

SMALLHOLDERS' EXPERIENCES WITH INCLUSIVE AGRIBUSINESS MODELS IN MOZAMBIQUE

From Inclusion to Embedded Autonomy



Filipe Di Matteo
2024

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**SMALLHOLDERS' EXPERIENCES WITH INCLUSIVE AGRIBUSINESS MODELS IN
MOZAMBIQUE**

From Inclusion to Embedded Autonomy

**EXPERIÊNCIAS DE PEQUENOS AGRICULTORES COM MODELOS DE AGRONEGÓCIO
INCLUSIVOS EM MOÇAMBIQUE**

De Inclusão à Autonomia Incorporada
(com um resumo em português)

**ERVARINGEN VAN KLEINE BOEREN MET INCLUSIEVE AGRIBUSINESSMODELLEN IN
MOZAMBIQUE**

Van inclusie naar ingebedde autonomie
(met een samenvatting in het Nederlands)

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*To my grandmother,
beacon of education in the lives of many, including mine.
To my parents,
who have always made a priority of investing in my education.*

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Abbreviations

| | |
|-----------|--|
| ACDI/VOCA | Agricultural Cooperative Development International / Volunteers in Overseas Cooperative Assistance |
| AdX | <i>Açucareira de Xinavane</i> (Xinavane sugar mill) |
| AGRA | Alliance for a Green Revolution in Africa |
| AMEA | Agribusiness Market Ecosystem Alliance |
| BAGC | Beira Agricultural Growth Corridor |
| BDS | Business Development Services |
| BRICS | Brazil, Russia, India, China, South Africa |
| CAADP | Comprehensive Africa Agriculture Development Program |
| CAPEL | Agricultural Complex of Lioma |
| CDI | Crop Diversification Index |
| CDN | Northern Development Corridor |
| CEPAGRI | Center for Promotion of Agriculture |
| CF | Contract Farming |
| CIFOR | Center for International Forestry Research |
| CLN | Integrated Nacala Logistical Corridor |
| CLUSA | Cooperative League of the USA |
| COPAZA | Cooperative of Producers of Alta Zambézia |
| CPI | Center for the Promotion of Investments |
| CSR | Corporate Social Responsibility |
| CTV | <i>Centro Terra Viva</i> |
| DNDT | National Directorate of Land and Territorial Development |
| DNTF | National Directorate of Land and Forests |
| DPA | Provincial Directorate of Agriculture |
| DPAP | Provincial Directorate of Agriculture and Fisheries |
| DUAT | Land Use and Benefit Right |
| EDR | Rural Development Strategy |
| EPA | Economic Partnership Agreement |
| ESG | Environmental, Social and Governance |
| ETG | Export Trading Group |
| EU | European Union |
| FAO | Food and Agriculture Organization of the United Nations |
| FAOSTAT | Food and Agriculture Organization Corporate Statistical Database |
| FDI | Foreign Direct Investment |
| FEPROG | Federation of Producers of Gurue |
| FGD | Focus Group Discussion |
| FNDS | National Fund for Sustainable Development |
| FRELIMO | <i>Frente de Libertação de Moçambique</i> Party |

| | |
|-----------|--|
| ACDI/VOCA | Agricultural Cooperative Development International / Volunteers in Overseas Cooperative Assistance |
| G20 | Group of 20 |
| GDP | Gross Domestic Product |
| GHG | Greenhouse Gases |
| GIZ | Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH |
| GoM | Government of Mozambique |
| Ha | hectares |
| HFIAS | Household Food Insecurity Access Scale |
| IAI | Integrated Agricultural Survey |
| IB | Inclusive Business |
| IBM | Inclusive Business Model |
| IFAD | International Fund for Agricultural Development |
| IFC | International Finance Corporation |
| IITA | International Institute for Tropical Agriculture |
| IISD | International Institute for Sustainable Development |
| ILO | International Labour Organization |
| IMF | International Monetary Fund |
| INE | National Statistics Institute |
| INIR | National Institute of Irrigation |
| IPCC | Intergovernmental Panel on Climate Change |
| KIT | Royal Tropical Institute |
| LDC | Least Developed Countries |
| LDI | Livelihood diversification index |
| LIFFE | Large-scale Investments in Food, Fiber and Energy |
| LMIC | Low and Middle-Income Countries |
| MADER | Ministry of Agriculture and Rural Development |
| MASA | Ministry of Agriculture and Food Security |
| MEF | Ministry of Economic Affairs and Finances |
| MIC | Middle Income Country |
| MICOA | Ministry of the Coordination of Environmental Affairs |
| MINAG | Ministry of Agriculture |
| MMO | <i>Moçambique Media Online</i> |
| MPD | Ministries of Planning and Development |
| NEPAD | New Partnership for Africa's Development |
| NGO | Non-Governmental Organization |
| NPO | Non-Profit Organization |
| OECD | Organization for Economic Cooperation and Development |

| | |
|-----------|--|
| ACDI/VOCA | Agricultural Cooperative Development International / Volunteers in Overseas Cooperative Assistance |
| OMM | Organization of the Mozambican Women |
| OMR | <i>Observatório do Meio Rural</i> |
| PAEI | Agrarian Policy and Implementation Strategy |
| PAPA | Action Plan for Food Production |
| PARP | Action Plan for Poverty Reduction |
| PCA | Principal Component Analysis |
| PDDA | Leading Plan for the Development of Agribusiness |
| PEDSA | Strategic Plan for Agricultural Development |
| PIATA | Partnership for Inclusion Transformation in Africa |
| PNDS | National Programme for Sustainable Development |
| PNISA | National Agricultural Investment Programme |
| PPP | Public-Private Partnership |
| PROAGRI | National Programme of Agrarian Development |
| RENAMO | <i>Resistência Nacional Moçambicana</i> Party |
| SADC | Southern Africa Development Community |
| SAP | Structural Adjustment Programme |
| SBS | <i>Sociedade de Beneficiamento de Sementes</i> |
| SCF | Small Commercial Farmers |
| SDAE | District Services of Economic Activities |
| SDG | Sustainable Development Goal |
| SME | Small and Medium Enterprise |
| SNV | Netherlands Development Organisation |
| SOCODEVI | Société de Coopération pour le Développement International |
| SSA | Sub-Saharan Africa |
| TNS | TechnoServe |
| TVET | Technical, Vocation, Education and Training |
| UGC | General Cooperatives Union |
| UNAC | National Peasants Union |
| UNDP | United Nations Development Programme |
| US | United States |
| USAID | United States Agency for International Development |
| USD | United States dollars |
| WBA | World Benchmarking Alliance |
| WBCSD | World Business Council for Sustainable Development |
| WTO | World Trade Organization |

