, 2022).

The results also support and build on previous research that criticises informal traders as being either predatory or ineffective. A study by Sitko & Jayne (2014) showed that traders were a necessary evil when there was no public market infrastructure. However, this study goes further by showing that traders also help build trust by negotiating prices, maintaining relationships, and being flexible with their services. This rich insight contributes to knowledge in value chain governance, suggesting that small grain traders play an enabling role while on the other hand demonstrating exploitative tendencies in the value chains. The role played usually depends on the context of the market structure, the time of year, and the ability to enforce rules.

The study's results also support research that stresses the importance of developing markets that include everyone. Policies that overlook the role of informal actors may put the systems on which most smallholders depend at risk (Chinsinga & Poulton, 2022). This study provides localized evidence to support that claim and calls for a practical approach to improve the market that includes, rather than excludes, small traders.

5.1.4 *Expected and Conflicting Results in Relation to Literature*

Several of the findings were aligned with prior expectations based on literature and stakeholder consultations. For instance, the importance of “proximity to market” and

“immediate payment” as strong predictors of farmer behaviour confirm earlier assertions made by Chinsinga et al. (2021) and Mango et al. (2021), who emphasized liquidity and logistics as significant determinants of marketing channel choice.

However, the study produced some findings that diverge from conventional wisdom. One of these findings was that farmers who get loans from traders are less likely to sell to them. The findings contradict much of the research on development, which suggests that trader credit is a necessary and beneficial component of informal markets (Barrett et al., 2021). Through qualitative analysis, this study suggests that while farmers may find loans from traders to be useful, these loans contribute to a negative perception among farmers. The farmers who obtain loans often feel debt-burdened and are obliged to sell to traders, which is associated with exploitative practices. The finding suggests that not all trader-facilitated services are welcomed and that the context and quality of service provision matter significantly.

Another surprising result was the positive influence of “a platform for negotiation” in determining farmers’ selling decisions. Due to differences in power, it was believed that most informal transactions were fixed and not open to negotiation. Interviews with farmers revealed that when farmers are allowed to negotiate prices, they are more likely to view the transaction positively, regardless of the price they ultimately agree on. This finding is consistent with the relational dimension of market exchange, which is often underexplored in economic literature that focuses solely on prices and margins.

Although the study did not specifically assess the influence of trader reputation on farmer decisions using regression models, it emerged through FGDs as one of the key influences in smallholder-trader relationships. This finding suggests that soft factors, such as relational history and community standing, may merit more structured measurement in future studies.

5.1.5 *Contribution to Doctoral-Level Knowledge and Theory*

This dissertation makes several valuable contributions to the academic world, demonstrating sufficient originality and analytical depth to warrant doctoral-level research. First, the study presents one of the few empirically grounded analyses of trader-farmer dynamics in Malawi's legume sector using a mixed-methods approach. By combining econometric modelling with participatory tools such as FGDs, the research offers a more holistic picture than single-method studies, thereby advancing methodological rigor in agricultural market studies (Creswell & Poth, 2021).

Second, the study advances the Transaction Cost Economics, Rationale Choice, and Value Chain Governance theories by providing context-specific validation. It illustrates how the theoretical assumption of cost-minimizing behaviour manifests in informal, rural markets where trust, logistics, and liquidity constraints shape economic decisions. It also demonstrates how relational governance—in the form of negotiation, ongoing business engagement, and reputational trust—can emerge even in environments lacking formal contracts.

Third, the dissertation introduces a refined framework for analysing smallholder market behaviour that considers both tangible services, such as aggregation and pricing, and intangible factors, including perception and negotiation. This analytical model can be applied to other commodities or geographies where informal traders dominate.

Fourth, the study offers practical value for policy-makers and development practitioners. It presents grounded evidence for consideration in policy reviews addressing the role of traders in value chains. It suggests that instead of focusing on attempts to replace SGTs, policies should seek to integrate, regulate, and upgrade their practices. The insights are timely for Malawi, considering the current government strategies for smallholder farmer

commercialisation, the implementation of the Affordable Inputs Programme (AIP), and regional trade initiatives under the African Continental Free Trade Area (AfCFTA).

Finally, this dissertation supports the argument for generating local evidence in designing inclusive value chains, particularly in Sub-Saharan Africa. The study has focused on grounded realities, resulting in bridging the gap between research and policy making. Therefore, the study affirms the relevance of doctoral research in addressing real-world development challenges.

5.2 Recommendations for Application

In this section, the study presents specific actions recommended based on the findings. The recommendations are relevant to policymakers, development agencies, farmer-based organizations, and value chain actors. It provides valuable tips on how to strengthen informal market systems in Malawi's legume value chains, especially for soya and groundnuts. These recommendations are informed by the empirical, qualitative, and quantitative findings of this study, complemented by insights from the literature. The recommendations are organized thematically into (i) enhancing trader-farmer trust, (ii) strengthening market infrastructure, (iii) regulating and integrating informal traders, (iv) building smallholder marketing capacity, (v) enhancing price discovery and negotiation platforms, and (vi) supporting inclusive value chain development.

5.2.1 *Enhancing Trader-Farmer Trust and Relationship Quality*

The key finding from this study is that while farmers have a negative perception of traders, the traders remain the primary dependable market for them due to their flexibility, proximity, and cash payment options. Development partners and local government should

facilitate structured engagement platforms such as seasonal trader-farmer forums or community marketing dialogues to be held before and during marketing seasons. These platforms would enable mutual expectation setting, feedback exchange, and negotiation over the terms of trade. These engagement forums can be arranged at the EPA level and coordinated by AEDC and AEDOs. At the district level, there is a need to establish district agricultural marketing committees, creating a forum for dialogue between all registered traders in the district and representatives of farmers drawn from EPAs. These district platforms will shape dialogue between farmers and small traders.

Qualitative data from focus group discussions indicate that farmers value predictability and openness in their dealings. When traders permitted some negotiation or returned for repeat transactions, farmers respond with improved trust. The literature suggests that informal marketing and social embeddedness, rather than strict legal enforcement, are key (Gereffi et al., 2020). The findings reinforce this notion by revealing how trust, even when limited, influences marketing behaviour in contexts of structural market constraints.

5.2.2 Strengthening Market Infrastructure and Reducing Physical Transaction Costs

The empirical findings failed to identify “proximity to market" as a statistically significant factor influencing farmers’ decisions to engage with SGTs. However, qualitative data from the discussions with farmers confirmed that one of the reasons farmers trade with small merchants is that they are readily available. Farmers tend to transact with the closest trader due to the avoidance of transport costs, time savings, and physical convenience.

In support of recommendation on 5.3.1 where the need to strengthen linkage and dialogue between the smallholder farmers and traders are enhanced, and also building on the recommendation that policies should move towards improving the linkage between traders and farmers, it is further recommended that government should invest in rural aggregation points

to be rented out to small traders as collection points and as models for excellent trading. A model for joint management of the warehouses by farmers and traders should be developed. These infrastructure points should be strategically placed in high-production EPAs, such as Chulu, Mkanda, and Chiosya, and should enable both formal buyers and certified informal traders to operate. Government investment, perhaps through the Agriculture Commercialisation (AGCOM) Project, Transforming Rural Agriculture through Diversification and Entrepreneurship (TRADE) Programme, or District Development Funds, could prioritize site-specific infrastructure in legume-growing zones based on production density and remoteness.

The study showed that “distance to alternative markets” influenced farmers' choice to sell to nearby traders. Even where prices were marginally lower, proximity trumped financial gain. The observation is consistent with transaction cost economics, which argues that farmers' market access is limited by physical transaction costs such as transport and time that strongly affect producer behaviour (Williamson, 1985). Moreover, research by Sitko and Jayne (2014) also highlighted that decentralization of procurement systems can improve producer margins and reduce reliance on exploitative intermediaries.

5.2.3 *Formalization and Capacity Development for Small Grain Traders*

Although traders fulfill indispensable roles such as aggregation, grading, financing, and logistics, their informal status presents a regulatory blind spot. The study findings emphasize that farmers do not consider SGTs reliable on certain dimensions, particularly regarding grading consistency or weighing fairness due to a lack of oversight or licensing. The Ministry of Trade and the Ministry of Agriculture should work jointly with district councils to create a light-touch registration and certification scheme for SGTs. The study learnt that small traders are issued with annual licenses that are district and commodity based. The process does not go beyond paying for a trading license for each commodity for a particular year. A light-touch

registration should involve maintaining a register of traders and agreeing on a code of ethics to guide the conduct and guard against malpractices on the market. The code of ethics should include clear penalties for any breach of the code. The light registration would not overregulate informal activity but would enable traceability, minimum compliance, and provide opportunity for coordinated access to training or finance for traders.