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Preface

On February 11th, 2013, I landed in Mavalane International airport. I had arrived in Mozambique for the first time, marking the beginning of a transformative chapter in my academic and professional journey. As a student pursuing my MSc. in Sustainable Development at Utrecht University, I was driven by a keen interest in understanding the challenges facing agricultural development and the livelihoods of smallholder farmers within the context of international development. At the time, I brought little more than a few material things, but I did bring a strong curiosity for that new experience.

Over the ensuing decade, Mozambique became not just the geographical location of my research, but a profound source of inspiration. It offered me firsthand insights into the complexities of real-world development issues, particularly in the agricultural sector, which sustains a significant portion of the population while grappling with issues like food insecurity, climate change, and social exclusion – to name a few.

From 2013 until 2016, I was part of the CGIAR-CIFOR’s “Large-scale investments in food, fibre, and energy: Sustainable options that work for forests and the poor (LIFFE Options)” project. The project sought to identify conditions under which different business models (of investments in the forest, agricultural and biofuel sectors) made positive contributions to local development and macro-economy, while minimizing environmental footprint. LIFFE paved the first steps of this dissertation. It generated a great deal of the data collected, in particular regarding the effects of inclusion of smallholder farmers in the contract farming and open-market sourcing models in the sugarcane and soyabean sectors in Mozambique.

Complementing this research, in 2017, I joined the Agribusiness Market Ecosystem Alliance (AMEA) as a program officer. This deepened my understanding through practical engagement. This experience, coupled with my academic pursuits, has provided me with a unique perspective on the intersection of theory and practice in international development. It has also connected me with more than 30 organizations that work for improving the conditions for sustained development of tens of thousands of farmer organizations in more than 40 countries.

In the pages that follow, therefore, I aim to distill the knowledge gained from my experiences into a comprehensive thesis about inclusion in agricultural production models – specifically in the sugarcane and soyabean sectors in Mozambique – and about the pursuit of better lives through a balance between agency and embeddedness within the framework of inclusion. Through rigorous analysis, I seek to shed light on the challenges facing agricultural development in Mozambique and propose pathways towards what – after a decade of research and practice – I am convinced help find more inclusive and sustainable solutions for smallholders’ involvement in agricultural production models.

In Mozambique, I observed the tenacity of a people with strong agency – that are daily striving to leave their mark in their world, be heard, and make a better living for themselves and their close ones.

Therefore, this thesis is not just an academic exercise; it is a tribute to the resilience and determination of the Mozambican people, whose stories have left an indelible mark on my understanding of development. My hope is that this work will contribute to the broader academic discourse and inspire future generations of researchers to pursue meaningful and impactful work in the field of international development.

The next time I land at Mavalane International airport, I will wholeheartedly bring a copy (or many) of this dissertation, as a small contribution (or so I hope) to a country that has provided me with so much, in several dimensions of my life.

A luta continua.

1

Introduction

For the past two decades, inclusive business has been on the rise as a response to one of the main struggles in international development: the generation of equitable and inclusive development through agriculture, which is centered on smallholder farmers. These farmers typically own or cultivate small plots of land and comprise a substantial portion of the impoverished population in most developing countries. The rise of inclusive business is linked to the long-standing difficulties that governments and local and international non-governmental organizations have faced in identifying effective strategies to promote rural economic development that considerably and sustainably improve the lives of rural populations (German et al., 2016; FAO et al., 2023).

More than three decades ago, the neoliberal reforms reduced government in many countries. Governments in Africa, Latin America, and Asia have actively embraced the reforms promoted by multilateral financial institutions and donors as a way to attract investments in priority sectors, such as agriculture (Bernstein, 2008; Daniel and Mittal, 2010). State interventions, such as investment in rural extension services and infrastructure, became less common and governments turned to the private sector to stimulate rural and agricultural development (Craig and Porter, 2006).

The involvement of private actors in agriculture has significantly increased over time and their investments were long considered by many as a silver bullet for smallholder farmers' life improvement. Governments started to invite the private sector to participate more prominently in shaping and implementing the development agenda. This took different forms, including contributions to infrastructure and social services to surrounding communities, payment of taxes, employment generation, and through business models that create value for local communities (Schoneveld, 2011; German et al., 2016).

However, in many countries, a stronger reliance on the private sector to solve key rural development issues has inadvertently generated negative outcomes (Bernstein, 2008; Aguilar and Sumner, 2020). There is plenty of criticism in academic and practice literature towards business participation in the development agenda. For example, private investments in agriculture were often accompanied by large-scale land acquisitions and plantation of monoculture crops which can be considered a form of neocolonial land-grab (Zoomers, 2010; German et al., 2016). As a result, displacements, impoverishment of local populations, food insecurity, and disrespect for community rights have become key topics in the land grab debate from the 2010s onwards (Borras et Franco; 2010; Oya, 2013; Gillon, 2016; Salomão, 2020; Müller et al., 2021).

These negative social and environmental impacts of investments relying on plantation-based production systems have been well documented over time (German et al., 2013; Kaag

and Zoomers, 2014). This led many scholars and stakeholders to urge a more active promotion of production models that were less harmful for local communities and their environments, and that did not exclude smallholder farmers from production (UNDP, 2008; Wach, 2012). Consequently, the focus has shifted from agricultural modernization at any costs to businesses that are inclusive of local populations.