Farmers were more trusting of traders they had traded with before or those with perceived community legitimacy. In cases where traders had a visible presence or operated semi-formally, such as through cooperatives, farmer confidence increased. Literature on market upgrading argues that informal actors should not be excluded but rather integrated through hybrid governance structures (FAO, 2023). Certification schemes or voluntary compliance models have proven effective in other contexts to enhance accountability without curbing trader agility.

5.2.4 *Building Smallholder Marketing and Negotiation Capacity*

A critical insight from the study was that “platforms for negotiation” were positively associated with farmers' perceptions of traders and their decisions to trade with them. However, many farmers lack the confidence or information to negotiate effectively, especially in contexts of asymmetrical power. The study recommends that extension services should mainstream marketing literacy and negotiation skills into their programming. The process includes training on interpreting price trends, calculating opportunity costs, and evaluating alternative buyers. Farmers who understood how to assess market price variability or had experience with price setting were more likely to report satisfaction with their sales decisions, even when selling to SGTs. The concept is supported by literature on farmer empowerment through market-oriented training models, such as the Smallholder Horticulture Empowerment and Promotion (SHEP)

approach (Takeshima et al., 2021). These models encourage producers to not only focus on production but also to analyse market dynamics.

Government and donor-led extension through the Department of Agricultural Extension Services or NGOs should include intensifying teaching modules on marketing decision-making, including simulated price negotiation exercises and peer learning.

5.2.5 *Improving Access to Price Information*

Limited access to real-time, trusted price information emerged as a recurring theme in both the qualitative and quantitative data. Farmers often relied on verbal claims by traders or delayed market information, which reduced their bargaining power and ability to compare alternatives. The study observed that farmers were not aware of how the prices were determined due to a lack of price information. Respondents indicated that, in the absence of credible information, they opted to sell to traders they "knew" rather than risk the cost of waiting or traveling to verify prices elsewhere.

The study recommends strengthening of mobile-based market information systems (MIS) that provide updated daily prices for soya and groundnuts at the EPA level. These systems should be accessible via USSD codes or integrated into existing platforms, such as the Malawi Agricultural Market Information System (AMIS). AMIS platforms can be jointly managed by the Ministry of Agriculture and organisations of interest in commodity marketing for smallholder farmers, such as the Farmers Union of Malawi (FUM), the National Smallholder Farmers' Association of Malawi (NASFAM), and Farm Radio, with data input from market observers at rural trading centres.

Price opacity is a well-documented constraint in informal agricultural markets. According to Mango et al. (2021), access to MIS significantly improves producer bargaining outcomes and market participation.

5.2.6 *Supporting Inclusive Value Chain Development*

A recurring insight from the study is that the informal and formal markets are not mutually exclusive. In fact, many traders operate at the interface, selling into formal aggregators, processors, or exporters after sourcing from scattered smallholders. Value chain development initiatives should explicitly integrate informal actors into contract farming, aggregation centers, or structured marketing systems. SGTs should be viewed as vital “last-mile aggregators” and capacitated accordingly. Several traders interviewed indicated that they regularly supply to larger buyers and processors, acting as intermediaries who bear the costs of aggregation. However, their exclusion from formal partnerships limits traceability and reduces incentives for ethical behaviour.

Ton et al. (2018) and Barrett et al. (2021) emphasize that inclusive upgrading requires recognizing intermediary roles and offering pathways to improve their practices rather than replacing them altogether. Formal inclusion through tiered sourcing contracts, for example, can enhance transparency and shared accountability. Existing value chain programmes, such as AGCOM and IFAD’s TRADE, or donor-supported commercialisation clusters, could allocate funding to pilot tiered trading models, where registered SGTs deliver volume and quality under verified sourcing contracts.

5.3 Recommendations for Research Application

The study focuses on two key legume-producing districts: Kasungu and Mchinji. These districts are crucial components of Malawi's legume economy. However, the manner in which farmers and traders interact with each other varies from region to region, underscoring the need

for further research. Future studies should utilize and modify this framework in various agro-ecological zones and districts, such as Dedza, Ntchisi, Mzimba, and other areas in southern Malawi. This type of research would enable policymakers to make informed decisions tailored to each region, illustrating how environmental, cultural, and infrastructural differences influence interactions between SGT and farmers (Barrett et al., 2021; IFPRI, 2023).

Similar studies should consider expanding the kind of commodities to include, for instance, maize, pigeon peas, and other legumes. The post-harvest and market dynamics for each commodity can vary. A comparison of what farmers want and what traders do with different crops can help us understand why transaction costs vary and how to group commodities in a way that works best for each one (Chamberlin & Jayne, 2020).

5.3.1 *Deepening the Analysis of Informal Market Governance*

In line with the recommendations to introduce light-touch regulations for smallholder farmers participating in the two value chains, understanding the governance systems under which SGTs and smallholder farmers operate in the market is essential. The current analysis acknowledges that value chains that include SGTs typically operate under governance systems based on either relational or market-based approaches. However, these governance models are still not well thought out, especially when it comes to the informal rules, unwritten contracts, and reputation systems that traders use to regulate their behaviour. Future studies are recommended to investigate how trust, social embeddedness, and informal enforcement mechanisms evolve in informal grain markets. Understanding these governance structures can provide a different perspective that informs policy suggestions for integrating informal merchants into value chains (Gereffi & Fernandez-Stark, 2019; Omulo & Wambugu, 2021). The study may also examine the potential of hybrid governance models that combine light-touch regulatory control with local norms. Such a study may examine the effectiveness of voluntary codes of behaviour, local conflict resolution committees, or trader certification

programmes run by producer groups, NGOs, or local governments (Fernandez-Stark & Gereffi, 2019).

5.3.2 *Trader Typologies and Business Models*

The study has assumed that SGTs are a homogeneous group. However, field observations and previous research indicate a wide range of individuals, from rural purchasers who occasionally buy items on bicycles to urban-based aggregators with connections to regional markets (Mango et al., 2021). Future studies should categorize groups of SGTs based on their size, financial requirements, additional services offered, and the number of buyers they serve. A deeper understanding of trader segmentation can assist in creating specialised programmes to grow capacity, incentives that are right for each group, and different rules for each group.

Furthermore, it is crucial to understand the various business concepts that successful SGTs employ and identify those that are successful. Researchers could investigate how informal merchants manage credit risk, pricing, logistics, and social capital to remain competitive in rapidly changing marketplaces. A business model study could also identify the factors that enable certain SGTs to establish long-term partnerships with farmers, while others employ unfair methods. This type of study can help shape the design of incubator programmes or rural business assistance programmes that aim to improve the professionalism of traders (Donovan et al., 2019; FAO, 2022).

5.3.3 *Gendered Dimensions of Trader-Farmer Interactions*

The other aspect that would be of interest to examine is the trader-farmer interactions from the perspective of gender. As stated in the research and focus group discussions, gender dynamics have a significant impact on how easily one can access marketplaces, the level of bargaining power available, and the decision-making process regarding crop sales. Women play a significant role in growing legumes, but they often lack the freedom to choose when and

to whom to sell (NSO, 2019). Future research should investigate how gender norms influence the relationships between traders and farmers. For example, do female-headed families make traders more likely to take advantage of them? Do women dealers treat male and female farmers differently? How might gender-sensitive actions be included in initiatives that help the informal market?

Long-term research that examines gender-separated data could investigate whether increased participation by women in trade (as buyers or sellers) makes the value chain more trustworthy and transparent. It is argued that participatory action research with women's groups, cooperatives, and trader associations would facilitate the resolution of gender-related problems in the value chains and provide solutions on how to ensure that women influence the informal marketplaces (Trebbin & Franz, 2020).

5.3.4 *Impact of ICT and Market Transparency Tools*

The dissertation discusses the dissatisfaction of farmers with the way prices and grades are determined, while also highlighting the lack of easy-to-use price information systems and standardized weighing tools. Future studies should investigate the potential and utility of using ICT-based solutions, such as SMS-based price alerts, digital receipts, and mobile weighing apps. Sebaggala & Matovu (2019) observed that digital methods have significantly contributed to the access of smallholder farmers in the Sub-Saharan Africa region to market information.

We could use experimental or quasi-experimental approaches to investigate how digital tools affect the frequency and quality of interactions between SGT and farmers. Donors and tech businesses that want to support inclusive agritech developments should pay close attention to this area of research. Additionally, these types of studies can determine whether digital literacy or inadequate network access renders these technologies less effective in rural Malawi (Nkhonjera & Mwandira, 2020).

5.3.5 *Exploring SGT Integration into Formal Value Chains*

Although informal marketplaces remain the most significant, contract farming, warehouse receipt systems (WRS), and structured commodities exchanges (GoM, 2021) are among the policies and development programmes that aim to incorporate smallholder farmers into formal value chains. In the future, researchers should investigate whether and how SGTs can be integrated into formal market systems such as warehouse receipt systems. Studies aimed at exploring different options for integrating SGTs in specific smallholder market models, such as WRS and contract farming, would be crucial to guide the role of SGTs in formal markets. For instance, SGTs act as certified logistics agents or aggregators under WRS schemes? Could they work as agents for processors or exporters under contract farming models?

These studies would further examine whether these new roles result in higher incomes, lower transaction costs, or would improve the farmers' perception of the traders. (Chinsinga & Poulton, 2022; Chikhawo et al., 2024).

5.3.6 *Funding Opportunities and Key Stakeholders for Future Research*

A wide range of universities are well-positioned to support the suggested research fields. The International Food Policy Research Institute (IFPRI), FAO, AGRA, and UNCTAD have all helped with research on informal markets, transaction costs, and legume value chains in Africa in the past. The Malawi Agricultural Policy Advancement and Transformation Agenda (MwAPATA) Institute and the Lilongwe University of Agriculture and Natural Resources (LUANAR) could be research partners in the country.

Bilateral donors, including GIZ and Flanders, have invested in making agriculture more commercial and improving the value chains of soya and groundnuts in Malawi. These financers may have an interest in investing in research that helps create scalable, evidence-based initiatives to improve the informal market. Similarly, development institutions such as the African Development Bank (AfDB), the World Bank, and IFAD, through the TRADE

Programme, may utilize study results to inform their broader plans for agricultural transformation.

Users and beneficiaries of the research would include:

- Ministry of Agriculture (Planning and Extension Services departments),
- NGOs and development projects implementing agricultural market programmes,
- Farmer-Based Organizations (FBOs), cooperatives, and apex bodies such as NASFAM and FUM
- Private sector players such as processors and exporters
- Financial institutions designing microloans for rural traders
- Universities and think tanks advancing the body of knowledge in rural development and agribusiness

5.3.7 *Methodological Innovations and Data Gaps*

This dissertation employed a variety of approaches, with a primary focus on cross-sectional data. To learn more about how trader-farmer relationships change over time, future studies should use longitudinal methods. For example, panel data could examine how variations in price volatility, weather patterns, or donor actions impact market dynamics.

Behavioural research, such as trust games, lab-in-the-field experiments, and conjoint analysis, can also provide us with more information about the mental and emotional aspects of trader selection. These tools may help identify the heuristics or biases that farmers use to make decisions that extend beyond maximizing their utility (Devaux et al., 2020).

Ultimately, we require more detailed information about the actual margins, volumes, and profits of SGTs. This would make the conversation about perceived exploitation more balanced. National agricultural surveys and regular monitoring systems should consider

incorporating modules on informal commerce to provide statistics that are useful for policy-making.

5.4 Conclusion

The study aimed to examine the factors that influence smallholder farmers' views on small traders and to determine what SGTs do that makes farmers more or less likely to work with them. The study adds to the growing corpus of research in agricultural marketing, rural development, and value chain governance. It has both practical and theoretical implications for policy, development programmes, and academic discourse.

There is a fundamental paradox at the heart of this study, evident in markets across Sub-Saharan Africa: smallholder farmers often rely on informal traders despite their negative perceptions of how these traders conduct their business. The study employed a mixed-methods approach, combining quantitative regressions with qualitative insights from focus group discussions and stakeholder interviews. The use of mixed research provided a complete picture of the paradox. The results showed that even if there is some suspicion, small traders remain important for smallholder commercialisation because they are easily accessible, pay promptly, and are prepared to accept ungraded produce.

Econometric research has shown that the main factors affecting smallholders' decisions to sell to SGTs vary by crop. The most important factors for groundnuts were the price offered, the opportunity to negotiate, receiving payment upon delivery, and being able to obtain loans. The price, the need for fast payment, and the distance to other markets all played a significant role in the decision over Soya. These results support the assumption that farmers are primarily motivated by transaction costs, liquidity constraints, and proximity to the market. This aligns

with Transaction Cost Economics and Rational Choice theories (Fernandez-Stark & Gereffi, 2019; Devaux et al., 2020).

The study also demonstrates that relational and market-based governance models are effective in understanding how trust, reputation, and proximity influence market participation in rural Malawi (Chinsinga & Matita, 2021). These new ideas add to the body of research on value chains, which has often ignored the social and institutional aspects of informal commerce.

The research questions the common negative views of informal merchants in terms of policy importance. It proposes a change in the way agricultural commercialisation operates, so that it better recognises and supports the work of SGTs, especially in areas where cooperatives, organised marketplaces, and formal aggregators are not available or practical. The study suggests that instead of trying to replace SGTs with perfect but unworkable formal models, we should work to make things more open, provide traders with additional skills, and educate farmers more effectively.

The report also emphasizes the connection between agricultural markets in Malawi and society. Long-term relationships and social and economic realities influence farmers' choices about whom to trade with. Sometimes these things are more important than economic logic. For instance, farmers may choose SGTs even when they offer lower pricing because they are familiar with them, have helped them in the past, or are willing to provide them with credit when needed. These kinds of relationships should be taken into account when creating development projects that aim to transform the way agricultural markets operate.

There are several practical applications for the research. It suggests that training, certification, and local rules could help traders act better, which could make informal markets more trustworthy and efficient. It also demonstrates the importance of market information

systems, standardisation, and mobile payment tools in reducing information asymmetry and transactional exploitation. The study also identifies opportunities for gender-sensitive actions, notably those that empower women to make more informed decisions about selling legumes.

The study makes essential contributions, but it also knows that it has some problems. The study examined only two districts and two types of legumes. Additionally, the data were not cross-seasonal, so the study could not show how farmers' perceptions or marketing methods changed over time. Longitudinal analysis, a wider range of geographic areas and crops, and a deeper examination of business models and types of SGTs should all be included in future research.

In conclusion, this study contributes in understanding the function of small grain dealers in Malawi's legume economy, which is often misunderstood. It shows that SGTs are not only peripheral or exploitative players; they are at the heart of smallholder farmers' commercialisation plans, especially those who face challenges with finances, infrastructure, and information. By examining both perception and behaviour, the study brings new insights to the literature. It also gives a fair account that acknowledges both the pros and cons of informal agricultural trade systems.

In the end, the results suggest a practical approach to developing the value chain: one that includes informal actors in larger commercialisation frameworks without neglecting their realities or downplaying their contributions. The study contributes to models of rural development in Malawi and other regions that are more inclusive, effective, and grounded in local contexts.

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APPENDICES

APPENDIX 1A: Questionnaire for Smallholder Farmers

Part 1: Personal Data

1.1	Age of trader (years)				
1.2	Address of the farmer	Village	Traditional Authority	District	EPA
1.3	Gender	Male	Female		
1.4	Marital status (Tick the applicable)	Single	Married	Widowed	Divorced
1.5	Number of dependants				
1.6	Education level (tick applicable)	None	Primary	Secondary	Tertiary	University
1.7	Other Occupations (tick applicable)	Employed	Agribusiness	Other Businesses	Others

Part 2: Key roles played by the trader in the value chains of groundnuts and soya

2.1	What do you see as the role of vendors in marketing of your groundnuts?	
2.2	What do you see as the role of vendors in marketing of your soya?	

Part 3: What are the views of the public on small traders

3.1	To what extent do you agree to this statement: "You consider vendors as cheaters" (tick applicable)	very	somehow	not agreeing

3.2	If you agree to the statements in 3.1 what would you do to change this perception	

Part 4: Why do smallholder farmers continue selling through vendors?