The term 'inclusive business' was coined in 2005 by the World Business Council for Sustainable Development (WBCSD) and has been used in various ways by different stakeholders. Concepts related to inclusivity have evolved over the last two decades, including *inclusive growth*, *inclusive development*, in addition to *inclusive business*. These terms stemmed from concerns over the distributional effects of economic growth under the scope of an overtly pro-poor growth agenda (Kakwani and Pernia, 2000; Likoko and Kini, 2017). The ideal of inclusion soon developed into widely applied development concepts (Schoneveld, 2020).

The challenge in agricultural development is that inclusive business has become a buzzword whose meaning has rarely been examined (Wangu, 2022). Inclusion often refers to a (marginalized) group's economic participation, assuming that the generation of higher incomes by participating in the business model necessarily results in better lives for those groups. In the case of agricultural development, these groups are typically smallholder farmers.

It is debatable whether economic participation in inclusive business models is sufficient for smallholder farmers to improve their lives or not (Teichman, 2016; German et al., 2018). Additionally, little is known about its long-term effects on livelihoods in smallholder communities (Wangu et al., 2020) and how smallholder farmers simultaneously affect and are affected by inclusive models design (Hintz and Pretzsche, 2023; Falk et al., 2024). There is thus a need to investigate whether smallholder farmers become better positioned to have better lives and secure sustainable livelihood pathways by participating in inclusive business models, especially in the agricultural production models of these businesses.

Therefore, the key question which guides this dissertation is: '*How can inclusive production models improve smallholder farmers' livelihoods over time?*'. To answer this question, I examined cases of production models in the sugarcane and soybeans sectors in Mozambique, from 2014 until 2023.

1.1. RESEARCH OBJECTIVE

The pressing livelihood challenges faced by smallholders globally require immediate attention. While the long-term effectiveness of inclusive business approaches remain underexplored, its promotion by donors and local governments to address these issues represent a current opportunity to advance academic and practical understanding on the subject. The research guiding this dissertation aimed to conduct a firsthand assessment of inclusive models of agricultural production in enhancing the livelihoods of smallholders over time. This dissertation offers an evaluation of the extent to which agricultural production models with inclusive features can facilitate improvement in smallholders' livelihoods. It investigates the evolution of the relationship between smallholders and inclusive businesses, the factors influencing smallholders' decisions to engage or not in such models, and how they experience participation. Furthermore, it examines the direct and indirect impacts of inclusive production models on local livelihoods over time.

Consequently, the insights presented in this research can contribute to evidence-based recommendations for policymakers, the development community, and various stakeholders regarding the potential advantages and risks associated with adopting an inclusive production model approach to enhance the well-being of smallholders. While the role of the private sector as a driver of development is not a novel strategy in the development arena, it remains a subject of intense debate (Eicher and Staatz, 1998; Pauw, 2015; Blowfiel and Dolan, 2016; Schoneveld, 2020). This dissertation contributes to this ongoing debate by providing empirical evidence to the body of knowledge, accompanied by valuable insights into how smallholder farmers experience inclusion in agro-investments and how outcomes play out for them over time.

1.2. THE FOCUS ON PRODUCTION MODELS, MOZAMBIQUE, AND THE SUGARCANE AND SOYBEANS SECTORS

1.2.1. Why inclusive production models and the focus on smallholder farmers?

Despite the recent importance given to inclusive business models, there is no consensus in its definition. Specifically, there are various definitions in agricultural settings (Likoko and Kini, 2017), each highlighting specific interests (Table 1.1).

Table 1.1: Common definition of inclusive business models

| Source | Definition |
|--|---|
| World Business Council for Sustainable Development (WBCSD, 2005) | Inclusive businesses are business solutions that improve access to goods, services, and livelihood opportunities for low-income communities in commercially viable ways. |
| United Nations' Food and Agriculture Organization (FAO, 2015) | Inclusive business models promote the integration of smallholders into markets, with the underlying principle that there are mutual benefits for poor farmers and the business company. |
| Group of 20 (G20, 2015) | Inclusive businesses provide goods, services, and livelihoods on a commercially viable basis, either at scale or scalable, to people at the "base of the economic pyramid", making them part of the value chain of companies' core business as suppliers, distributors, retailers, or customers. |
| United Nations Development Programme (UNDP, 2016) | Inclusive business models include the poor on the demand side as clients and customers, and on the supply side as employees, producers and business owners at various points in the value chain. They build bridges between business and the poor for mutual benefits. |
| International Finance Corporation (IFC, 2018) | Inclusive business models are those which integrate low-income consumers, suppliers, retailers or distributors in their core business operations, on a commercially viable basis. By adopting the models, companies build the capacity of low-income farmers and entrepreneurs; increase access to finance for suppliers and consumers; create or adapt products to meet local needs and requirements; and develop innovative distribution approaches to hard-to-reach communities. |
| Schoneveld (2020) | Inclusive business is a type of sustainable business model that seeks to productively engage income-constrained groups in the value chain by providing solutions to neglected problems. |

Source: Adapted from Schoneveld, 2020.

Despite the lack of a singular definition, there are common elements defining inclusive business models, such as the need to maintain the viability of the business (e.g. economic sustainability) and the goal of integrating income-constrained groups within value chains (e.g. generation of economic participation and benefits). The definitions above also broadly focus on the whole value chain, including producers, suppliers, distributors, and consumers.

As business models include production, employment, and consumption, any of these different elements can be the focus of inclusiveness analyses. This thesis focuses on the *production* aspect of models.

The specific focus on *inclusive production models* provides a clear avenue for understanding the impact of businesses on smallholder farmers. Inclusive production models are those that aim to integrate smallholder farmers into value chains, while trying to solve market

failures (Vermeulen and Cotula, 2010). For example, inclusive production models often provide smallholders with access to resources, markets, and technical support. Plenty of evidence suggests that, by studying and promoting such models, one can empower smallholders, enhance their livelihoods, and contribute to their sustainable development, thereby addressing critical issues related to poverty, inequality, and food production (Van Westen et al., 2019; Rob and Cattaneo, 2021).