4.1	What market options do you have for your groundnuts or soya? (tick applicable)	Vendors	Admarc	Cooperatives	Outlets of large firms	Others
4.2	Where did you sell your groundnuts in the past last season? (tick applicable)	Vendors	Admarc	Cooperatives	Outlets of large firms	Others
4.3	Where did you sell your soya in the past last season? (tick applicable)	Vendors	Admarc	Cooperatives	Outlets of large firms	Others
4.4	What was the total quantity of groundnuts and soya sold in 2020? (Kgs)	Groundnuts	Soya			
4.5	How much groundnuts and soya was sold to vendors (Kgs)	Groundnuts	Soya			
4.6	Explain why most was sold to vendors or not sold to vendors					

Part 5: To what extent does the participation of vendors in grain marketing reduce distances for markets for soya and groundnuts?

5.1	If vendors were not available to buy your groundnuts, what will be your alternative market? (Tick applicable)	Vendors	Admarc	Cooperatives	Outlets of large firms	Others
5.2	What is the distance to your next alternative market for groundnuts?					
5.3	If vendors were not available to buy your soya, what will be your alternative market? (Tick applicable)	Vendors	Admarc	Cooperatives	Outlets of large firms	Others
5.4	What is the distance to your next alternative market for soya?					
5.5	How is groundnuts and soya transported to the vendors?					
5.6	How much does it cost to transport to vendors? (MK)					

5.7	How is soya and groundnuts transported to alternative markets?	
5.8	How much does it cost to transport to alternative markets?	

Part 6: What is the importance of the vendors role in aggregating groundnuts and soya?

6.1	What is the minimum and maximum quantity groundnuts you sold to vendors last season? (Kgs)	Minimum	Maximum
6.2	What is the minimum and maximum quantity soya you sold to vendors last season? (Kgs)	Minimum	Maximum
6.3	In your opinion can these quantities be sold to a big market other than the vendor? Explain.		

Part 7: What role does small traders play in bagging and re-bagging of smallholder produce?

7.1	What type of package do you use when carrying groundnuts and soya to vendors?		
7.2	Is the package returned or left with the vendor? (Tick applicable)	Yes	No
7.3	Do you think the vendor uses the same package for on-ward selling? (tick applicable)	Yes	No
7.4	If your answer for 9.3 is "NO" why?		

Part 8: What role is played by small traders in grading the produce?

8.1	When you take groundnurs or soya to a vendor, do you sort it? (tick applicable)	Yes	No
8.2	How do you ensure that the grain has the right moisture content before taking to a vendor?		

8.3	In your opinion do you think soya and groundnuts taken to the vendor can be sold to alternative markets in the same state sold to vendors? (tick applicable)	Yes	No
8.4	Explain your answer for 10.3		

Part 9: To what extent do small traders contribute to improve access to finances for smallholder farmers?

9.1	Have you ever been paid in cash or in-kind by vendors before delivering soya or groundnuts to the selling point? (tick applicable)	Yes	No			
9.2	If yes in 11.1 above was it cash or in kind? (tick applicable)	Cash	In-kind			
9.3	If yes in 11.1 above, what is the longest period between receiving money and you delivery the grain? (days)					
9.4	What is the minimum and maximum value of the loan received	Minimum	Maximum			
9.5	What was the purpose for receiving money in advance? (tick applicable)	Inputs	Transport to the selling point	Shelling	Others relating to marketing of the grain	Other needs not related to marketing the grain
9.6	Who initiated the arrangement? (tick applicable)	Farmer	Vendor	Others		
9.7	Was it helpful to you? (Tick applicable)	Very helpful	Helpful	Not sure	Not helpful	
9.8	Explain your answer in 11.7 above					

Part 10: How are prices at your buying point determined?

10.1	Who decides the the selling price when selling to a vendor? (Tick applicable)	You	Vendor

10.2	Who decides the price when selling to other alternative markets? (Tick applicable)	You	Buyer		
10.3	Have ever negotiated selling price with any buyer? (Tick applicable)	Yes	No		
10.4	If yes in 12.3 above, what was the type of the buyer (Tick applicable)	Vendor	Cooperative	Admarc	Large processor or Exporter
10.5	What was the minimum and maximum selling price for your groundnuts last season? (MK../Kg)	Minimum	Maximum		
10.6	What was the minimum and maximum selling price for your soya last season? (MK../Kg)	Minimum	Maximum		
10.7	How did you feel about the prices?				

APPENDIX 1B: Questionnaire for Small Traders

Part 1: Personal Data

1.1	Age of trader (years)					
1.2	Nationality (Tick applicable)	Malawian	Others			
1.3	Gender	Male	Female			
1.4	Marital status (Tick applicable)	Single	Married	Widowed	Divorced	
1.5	Number of dependants					
1.6	Education level (Tick applicable)	None	Primary	Secondary	Tertiary	University
1.7	Place of residence (tick applicable)	Within EPA	Within District	Outside District	Outside Malawi	
1.8	Other Occupations (tick applicable)	Input trading	Farming	Other Businesses	Employed	Others

Part 2: Business Information

2.1	Age of business (Years)	1 to 3
2.2	Number of employees	
2.3	Number of districts of operation in Malawi	
2.4	Total number of buying points	
2.5	Number of buying points in Chulu EPA in Kasungu	

2.6	Number of buying points in Chiosya EPA in Mchinji	
2.7	Number of buying points in Mkanda EPA in Mchinji	

Part 3: Key roles played by the trader in the value chains of groundnuts and soya

3.1	What do you see as your role in the groundnuts value chain?	
3.2	What do you see as your role in the soya value chain?	
3.3	In your opinion, what is it that SHFs would not do on their own for their commodities to reach your market?	

Part 4: What are the views of the public on small traders

4.1	From your experience what are the attitudes of smallholder farmers on you as a vendor?				
4.2	From your experience what are the attitudes of grain processors and exporters on you as a vendor?				
4.3	From your experience, what is the perception of policy makers on you as a vendor?				
4.4	Is there need to develop positive perception towards vendors? (Tick as applicable)If so, how?	Yes	No		
4.5	If your answer is yes in 4.4 above, how should it be done?				
4.5	To what extent do you agree to this statement: "Farmers consider you as a cheater"	Very	somehow	not agreeing	
4.6	To what extent do you agree to this statement: "The general public consider you a cheater"	Very	somehow	not agreeing	
4.7	If you agree to the statements in 4.6 and 4.8 what would you do to change this perception				

Part 5: Why do smallholder farmers continue selling through vendors?

5.1	Do you think smallholder farmers prefer to sell their crops through vendors? (tick as applicable)	Yes	No		
5.2	Explain your response in 5.5 above				
5.3	What other options are available for smallholder farmers markets?	Admarc	Cooperatives	Outlets of large firms	Others
5.4	In your opinion what is the preference of farmers as a point of sale	Admarc	Cooperatives	Outlets of large firms	Others
5.5	Explain your selection in 5.5 above				

Part 6: To what extent does the participation of vendors in grain marketing reduce distances to markets for soya and groundnuts?

6.1	What is the distance to nearest selling point for soya (Km)	
6.2	What is the distance to nearest selling point for groundnuts (Km)	

Part 7: What is the importance of the vendors role in aggregating groundnuts and soya?

7.1	What is the minimum volume of commodity purchased from a smallholder farmer at a time? (Kgs)		
7.2	What is the maximum volume of commodity purchased from a smallholder farmer at a time? (Kgs)		
7.3	What is the minimum economic quantity that can be taken to the next level of market? (Kgs)		
7.4	How many days does it take to aggregate minimum volumes to market?	Minimum (days)	Maximum (days)
7.5	What was the total quantity of soya that you sold last year? (tons)		
7.6	What was the total quantity of groundnuts that you sold last year? (tons)		

7.7	In your opinion what should farmers do to get to the next level of the market option?	

Part 8: To what extent are vendors involved in moving graoundnuts and soya to the processor or exporter?

8.1	How do you transport commodities from the buying point to the next market (processor or export)?				
8.2	Do you use hired vehicle or you use own vehicle?	Hired	Own		
8.3	What is the average cost per ton of transporting to the next level of the market?				
8.4	In your opinion what should farmers do in order to be able to transport their commodities to the next level of the market				
8.5	What is the distance to the nearest alternative market for smallholders (Kms)?	For g/nuts	For soya		
8.6	Mention your three main buyers for soya in order of importance to you	1	2	3	
8.7	What is the nature of their business	Local grain wholesaling	Processing	Exporting	Others

Part 9: What role do the small traders play in bagging and re-bagging of smallholder produce?

9.1	What proportion of the commodity received at the buying point come in proper bags with proper weight and does not require rebagging?	
9.2	Why is bagging or rebagging done before taking the commodities to the next market?	
9.3	What is the percentage of the markets that require bagging	

Part 10: What role is played by small traders in grading groundnuts/ soya?

10.1	Does the groundnuts and soya brought by farmers require grading? (tick as applicable)	Yes	No
10.2	Roughly what percentage of groundnuts and soya require	Soya	Groundnuts

	grading (insert perentage as applicable)				
10.3	percentage of foreign bodies or poor grade gain that is removed from the lot during garding? (%age)	Soya	Groundnuts		
10.4	What may happen at the market if the grading is not done?				

Part 11: To what extent do small traders contribute to improve access to finances for smallholder farmers?

11.1	Have you ever been involved in giving money in advance to farmers before commodities are deivered? (Tick as applicable)	Yes	No		
11.2	If yes in 11.1 above, what is the longest period between the giving of money and the delivery of the commodity to your buyin point (days)				
11.3	What was the purpose for providing money in advance?	Inputs	Transport to the selling point	Shelling	Others relating to marketing of the grain	Other needs not related to marketing the grain
11.4	In your opinion, why do farmers need this type of support?				

Part 12: How are prices at your buying point determined?

12.1	How do you decide the price, or what influences the price you decide to offer at your buying point?			
12.2	Are goverment set minimum prices followed at all times?	Yes	No	
12.3	Explain the reason for your answer in 12.2 above			
12.4	What has been the minimum and maximum buying price for groundnuts (MK../Kg)	Minimum	Maximum	

12.5	What has been the minimum and maximum selling price for groundnuts? (MK../Kg)	Minimum	Maximum
12.6	What has been the minimum and maximum buying price for soya? (MK../Kg)	Minimum	Maximum
12.7	What has been the minimum and maximum selling price for soya? (MK../Kg)	Minimum	Maximum
12.8	What is the involvement of farmers in price determination?		

APPENDIX 1C: Focus Group Discussions Guide with Smallholder Farmers, Smallholder Traders, and EPA Staff

1	Name of group:	
2	What are the main market options for smallholder farmers?	
3	Why do small traders seem to be the lead market used by smallholder farmers?	
4	What roles are played by small traders in marketing of soya and groundnuts?	
5	How are small traders viewed by smallholder farmers and why?	
6	What are good things that the small traders should continue doing with regard to groundnuts and soya trade?	
7	What should small traders stop doing when trading with smallholder farmers and why?	
8	What should small traders start doing when trading with smallholder farmers?	
9	Do smallholder farmers grade their groundnuts and soya when taking to a trader?	
10	What can smallholder farmers do in order to take their groundnuts and soya to processors and exporters?	

APPENDIX 1D: **Interview Guide for Processors and Exporters**

1 **Age:**

2 **Gender:**

3 **Experience in the Sector (Number of years in business):**

4 **What is your involvement in groundnuts/ soya?** :

5 **What are your main supplier of soya/groundnuts?**
Aggregators:
Agents

At times there is competition - What strategy do you do to get more?

6 **What are the terms for buying from farmers and vendors including payment terms, quality, quantity?**
Number of days between invoice and payment:
Check or cash payment?:
Any minimum quantity?:

7 **When you are buying from traders how do you ensure that the groundnuts/soya meets standards in quality, misture content, and bagging?**:

8

What is your general view on vendors in regard to trust and relevance? Explain your answer:
Would you prefer to buy from farmers and not vendors/ aggregators:

9 **How do you determine prices offered to traders for groundnuts/ soya?:**
If commodities are brought by farmers, would you offer a different price

10 **How are you affected by a conduct of a SGT?:**

11 **How are you affected by government policies on trading of soya and groundnuts?:**

12 **Total quantity bought:**

APPENDIX 1E: **Interview Guide for Policy Makers and Stakeholders**

1 Age:

2 Gender:

3 Experience in the Sector (Number of years):

4 **Would share information about your organisation and the role in groundnuts/soya value chains?**

5 **What are the key roles that are played by small traders in soya and groundnuts value chains?**
If vendors were not available, how would the grain reach the exporters and processors?

6 **What roles played by small traders that can be played with other traders or smallholder farmers ?**

7 **How can smallholder farmers aggregate soya and groundnuts without vendors being involved?**

8 **What is your general view on smallholder farmers in regard to trust and relevance?**

9 **What is your own view? Explain.**

10 **In your opinion, why do small holder farmers continue selling most of their groundnuts and soya through ver (smallholder buyers)?**

11 **What practices of vendors would you like changed? How?**

12 **What practices and roles would you like vendors to continue?**

13 **How are prices offered to smallholder farmers by vendors determined?**

14 **For Ministry of Trade : How is export ban determined and how does it affect prices?**

APPENDIX 2: Questionnaire-to-Research Objective Mapping

APPENDIX 2A. Smallholder Farmer Questionnaire

Question	**Mapped Research Objective**
Volumes (Kgs) of groundnuts harvested in the past three years	Demographic / Contextual Information
Kgs	Demographic / Contextual Information
Total volume sold the past market season – Soya (Kgs)	Demographic / Contextual Information
Total volume sold the past market season - groundnuts (Kgs)	Demographic / Contextual Information
Volumes sold to SHT the past market season– soya (Kgs)	Demographic / Contextual Information
Volumes sold to SHT the past market season – groundnuts (Kgs)	Demographic / Contextual Information
Did you sell to any other markets apart from vendors in the past season?	Perception of small traders (general attitudes)
If, yes in 14 above, list the other markets used	Demographic / Contextual Information
What volume was sold to other markets the past market season - Soya (Kgs)?	Demographic / Contextual Information
What volume was sold to other markets the past market season – groundnuts (Kgs)	Demographic / Contextual Information

What was the minimum selling price the past marketing season for soya (per Kg)?	Factor influencing decision to sell (price perception)
Maximum selling price the past marketing season for soya (per Kg)	Factor influencing decision to sell (price perception)
Minimum selling price the past marketing season for groundnuts (per Kg)	Factor influencing decision to sell (price perception)
Maximum selling price the past marketing season for groundnuts (per Kg)	Factor influencing decision to sell (price perception)
How do you compare smallholder traders to the other buyers/ market?	Perception of small traders (general attitudes)
Who decided the price when you were selling to SHT?	Factor influencing decision to sell (price perception)
If the answer for (23) was the buyer, why did you agree to the price?	Factor influencing decision to sell (price perception)
Who decided the price when you were selling to others markets?	Factor influencing decision to sell (price perception)
If the answer for 25 was the buyer, why did you agree to the price?	Factor influencing decision to sell (price perception)
Explain your answer in (26) above	Demographic / Contextual Information
Where do you find easy to sell to between small trader and the other markets	Perception of small traders (general attitudes)
Explain your answer above	Demographic / Contextual Information

Would you find it difficult to sell your soya and groundnuts if the vendors were not accessible?	Perception of small traders (general attitudes)
Explain your answer above	Demographic / Contextual Information
What is the minimum volume sold at a time in the past season (Kgs)	Demographic / Contextual Information
What is the maximum volume sold at a time (Kgs)	Demographic / Contextual Information
What is the distance to nearest selling point for soya (Kms)	Factor influencing decision to sell (distance to market)
Distance to nearest selling point for groundnuts (Kms)	Factor influencing decision to sell (distance to market)
What would you want vendors to stop doing?	Perception of small traders (general attitudes)
What would you want vendors to start doing?	Perception of small traders (general attitudes)
What would you want vendors to continue doing?	Perception of small traders (general attitudes)

APPENDIX 2B. Trader Questionnaire

Question	**Mapped Research Objective**
Name of Trader:	Trader background and operations
Traders Business Name:	Trader background and operations
Name of Traders' Employee/Agent:	Trader background and operations
Number of districts with Trading points:	Trader background and operations
Number of trade points in the district of study:	Trader background and operations
How many seasons has the trader operated in the district?	Trader background and operations
Number of commodities traded in the district	Trader background and operations
Tonnage of soya traded in the past 3 years	Trader background and operations
Tonnage of groundnuts traded in the past 3 years	Trader background and operations
Minimum buying price for soya for the past 3 years	Role of traders in value chain (buying/sourcing)
Maximum buying price for Soya for the past 3 years	Role of traders in value chain (buying/sourcing)
Minimum buying price for groundnuts for the past 3 years	Role of traders in value chain (buying/sourcing)
Maximum buying price for groundnuts for the past 3 years	Role of traders in value chain (buying/sourcing)