In this sense, focusing on inclusive production models with a particular emphasis on smallholder involvement is relevant because it addresses key challenges in rural development and contributes to the debate of alternative models to large-scale plantations. Smallholders represent a significant portion of the population in many developing countries. They are the focus of most agricultural development strategies, but their experiences and agency in their evolving relationship with agro-investments remains underexplored.

1.2.2. Why Mozambique?

Mozambique is an example of a country that fully embraced the neoliberal policy reforms of the late 1980s and early 1990s: the Structural Adjustment Programme (SAP) (Bowen, 1992). It is also a country with a significant smallholder farming population. Approximately 70% of the Mozambican population is rural and highly dependent on subsistence agriculture as livelihood means (MADER, 2021; INE, 2023). Additionally, it is one of the most income-constrained countries in the world, with a GDP per capita that is lower than 650 USD, ranking 181 out of 192 countries according to the IMF (2023). Consequently, improving smallholder farmers' livelihoods has been a priority in the political agenda for decades (Bowen, 1992; Cunguara, 2012; Aiuba and Nova, 2022).

Compounding the issue, from an economic standpoint, the country has recently faced multiple interlinked challenges, including the global COVID-19 pandemic, the Ukraine war and its reflection on grain and fertilizers prices, general cross-sectoral inflation, and the hidden debts contracted by the government. These events have strained the state's capacity to deliver services, exacerbating poverty and hindering progress towards development goals. Furthermore, climate change poses another significant challenge, demanding a focus on adaptation and resilience to mitigate its effects on investments and rural communities (World Bank, 2023).

However, challenges to the Mozambican agricultural sector are not new and have persisted for decades (Ferrão et al., 2018). Mozambique has experienced distinct phases of development models since its independence from Portugal in 1975. Initially characterized by a socialist model, the sector saw significant state intervention and promotion of cooperative farming. The SAP and post-Civil War period emphasized cash

crops for government revenue and economic recovery, driven by privatization and foreign investment, which failed to incentivize the development of smallholders' activities and livelihoods (Do Rosário, 2012). Subsequently, the early 2000s marked a new phase in which three models coexisted: large-scale private investments often focusing on monocultures (e.g. forestry and sugarcane); concession schemes that largely involve smallholder farmers in delimited geographical areas (e.g. cotton and tobacco); and top-down promotion of transformation of smallholder farmers into commercial farmers, specially in higher value crops, such as soybeans and sesame (Nova and Rosário, 2022). This latter phase is markedly more focused on production and smallholder support than those before the 2000s, with various agricultural policies and programs introduced in the past two decades (MINAG, 2011; Macuane, 2012). Despite these efforts, the agricultural sector continues to struggle in providing benefits to the majority of smallholder farming households (Baez et al., 2018) and the current models are criticized for these failures (Nova and Rosário, 2022; Mosca, 2023).

Mozambique has recently begun a new cycle of agricultural strategy and policies to develop the sector, with the publications of the second Strategic Plan for Agricultural Development (PEDSA II), and National Agricultural Investment Programme (PNISA II), covering 2022-2030, and the launch of the flagship agricultural development program, SUSTENTA - which is largely based on the top-down model described above (Nova and Rosário, 2022). However, as in many other African countries, the Mozambican government has systematically considered smallholder economic participation in value chains as inclusion, and heavily relied on the private sector for investments that address rural development challenges (Kaarhus, 2011; 2018; Macuane, 2012). This will be further explored in the subsequent chapters, but there is a risk that history will repeat itself and smallholder farmers will not be the priority target beneficiary of this new cycle of agricultural policies and strategies. Or they will only be prioritized rhetorically and inclusion will be just another buzzword.

Consequently, how agribusiness-smallholders relationships evolve in this challenging context for agricultural inclusion and generate genuine outcomes for an inclusive agenda in Mozambique needs to be further examined. In examining this, there is also a need to look into whether smallholder farmers become better positioned to have better lives, as well as more secure and sustainable livelihoods through the processes of inclusion which took place in the past decades.

1.2.3. Why the sugarcane and soybeans sectors?

In 2021, there were over 137 million hectares of soybeans and over 27 million hectares of sugarcane harvested worldwide – an area 91% larger for soybeans and 35% for sugarcane compared to 20 years before (FAOSTAT, 2021). These are crops with growing economic importance attributed to their multiple uses as food, feed, and fuel, that can be flexibly

interchanged (See Borrás et al., 2014; 2016 for 'flex crops') and typically cultivated in large-scale plantations in the Americas and in Asia.

As sugarcane and soybeans production predominantly involve large-scale plantations, these crops are often controversial. Plantations are typically seen as non-inclusive models of agricultural production and have been a key focus of the 'land grab' debates over the past decade (See Kaag and Zoomers, 2014). Plantations are often associated with the potential takeover of land and related resources as well as the displacement of former land users and types of usage (Hall et al., 2017; Zoomers et al., 2017; Zaehring et al., 2018). Environmental concerns add weight to the controversies, as in many cases the increase of flex crop production through plantations requires additional land that is converted from natural resources (Leal et al., 2013; Bordonal et al., 2018) or displaces smallholder farmers. These farmers must then search for new plots of lands often causing deforestation (Zaehring et al., 2021). There is also evidence that plantations are typically poorly integrated into surrounding societies and in the economy, given that they contribute to value chains which are often embedded in global markets (Ferguson, 2006), decreasing their intrinsic value to local communities.

Despite the controversies, sugarcane and soybeans are crops that have been successful in enabling small-scale family farmers in Mozambique to move away from traditional large-scale production models. In Mozambique, smallholder farmers are typically those that cultivate less than 10 ha of land¹. However, by 2020, smallholders were cultivating 23672 ha of land for sugarcane and 65834 ha for soybeans (MADER, 2021). Moreover, unlike production in the Americas, Asia, and many other parts of Africa, there are thousands of smallholder producers who are involved in growing sugarcane and soybeans, which have been seen as priority crops for commercial agricultural development for years (Dias, 2013; Joala et al., 2016; Capaina, 2023; Mosca, 2023).