How do you decide the buying price?	Role of traders in value chain (buying/sourcing)
Do you think the farmers is aware of how you decide the buying price?	Role of traders in value chain (buying/sourcing)
How do you decides the selling price	Role of traders in value chain (buying/sourcing)
What determines the selling price	Role of traders in value chain (buying/sourcing)
What is the minimum volume bought from one farmer at time?	Trader background and operations
What is the maximum volume bought from one farmers at a time	Trader background and operations
What is the minimum quantity taken to market for Soya?	Trader market access and client base
What is the minimum quantity taken to market for groundnuts?	Trader market access and client base
Minimum period taken to aggregate soya to the minimum quantity to take to the market?	Trader market access and client base
Maximum period taken to aggregate soya to meet the minimum quantity for the market?	Trader market access and client base

Minimum period taken to aggregate groundnuts to the minimum quantity to take to the market?	Trader market access and client base
Maximum period taken to aggregate groundnuts to meet the minimum quantity for the market?	Trader market access and client base
What is the distance to nearest selling point for soya	Role of traders in value chain (buying/sourcing)
What is the distance to nearest selling point for groundnuts	Role of traders in value chain (buying/sourcing)
What is the nature of business of the buyer for soya	Role of traders in value chain (buying/sourcing)
Nature of business of buyer for groundnuts	Role of traders in value chain (buying/sourcing)
Mention your three main buyers for soya in order of importance to you	Role of traders in value chain (buying/sourcing)
Mention your three main buyers for groundnuts in order of their importance	Role of traders in value chain (buying/sourcing)
What activities do you do between buying and selling soya	Role of traders in value chain (buying/sourcing)
What activities do you do between buying and selling groundnuts	Role of traders in value chain (buying/sourcing)
Apart from other small traders who else buy groundnuts from farmers in the area	Role of traders in value chain (buying/sourcing)

In your opinion what is the preference of farmers as a point of sale	Trader background and operations
What are the reasons for the preference	Trader background and operations
To what extent to you agree to this statement: “Farmers consider you as a cheater”	Trader background and operations
Why	Trader background and operations
To what extent do you agree to this statement: “The general public consider you a cheater”	Trader background and operations
Why	Trader background and operations
If you agree to the statements in 35 and 37 what would you do to change this perception	Trader background and operations

UNICAF UNIVERSITY
RESEARCH ETHICS APPLICATION FORM

The Research Ethics Application Form (REAF) should be completed by:

- Bachelor's students undertaking undergraduate final year projects requiring relevant ethics review and consideration.
- Master's students in academic programmes with research based dissertation / project modules.
- Doctoral level candidates who are embarking on the first of their Dissertation stages.
- Faculty researchers who are either full time members of Unicaf University staff or part time members of staff.

Important Notes:

- For **students** at all levels, an electronic version of the completed form should be uploaded to the relevant submission link in the VLE. Your supervisor will then review this and provide feedback commentary. Once their initial approval is given then the supervisor will forward this on, for final approval by the Unicaf University Research Ethics Committee (UREC). See Appendix I and II for guidance.
- Faculty members should submit their applications directly to the UREC secretary.
- Please type your application and **do not** submit paper copy scans. Only *PDF of Word* format documents should be submitted to the committee.
- If you need to supply any supplementary material, not specifically requested by the application form, please do so in a separate file. Any additional document(s) should be clearly labelled and uploaded in the relevant VLE link.
- If you have any queries about the form, please address them to your dissertation or project supervisor.

☒ **Before submitting your application, please tick this box to confirm that all relevant sections have been filled in and that the information contained is accurate to the best of your knowledge.**

UNICAF UNIVERSITY **RESEARCH ETHICS APPLICATION FORM**	UREC USE ONLY: Application No: Date Received:

Student's Name:	Dixon Extor Ngwende
E-mail Address:	d.ngwende@gmail.com
Student ID #:	**R1702D2407433**
Partner University:	UNICAF University - Malawi
Program of Study:	Doctor of Business Administration

1. Title of Proposed Research Project:

The Role of Smallholder Grain Traders in Groundnut and Soy Value Chains Malawi

2. Please indicate the category of the proposed Research Project:

(a) UU Faculty research project ☐
(b) UU Doctoral Student dissertation research ☒
(c) UU Master's Student dissertation / research project ☐
(d) UU Bachelor's Student final year research project ☐
(e) Other, please specify: ☐

3. Proposed Research Project Investigator(s):

a) Please fill in below the details of the Principal Investigator(s) as per 2(a). In the case of student projects (categories 2.b, 2.c and 2.d) fill in the details of the Faculty supervising the project (supervisor).

Please fill in the details of the:

Principal Investigator	
Title:	Mr
First Name:	Dixon
Last Name:	Ngwende
Position:	DBA Student
School/Department	UNICAF University - Malawi
Telephone:	+265 888216000

Email address:	d.ngwende@gmail.com

Principal Investigator	
Title:	
First Name:	
Last Name:	
Position:	
School/Department	
Telephone:	
Email address:	

b) Details of co-investigators (category 2.a) or co-supervisors (categories 2.b, 2.c and 2.d) if applicable:

Co-Investigator	
Title:	Dr
First Name:	Raimi
Last Name:	Lukman
Position:	Supervisor
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Email address:	r.lukman@unicaf.org

Co-Investigator	
Title:	
First Name:	
Last Name:	
Position:	
Organisation:	
Telephone:	
Email address:	

c) In the case of student projects (categories 2.b, 2.c and 2.d), please provide details of the student:

Student			
Fist Name::	Dixon	Student ID:	**R1702D2407433**
Last Name:	Ngwende	Email	d.ngwende@gmail.com
Programme of	Doctor of Business Administration		
Level of study:	Doctoral Degree		
Supervisor:	Dr. Raimi Lukman		
Co-Supervisor:			

4. Please state the timelines involved in the proposed research project:

Estimated Start Date: July 2019

Estimated End Date: Sept 2019

5. External Research Funding (if applicable):

(a) Please list any external (third party) sources of funding you plan to utilise for your project. You need to include full details on the source of funds (e.g. state, private or individual sponsor), any prior / existing or future relationships between the funding body / sponsor and any of the principal investigator(s) or co-investigator(s) or student researcher(s), status and timeline of the application and any conditions attached.

None

(b) If there are any perceived ethical issues or potential conflicts of interest arising from applying for and receiving external funding for the proposed research then these need to be fully disclosed below and also further elaborated on, in the relevant sections on ethical considerations later on in this form.

Not applicable

6. Summary of Project:

In this section please fully describe the purpose and underlying rationale for the proposed research project. Ensure that you pose the research questions to be examined, state the hypotheses, and discuss the expected results of your research and their potential.
It is important in your description / discussion to use plain language so it can be understood by all members of the UREC, especially those who are not necessarily experts in the particular discipline. To that effect please ensure that you fully explain / define any technical terms or discipline-specific terminology.

Purpose of the Research

The purpose of this research is bring broader understanding of the role of smallholder grain traders in grain value chains in Malawi. The study will focus on groundnut and soya value chains. The study will provide a platform for advocating for mindset change against smallholder traders.

Research Questions

The following are key questions that the study will attempt to answer:

1. What are the key roles played by smallholder grain traders in the grain value chains that are of benefit to smallholder farmers in the context of Malawi?
2. How large and significant is the level of grain trading done by smallholder traders?
3. Can off takers eliminate smallholder traders and at what cost?
4. Can smallholder farmers eliminate smallholder traders and at what cost?
5. What support do smallholder traders require in order to win confidence and trust from the public?

Hypotheses

1. Smallholder traders play a very significant role in the grain value chain that of the aggregators and this role cannot be eliminated from the chain.
2. Over 50% soya and groundnut grains are traded by smallholder traders every year.
3. Smallholder traders can only be removed from the chain if their role is taken over by either off-takers or smallholder farmers themselves at a cost.