As such, the sugarcane and soybeans sectors are considered models of inclusive production in Mozambique. Although contract farming is present in both sugarcane and soybean production, there are considerable differences in their production models. For example, sugarcane production is highly controlled by the agribusinesses (sugar mills), whereas soybeans production is not. This distinction resulted in different experiences and outcomes of participation for smallholder farmers within these production models that have not been well explored to date. Furthermore, we also have limited knowledge about the interactions of sugarcane and soybean agribusinesses (for example the sugar mills, and soybean off-takers) with local communities. Can we truly label these sectors inclusive?

¹ There are additional criteria for defining a smallholder farmer. This topic is further explored in Chapter 3.

How did they become sectors with large involvement of smallholder farmers? Has the involvement of smallholder farmers changed the characteristics of the sector over time? What can we learn from these examples that can also be useful to better understand the role of agribusiness in Mozambique? How have smallholders experienced the 'inclusion' and does it clash with smallholders' livelihood's goals?

Answering these questions can contribute to our understanding about the 'developmental impacts' of these crops. They can also contribute to the debate on agrarian development models (particularly in Mozambique), and more broadly to the debate on the participation of the private sector in the development agenda. Finally, they can contribute to the body of literature on inclusive businesses.

In order to better understand the role of agribusiness in an inclusive agenda, this thesis examines the sugarcane and soybeans sectors as case studies on agribusinesses in Mozambique and the quest to implement more inclusive models of production and supply that positively contribute to rural development and smallholder farmers' livelihoods.

1.3. RESEARCH QUESTIONS

The overarching question for this study is: '*How can inclusive production models improve smallholder farmers' livelihoods over time?*'. Chapter 2 and 3 present an overview of relevant literature and the contextual background for this research, respectively. They situate this thesis within current debates and further illustrate the local and broader relevance of the topic.

The specific questions that will guide the subsequent chapters are:

1. What are the characteristics of agro-investments in Mozambique and in what ways do they involve smallholder farmers?

This question will be answered in Chapter 4, which focuses on the geographies of investment in Mozambique. It aims to illustrate the main characteristics of agro-investments and how smallholder farmers have been integrated (or not) into models of production in past decades until 2013².

2 This year (2013) is based on the available official database, further explained in the Methodology section.

2. What are the characteristics of inclusive production models in the sugarcane value chain in Maputo Province, and what are the outcomes of participation for smallholder farmers over time?

Chapter 5 will answer this question by means of a case study in Maputo Province. It aims to illustrate smallholder farmers' experience with the sugarcane production models over time, while paying attention to differences in benefits and challenges for those who were integrated into the model and those who were not.

3. What are the characteristics of inclusive production models in the soybean value chain in Gurue, Zambezia Province, and what are the outcomes of participation for smallholder farmers over time?

Chapter 6 also makes use of a case study to answer question 3). It examines the evolution of the soybeans production systems in Gurue, Zambezia Province, and its long-term effects on smallholder farmers to answer the question.

4. How can farmer organizations enhance the benefits of smallholder farmers participation in the sugarcane and soybean production models studied?

This question is answered by Chapter 7, which looks into the roles and needs of smallholder farmer organizations as conduits of inclusion in the sugarcane and soybean sectors.

1.4. METHODOLOGY

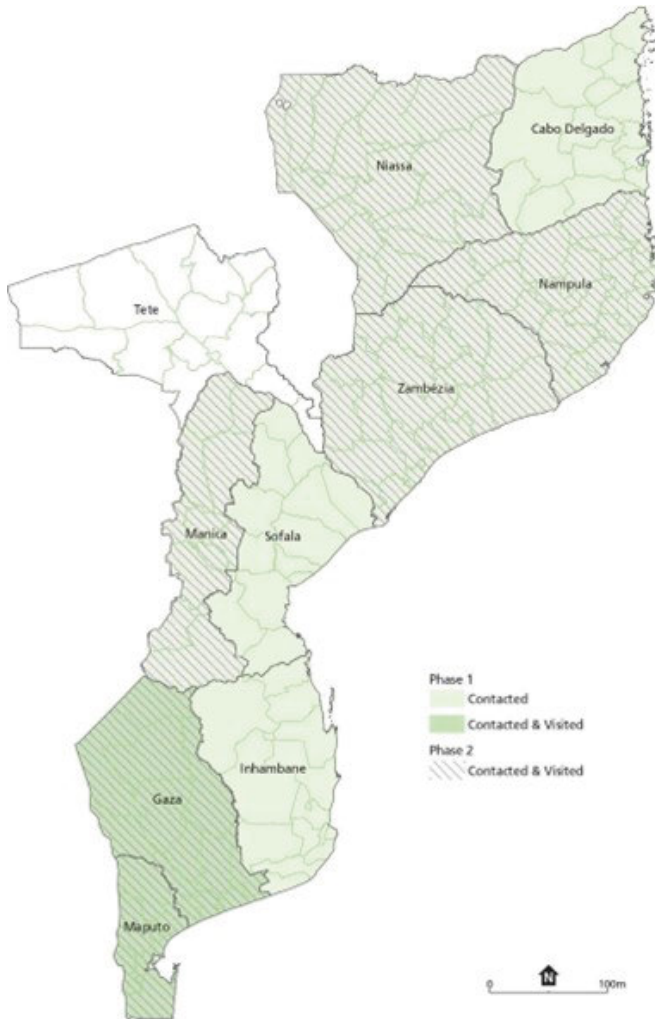
This study uses a mixed-methods research technique, combining quantitative and qualitative methods. It is primarily informed by a) primary and secondary data collected from fieldwork, official documents, and national databases, b) two case studies, and c) participatory organizational research within the Agribusiness Market Ecosystem Alliance (AMEA). The time frame for the research is divided into four phases between 2013 and 2023, as outlined below.

1.4.1. Data Collection, Analysis, and Data Limitations

Data collection

To effectively evaluate the durability and changing characteristics of inclusive production models for smallholder farmer livelihoods, data were collected in four phases. Phase I (2013/2014)'s objectives were twofold. It aimed to gather available information in literature and primary data to a) provide a background of agro-investments in Mozambique and b) select research topics and cases. Secondary data on legislation and investment governance, including incentives, strategies, and plans of action, were collected together with primary data. Primary data from central databases, such as from the Center for Promotion of Investments (CPI) and the former Center for Promotion of Agriculture (CEPAGRI), included land-based investments available since 2003, totaling almost 500 investments by 2013. Semi-structured key informant interviews were also conducted with central government agencies (CPI, CEPAGRI, and MICOA), local (district and provincial) governments (Figure 1), active civil society groups advocating for land rights, peasant organizations (UNAC and OMM) and a few large investors (Annex A). Lastly, mapping the hubs of investments distribution was possible due to the data collected (see Chapter 4).

Figure 1.1: DPAs contacted during Phases I and II, by Province



After the compilation of data on land-based investments in Phase I was completed, Phase II (2014) began. During this phase, as many active investments as possible were sampled throughout the country. The objectives of the sampling were threefold. The first objective was to identify accurate geography and sectors of investments and control for inactive investments in the database. Secondly, as much information as possible on Mozambican agro-investments' practices, patterns, and characteristics was collected. Thirdly, suitable case studies were identified for Phase III. Visits to over 40 districts in eight provinces (Figure 2) highlighted a significant mismatch between officially registered investments in national-level databases and actual active investments on the ground (Chapter 4). Therefore, a careful investigation into the agricultural sector with the help of the local bureaus for

Phase III (2014-2016) consisted of case studies on two crops in two regions of the country: sugarcane in Maputo Province and soybeans in the plateaus of Gurue district, Zambezia Province. The case study in northern Maputo Province involved two sugarcane mills, 12 farmer organizations (producing and not-producing sugarcane), and 365 households (Annex A). In Gurue, active and failed contract farming schemes were identified, along with studies of the evolution of the soybeans sector in the region, the role and dynamics of smallholders associations, forums and federation, the role of a commercial class of smaller producers and the sampling of 160 producers. Interviews with traditional authorities, as well as focus groups discussions (FGDs) were conducted with various groups and stakeholders – while controlling for differences in social classes and gender participation. Semi-structured interviews with investors (See Annex A and Table 1.2) were conducted before selecting households in both regions to capture topics that would enhance the accuracy of the research and local determinants of socio-economic development.

Controlling for gender and social classes participation is crucial. Ensuring balanced participation of diverse groups with FGDs (in some cases all-female FGDs), resulted in the tailoring of structured questionnaires (Annex D) by incorporating relevant contextual information. This ensured a nuanced understanding of, for example, what assets were considered relevant for households, and what smallholders understood as key for social status improvement and livelihood enhancements.

Finally, Phase IV (2017-2023) consisted of participatory organizational research, which benefits from the participation of local voices in the co-creation of knowledge (Burns et al., 2014) and culminated in a final field visit to Mozambique in July 2023 to conduct follow-up field observation and interviews. The participatory organizational research period leveraged over six years of experience with my current work at the Agribusiness Market Ecosystem Alliance (AMEA). AMEA is a network of more than 30 members and partners that work towards the development of farmer organizations in Africa and Latin America. I directly participated in Working Groups and in the publication of numerous gray literature case studies, reports, and evaluations pertaining to the field of farmer organizations development. The fieldwork in 2023 consisted of a total of 28 semi-structured interviews with key informant stakeholders (Annex A), such as government officials, community representatives, farmer organizations' members and leaders, and civil society organizations. This allowed for an update of the case studies since Phase III, which enabled an element of a longitudinal study for this thesis. The field work included interviews with AMEA members who are active in Mozambique. The objective of Phase IV was to provide a more comprehensive overview of what has changed since Phase III and enable more current reflections about the processes and outcomes integrating smallholder farmers in the cases studied.

Table 1.2: Summary of research techniques data collection, per research phase

| Phase I | | |
|---|--|--|
| Information collected | Source | Collection technique |
| Data about agro-investments | CPI | Database analysis |
| | CEPAGRI | Document review |
| | Archives of the National Library | |
| Information on legislation and investment governance | 11 official documents | Document review |
| | 49 key informants of 39 organizations (Annex A) | Semi-structured interviews |
| Phase II | | |
| Sampling of active agro-investments (Annex B) | 69 agro-investors | Site visits |
| | 50 districts (SDAEs) | Semi-structured interviews |
| | 6 DPAs and their SPGCs | Structured data collection questionnaires – (Annex C) |
| | | Database analysis |
| Phase III | | |
| Insider view of communities affected and non-affected by agribusiness' activities (Annex A) | 12 communities (incl. Traditional authorities) | FGDs, with groups of 5-10 participants, including gender-balanced groups and all-female groups |
| | | Structured questionnaires (Annex D) |
| Data on production model participant and non-participant households | 365 households (sugarcane) | Structured questionnaires (Annex E) |
| | 160 households (soybeans) | |
| Phase IV | | |
| Examination of changes in the local contexts and outcomes of case studies since Phase III | 28 interviews with 24 key informant organizations / institutions (Annex A) | Semi-structured interviews, FGDs, and site visits |

Data analysis

Throughout the thesis, mixed-methods approach were applied. The analysis draws on the data collected from the community semi-structured interviews, household surveys, FGDs, key informant interviews, and official investments datasets (Annex A through E). Data analysis follows the protocols established by CIFOR's LIFFE (Large-scale Investments in Food, Fiber and Energy) Project. LIFFE (2013-2016) aimed to identify conditions under which different business models (investments in the forest, agricultural, and biofuel sectors) could make positive contributions to local development and macro-economy, while minimizing environmental footprint. The Project involved research in four countries, including Mozambique, where I was the researcher for CIFOR.