Research Objectives

1. To clearly identify and document the unique roles and positive characteristics of smallholder traders in grain value chains;

7. Project execution:

Please give a description of the research method(s) that will be used:

Methodology

This study will concentrate in two districts in Malawi of Mchinji and Kasungu. These districts have been chosen because they are among the major grain producing districts of Malawi known as the grain basket of Malawi. As such there are many grain trading activities happening in these districts. Further an IFAD[1] funded value chain development programme called Rural Livelihoods and Economic Enhancement Programme (RLEEP) initiated the process of identifying and training grain traders to build capacity and assist them to change their mindset to become reliable and trusted grain chain actors. This study will use secondary and primary sources of data.

Secondary Data Collection: Through literature review, the study intends to understand what has already been documented regarding the role of the aggregators in value chains and in areas of all study questions and objectives above. The study will explore volumes of commodity handled by smallholder grain traders in comparison to grain handled by large off-takers and look at how much smallholder farmer produce is marketed against what is consumed at domestic level. The literature review will find out how smallholder traders played the role of aggregation and contributed in improving grain value chains in other parts of the world and what elements contributed to the success of their involvement.

Primary data collection will involve four major groups of people and these are:(i) the aggregators; (ii) the smallholder farmers (iii) the up takers, and the (iv) the policy makers and regulatory authorities.

Data Collection from Farmers: Data will be collected from farmers from two extension planning areas[2] (EPAs) in Mchinji district and one EPA in Kasungu district. 100 questionnaires will be administered in each EPA giving a total sample of 300 questionnaires. The questionnaires will be triangulated by one focus group discussion in each EPA.

Data Collection from smallholder traders: Data collection from smallholder traders will mainly be done through guided interview. A total of forty (40) vendors will be selected using random sampling from the selected three EPAs. Through the interviews with smallholder traders, service providers supporting the traders such as banks will be identified and follow up interviews will be made to ascertain sustainability of the services provided.

Data Collection from Off-takers: The study will identify 3 to 4 key off-takers of groundnut and soy. Data collection from the up-takers will be based on guided interview. These interviews will be expected to confirm their source of agricultural commodities, bring out data on annual quantities traded, and confirm why they prefer buying from smallholder traders and not directly from smallholder farmers.

8. Does the Project involve the recruitment and participation of additional persons other than the researchers themselves?

Note: The definition of "participation" includes both:

(i) Active participation, such as when participants knowingly take part in an interview or complete a questionnaire.

YES ☒ NO ☐

[1] International Fund for Agricultural Development

[2] Agricultural extension administrative level below a district; a district would have 4 to 10 EPAs

(i) If you have answered "NO" to Question 8 please directly proceed to Section 18.
(ii) If you have answered "YES" to Question 8 please complete all the following sections.

9. Relevant Details of the Participants of the Proposed Research

Please state the number of participants you plan to recruit, and describe important characteristics such as: demographics (e.g. age, gender, location, affiliation, level of fitness, intellectual ability etc). It is also important that you specify any inclusion and exclusion criteria that will be applied (e.g. eligibility criteria for participants).

300 smallholder farmers from 3 EPAs in the two districts of Mchinji and Kasungu. These are from rural areas with education ranging from primary to secondary school education. Age range average 18 – 60 years.

15 enumerators: These will have a University diploma or degree; Age range 18- 35.

3 supervisors: These will have University degree with at least five years experience in filed research work. Age range is 25 to 35.

6 Agriculture extension workers; Serving frontline officers of the Ministry of Agriculture, Irrigation and Water Development working within the selected EPAs; Age group is between 25 and 60.

40 smallholder grain traders: Primary school to secondary school level; age group range is 20 to 50.

3 Managers of groundnut and soya off-takers: These are high profile business community with experience in grain management. Age 30 to 65.

6 Policy makers: Persons holding positions of policy influence in the grain sub-sector. Include government officials, NGOs, and other stakeholders. Most possess University first and second degrees. Age range 30 to 60.

10. Recruitment Process for Human Research Participants:

(i) Please clearly describe how the potential participants will be identified, approached and recruited.

(ii) State any relationship between the principal investigator(s), co-investigators(s), student investigator(s) and participant(s). For example if you are conducting research in a school environment on students in your classroom (e.g. instructor-student).

(iii) If any poster(s), advertisement(s) or letter(s) are to be used for participant recruitment, then please provide a copy of that.

1. Recruitment to 300 smallholder farmers will be by random sampling. First we do purpose sampling of sections in the EPAs where the two commodities are predominant and will select sections with good access to markets and those with bad access to markets. Households in these sections will be selected at random.
2. Recruitment of smallholder traders will be random picked from the register of the traders association. The enumerators will meet the traders at their business place to allow observation on the conduct of business. The study will balance traders operating in all targeted EPAs.
3. Off-taker managers will be visited at their premises for an interview. Prior arrangements will be made through phone and introductory letters.
4. Policy makers engagement will be through a questionnaire that will be administered electronically to reach as many of them as possible.
5. 15 Enumerators will be recruited from an open market. However, to reduce cost of hiring, they will be identified through head search. Two days will be used to induct them on the questionnaires and processes of interviews particularly paying attention to ethical practices.
6. 3 Supervisors will be engaged on head search just like the enumerators. They will participate in the training that will be provided to the enumerators.

11. Informed Consent of Research Participants:

a) Describe in details the process that the investigator(s) will be using to obtain valid informed consent from study participants.
If the participants are minors or for other reasons are not competent to give written consent, describe the proposed alternate source of seeking consent, including any permission / information letter to be provided to the person(s) providing the consent on their behalf (e.g. parent or guardian).

Also, in such a case please discuss how you plan to obtain verbal assent from the actual study participants, and if this is not warranted please explain why.

The study will not involve minors. All participants including smallholder farmers, small traders, extension workers, policy makers, off-takers and processors will have to make written consent that will be signed. Where a questionnaire is used consent will be sought at the beginning of the questionnaire.

(b) You need to provide a copy of these important additional documents:

1. **Informed Consent Form / Certificate of Consent for Research Participants**
2. **The content of any telephone script (if applicable).**
3. **Any other material that will be used in the consent process.**

(c) Will the participants be deceived in any way about the true purpose of the study?

YES ☐ NO ☒

(d) If you answered "YES" to the above, please describe the nature and extent of the deception involved. Explain how and when the deception will be revealed, and who will administer this debrief to the participants.

Not applicable

12. Details of Participant Debrief and Further Information:

Please explain and further elaborate on what information will be provided to the participants after participation in the research.

For example, will you be providing a more complete description of the purpose of the research (over and above the information provided in the informed consent form and in the debriefing form, or provide information of future access to the results of the research).

The report will be shared at EPA level. The extension workers will use the report to support smallholder farmers on how they can improve on the marketing of groundnuts and grains; The smallholder traders will be shared the research report through their local association; It will inform them on how to improve in their trading practices; Policy makers will be informed on how to improve on strategies for addressing issues of value chain development; Off-takers will be shared a report that will help them to understand on their role in the value chain more and how this affects their business.

13. Ensuring the Participants' Right to Withdraw:

a) Describe how the participants will be informed of their right to withdraw from the project.

Since the engagement will be at the point of administering either an interview or a questionnaire, participants will be advised on their right to withdraw at the time of seeking consent.

b) Explain any consequences for the participant from withdrawing from the study and indicate what will happen to the data of participants who chose to withdraw.

If the participant decides to withdraw from the study all his/her data will be cancelled/ deleted and not form part of the study.

c) Describe how the participant will be informed of their right to access their data.

Smallholder farmers and smallholder traders will be informed of accessing the processed data through external workers. Other participants will be mailed their data directly.

14. Details of Proposed Compensation Given to Participants (if applicable):

Will participants receive compensation for participation?

(i) Monetary	**YES** ☐	**NO** ☒
(ii) Non-Monetary	**YES** ☐	**NO** ☒
(iii) No compensation		

YES

(a) If you answered "**YES"** to **either** (i) or (ii) above, please provide details below:

Not Applicable

(b) In the case of participants who exercise their right to withdraw, prior to completion of the proposed study, and you answered "YES" to either (i) or (ii) above, will they still be entitled to compensation and on what terms (e.g. full / partial or no compensation given)?