In Chapter 4, the results were based on the analysis of a) cleaned and coded official governmental databases on agricultural and forestry investments, and b) cleaned and coded agro-investment data collected by standardized investors questionnaires (Annex C). In Chapters 5 and 6, the data for household surveys were triangulated prior to being entered in an excel file, then cleaned, coded, and analyzed. CIFOR supported this analysis that encompassed descriptive statistics including frequency, summary tables, and t-tests. More specifically, the data used in Chapter 5 (sugarcane) was thoroughly analyzed statistically. Through descriptive t-test statistics, the chapter highlights key differences between participants and non-participants. Differences are observed across four themes: household characteristics, livelihood activities, agricultural production dynamics, and socioeconomic development. Variables included in the analysis are depicted in the chapters. Four different indices were constructed for this analysis. The livelihood diversification index (LDI) and the crop diversification index (CDI) are constructed using methods proposed by the Intergovernmental Panel on Climate Change (IPCC) to monitor livelihood vulnerability (Hahn et al., 2009). The food insecurity index is based on the Household Food Insecurity Access Scale (HFIAS), developed by USAID, to estimate the prevalence of food insecurity (see Coates et al., 2007). The welfare index is based on the ownership of 27 different types of assets (see questionnaire in Annex E). The analysis and methodology of Chapters 5 and 6 are further explained in the respective chapters.

Given the strong participatory organizational research used for Chapter 7 (see 1.4.3), the qualitative information collected underwent coding and analysis to identify themes and patterns using inductive reasoning. Finally, across the case study chapters, concepts further explained in Chapter 2 (Literature Review) are used to base the analyses and discussions.

Limitations to data collection and analysis

Although the adopted empirical approach yielded valuable insights into the differences between participant and non-participant smallholder farmers in the case studies' models, it did not control for confounding variables or endogeneity and simultaneity biases. This implies that observed differences could not be conclusive attributed to scheme participation, particularly since the approach cannot account for self-selection biases; for example, when the likelihood to participate in an inclusive production model is shaped by differences in household characteristics and activities. However, since research activities involved the collection of extensive qualitative data, including with control communities, the analysis of results, especially causality, drew heavily on qualitative analysis of local processes, notably household perceptions of participation benefits and participation and non-participation motives and constraints.

An additional limitation of this data analysis was the mismatch between official databases and investors' reality in the field. However, this issue could be circumvented by FGDs and interviews, as further explained in Chapters 5 and 6 methodology sections. In terms of practical limitations, armed conflicts hindered travel during Phases I through III to important agricultural regions of the country. Sofala and Cabo Delgado provinces were inaccessible during the field research period. Sofala is a province which has traditionally attracted many agro-investments. In addition, road and climate conditions prevented access to more isolated investment locations, particularly in Manica and Niassa provinces. Finally, lack of full cooperation of some provincial departments of agriculture set up extra hurdles to the identification and location of investments in provinces such as Maputo, Niassa, and Manica in the early phases of the research.

1.4.2. Case studies

Case studies aim to map, illustrate, or exemplify a context-specific phenomenon (Zainal, 2007). This thesis focused on the phenomenon of smallholder farmers' participation in the sugar and soybeans value chains. I have selected two case studies based on the results from Phase II: sugarcane production model in Maputo Province and soybean production model in Gurue, Zambezia Province. These case studies offer us opportunities to analyze the long-term effects of inclusive production models. They also allow for the generation of knowledge in terms of replicability, scalability, and sustainability of the production models.

Case studies' research sites

There are four main sugar mills in Mozambique. Two of them are located in Maputo Province, and the other two in Sofala Province. However, there were considerable threats of armed clashes between Mozambique's two main political parties³ in the latter region. Therefore, for security reasons, Maputo Province was selected as the research site for the sugarcane cases. Maputo province was selected as a research site for additional reasons. Firstly, there has been a revitalization of the sugar cane sector, followed by the significant volume of production. Additionally, the two sugar mills selected engage smallholders in different ways (block farming), generating interesting cases to study the relationship between agro-investments and the smallholder farmers living in the region, and whether they are integrated or not in the business value chain.

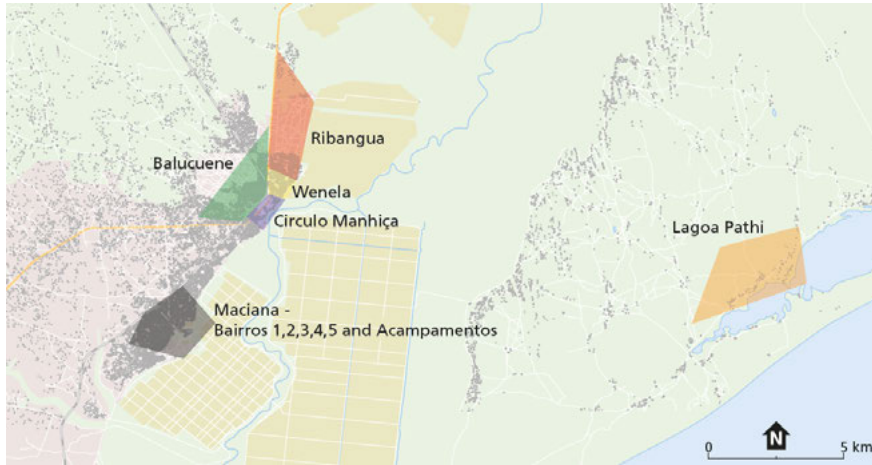
While the sugar mill sites are located in the district of Manhiça, smallholders involved in the business model are distributed across three districts: Manhiça, Magude, and Moamba (see Figures 3 and 4 for the locations of sugar mills and communities).

³ Following the ending of the civil war in 1992, Mozambique observed a period of relative peace. However, between 2013 and 2018, tensions between the two main political parties, FRELIMO and RENAMO, flared again in specific provinces of the country. This includes Sofala, where the two other sugar mills are located.