Not applicable

15. Confidentiality of the Participants' Data:

(i) Will all participants be anonymous? **YES** ☒ **NO** ☐

(ii) Will all data be treated as confidential? **YES** ☒ **NO** ☐

Note: Participants' identity/data will be considered confidential if an assigned ID code or number is used, but it will not be anonymous. Anonymous data are defined as those which cannot be in any way traced back to an individual participant.

(a) Describe the procedures to be used to ensure anonymity of participants and/or confidentiality of the collected data both during the conduct of the research and in the subsequent release of its findings.

It is not appropriate to treat participants anonymously because we have to come back with a feedback of the study and the process will require interactions with other participants. However, the data will not be anonymous in that it will not be linked back to individual participants but rather given a code.

(b) If participants' anonymity or confidentiality is not appropriate for this proposed research project, please explain why, providing details of how all participants will be informed of the fact that any data which they will provide will not be anonymous or confidential.

16. Storage, Access and Disposal of Collected Research Data:

Please describe in detail (see appendixes 1):

(i) How the collected research data will be stored,

(ii) What type of data will you be storing,

(iii) Where will they be stored,

(iv) For what period of time,

(v) What are the measures that will be put in place to ensure the security of the data,

(vi) Who will have access to the data, and

(vii) The method and timeline for the disposal of the data.

The collected data will be stored in electronic format in a flash or external drive both quantitative and qualitative data. The flush will be used for this purpose only and stored in a lockable drawer for safe keeping; with only accessed by the researcher; This data will be stored up to at least 5 years; The destroying of the data will be through reformatting of the flush.

17. Are there any other approvals required (in addition to ethics clearance from UREC) in order to carry out the proposed research study?
For example do you need any kind of institutional permission (e.g. school principal or company director) or approval from a local ethics or professional regulatory body?

☐ YES ☒ NO ☐ NOT APPLICABLE

If you answered "YES" to the above then please provide the essential details below.

18. Significance of the Proposed Research Study and Potential Benefits:

Outline the potential significance and/or benefits of the research.

The results of this study will be used as an advocacy tool to change the mindset of the policy makers and the public in general from the negative attitudes against smallholder traders in Malawi and in the region. The study will provide convincing information suggesting the importance of smallholder traders in grain value chains. The paper will make clear proposals regarding what support the vendors require in order for them to add more value to the value chain. Once the policy makers and the public in general understand and appreciate the positive role played by the smallholder traders, programmes supporting grain value chains will include working with smallholder traders part of chain actors that need support thereby making the chain more efficient and sustainable.

19. Potential Risks of the Proposed Research Study:

(a) Outline any potential **Individual** risks associated with the conduct of the research. This may include potential harm coming to research staff, research participants, other individuals not directly involved in the research. Please also state the measures that will be taken to minimise any such risks and the procedures to be adopted in the event of any misadventure.
Please refer and complete the Risk Assessment Form for Ethics Application (Appendix III) and submit it along with the current document.

N/A

(b) Outline any potential **Environmental** or **Societal** risks that may arise from the proposed research. If you perceive any such risks it is important that you state what measures will be taken to minimise these, as well as the procedures to be adopted in the event of any misadventure.

None

20. Are there any other ethical issues associated with the proposed research study that are not already adequately covered in the preceding sections?

Yes ☐ **No** ☒

(a) If you answered "YES" to the above, please specify these below:

N/A

21 Application Checklist

Please mark √ if the study involves any of the following (for additional information, see Appendix III):

- Children and young people under 18 years of age, vulnerable population such as children with special educational needs (SEN), racial or ethnic minorities, socioeconomically disadvantaged, pregnant women, elderly, malnourished people, and ill people. ☐

- Research that foresees risks and disadvantages that would affect any participant of the study such as anxiety, stress, pain or physical discomfort, harm risk (which is more than is expected from everyday life) or any other act that participants might believe is detrimental to their wellbeing and / or has the potential to / will infringe on their human rights / fundamental rights. ☐

- Risk to the well-being and personal safety of the researcher ☐

- Administration of any substance (food / drink / chemicals / pharmaceuticals / supplements / chemical agent or vaccines or other substances (including vitamins or food substances) to human participants. ☐

- Results that may have an adverse impact on the natural or built environment ☐

Please check that the following documents are attached to your application.

	ATTACHED	**NOT APPLICABLE**
1. Recruitment advertisement	☐	☒
2. Informed Consent Form / Certificate of Consent for Research Participants (Appendix IV)	☒	☐
3. Questionnaire	☒	☐
4. Interview Schedule	☒	☐
5. Debriefing Form Template (Appendix V)	☒	☐

6.	The content of any telephone script (if applicable)	☐	☒
7.	Risk Assessment Form for Ethics Application (Appendix I)	☒	☐
8.	Gatekeeper Letter Template (Appendix VI)	☒	☐
9.	Any other approvals required in order to carry out the proposed research study, e.g., institutional permission (e.g. school principal or company director) or approval from a local ethics or professional regulatory body.	☐	☒

22. Final Declaration by Applicants:

(a) I declare that this application is submitted on the basis that the information it contains is confidential and will only be used by Unicaf University and Unicaf University Research Ethics Committee (UREC) for the explicit purpose of ethical review and monitoring of the conduct of the research proposed project as described in the preceding pages.

(b) I understand that this information will not be used for any other purpose without my prior consent, excluding use intended to satisfy reporting requirements to relevant regulatory bodies.

(c) The information in this form, together with any accompanying information, is complete and correct to the best of my knowledge and belief and I take full responsibility for it.

(d) I undertake to abide by the highest possible international ethical standards governing the Code of Practice for Research Involving Human Participants, as published by the UN WHO Research Ethics Review Committee (ERC) on http://www.who.int/ethics/research/en/ and to which Unicaf University aspires to.

(e) In addition to respect any and all relevant professional bodies' codes of conduct and/or ethical guidelines, where applicable, while in pursuit of this research project.

(f) I will report any changes affecting the ethical aspects of the project to the Unicaf University Research Ethics Committee (UREC). Note: In the case of student projects the responsibility lies with the Faculty Dissertation / Project Supervisor as per 3 (a).

(g) I will report any adverse or unforeseen events which might occur to the relevant Unicaf University Research Ethics Committee (UREC). Note: In the case of student projects the responsibility lies with the Faculty Dissertation/Project Supervisor as per 3 (a).

Print Name of Principal Investigator of the Research Project: Dixon Ngwende_____

Print Name of Project Supervisor

(in the case of student research projects):

Raimi Lukman

Date of Application:

27th May 2019

Important Note:

Please now save your completed form (we suggest you also print a copy for your records) and then submit it to your UU Dissertation/project supervisor (tutor). **In the case of student projects the responsibility lies with the Faculty Dissertation/Project Supervisor as per 3 (a).** If this is a student application then it should be submitted via the relevant link in the VLE. Please submit only electronically filled in copies; **do not** hand fill and submit scanned paper copies of this application. Faculty members should submit this application electronically to the UREC secretary.

Gatekeeper Letter Template

The District Commissioner

P.O. Box

Mchinji

Date: 31st May 2019

Subject: **Introduction of a Research Student**

Dear Madam,

I am a doctoral student at Unicaf University, Malawi. As part of my degree I am carrying out a study on The Role of Smallholder Traders in Soya and Groundnut Value Chains in Malawi in Mchniji and Kasungu Districts. I am writing to enquire whether you would be interested in or willing to participate in this research.

Subject to approval by Unicaf Research Ethics Committee (UREC) this study will be using questionnaires, interview guide and focus group discussions.

I would like to request you to be available for a short discussion lasting not more than one hour on issues relating for smallholder grain traders in the district. Further, I would appreciate if you can allow me access some of your staff including the District agricultural Development Officer and Agribusiness Officer.

I thank you in advance for your time and for your consideration of this project. Kindly please let me know if you require any further information or need any further clarifications.

Yours Sincerely,

Student:

Dixon Ngwende

P.O. Box 3233

Lilongwe

Malawi

Telephone: +265888216000

E-Mail: d.ngwende@gmail.com

Supervisor:

Dr. Raimi Lukman

Unicaf

Gatekeeper Letter Template

The District Commissioner

P.O. Box

Kasungu

Date: 31st May 2019

Subject: **Introduction of a Research Student**

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Yours Sincerely,

Student:

Dixon Ngwende

P.O. Box 3233

Lilongwe

Malawi

Telephone: +265888216000

E-Mail: d.ngwende@gmail.com

Supervisor:

Dr. Raimi Lukman

Unicaf