Figure 1.3: Research site for case study Açucareira de Xinavane (AdX)

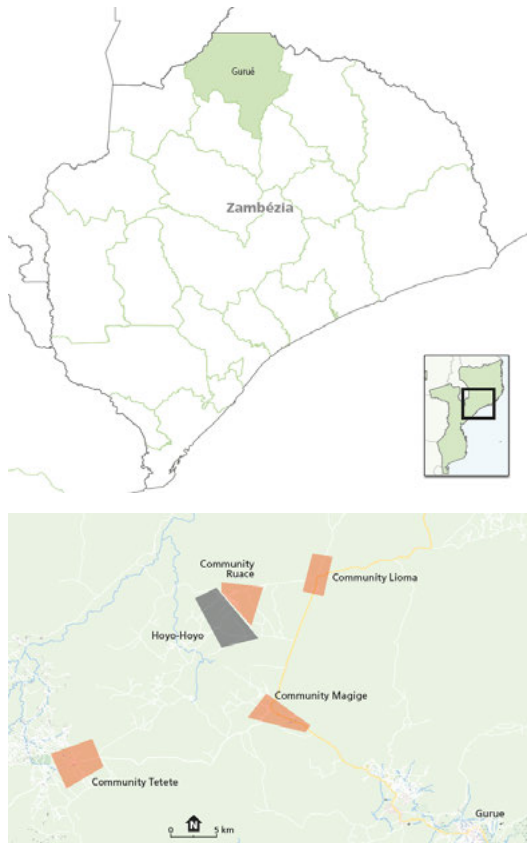


Figure 1.4: Research site for case study Maragra S.A.R.L.



The soybean site was chosen as a means of studying the evolution of a value chain from nascence to collapse, and eventual rethinking. Initially, the sector saw the emergence of successful cases of smallholder involvement. There was a noticeable increase in outcomes such as productivity and income, including the prospects of the rise of a commercial class of smallholders in Gurue district (Smart and Hanlon, 2014). Gurue is also the district where contract farming schemes for soya production grew to significant dimensions and is currently the district with the largest number of smallholder soy producers. Additionally, this evolution took place over a relatively short time span. In this sense, studying the characteristics of soybean expansion in this district became a relevant case study to understand the processes of smallholder involvement and agency in production models. Therefore, four main locations of soya production in Gurue district were selected for the study: Ruace, Lioma, Magige and Tetete (Figure 5).

Figure 1.5: Research site for case study on soya



1.4.3. Participatory Organizational Research

Finally, this thesis is complemented with participatory organizational research, based on my work with the Agribusiness Market Ecosystem Alliance (AMEA) between 2017 and 2023. AMEA is a Dutch Foundation established in 2016. It is a network with more than 35 organizations by 2024. One of the main missions of AMEA is to defragment the development of farmer organizations. Through the AMEA network, the membership reaches millions of smallholder farmers in more than 80 countries. AMEA members and partners create a supportive ecosystem for farmer organizations by delivering collaborative system change strategies. The work is centered on inclusive and sustainable growth by improving and better coordinating the business development services for farmer organizations and agri-SMEs which in turn, creates added value for farmers.

A key way to deliver on this mission is through Knowledge Generation and Dissemination activities, which I lead. AMEA has worked on research in partnership with members, partners and knowledge institutions over the past six years⁴.

1.4.4. Ethical considerations

As this research involved human subjects, I applied ethical principles to prevent any potential harm to participants, including applying informed consent and maintaining anonymity of the identity of the participants who requested so. Specifically, strict adherence to relevant ethical guidelines was maintained (Polonsky and Waller, 2011).

Firstly, participants provided informed consent before engaging in the study. Every interaction was preceded by either an introduction letter or a clear oral explanation of the research objectives. Secondly, participants were given the choice to remain anonymous to safeguard their confidentiality. Thirdly, participants were encouraged to ask questions about the significance of their involvement, specifically how the study's outcomes could potentially contribute to their livelihoods, and daily or work activities. Additionally, some findings were shared with the communities, farmer organizations, and other stakeholders that requested so in the different Phases of the study. Moreover, certain results were disseminated through a working paper, workshop, conferences, and articles. Finally, all study-related information was presented in the participants' preferred language (native languages through the support of enumerators, or in Portuguese and English) to ensure comprehensive understanding.

1.5. THESIS OUTLINE

This thesis is structured in eight chapters. Following this introductory one, Chapter 2 (on the literature overview) positions this thesis in the broader academic and practice debates. Chapter 3 presents the contextual background and how broader academic debates have played out in Mozambique.

Subsequently, Chapter 4 illustrates the main characteristics of agro-investments in Mozambique, its patterns and practices, and how it compares (contrasts or is similar) to what is found in literature. For example, it illustrates main trends in terms of land acquisition and geographical and sectoral patterns, and analyzes how land and investments governance may have contributed to the current investments context in the country. At

4 Chapter 7 further elaborates on the participatory organizational research and the role of AMEA in this study.

the same time, it explores the nexus between agribusiness and smallholder farmers. The chapter draws partly from CIFOR's Working Paper number 201.

Di Matteo, F. and G. C. Schoneveld. (2016). Agricultural investments in Mozambique. An analysis of investment trends, business models, and social and environmental conduct. Working Paper 201. Bogor, Indonesia: CIFOR.

Chapter 5 analyzes the long-term effects of inclusion of smallholder farmers in the sugarcane production models in Maputo Province. It examines various aspects of the outcomes of the involvement (and exclusion) of smallholders in contract farming schemes (2014 - 2023). It looks at old and new challenges posed by participation and non-participation in the production models and at the outcomes beyond income and productivity that the models brought about to smallholders involved in the sugarcane value chain.

Chapter 6 describes the soybeans case study and examines the processes of expansion of the soya value chain in Gurue, Zambezia Province (2015 - 2023). The chapter is an analysis through the lens of smallholders' experience with contracts, open market sourcing schemes, and self-organization. It discusses the elements which made them inclusive or not, and highlights the role of smallholder agency in shaping the outcomes for smallholder farmers' involvement in the production system. This chapter expands on the paper published for the special issue of the African Summit of the London School of Economics' The Public Sphere Journal.

Di Matteo, F., Otsuki, K., and Schoneveld, G.C. 2016. Soya bean expansion in Mozambique: Exploring the inclusiveness and viability of soya business models as an alternative to the land grab. The Public Sphere Journal, LSE Africa Summit Edition 2016, 61-86.

Chapter 7 builds on my current work at AMEA (2017 - 2023), and makes use of participatory research to examine the role that farmer organizations play in bringing about inclusion for smallholder farmers. It uses the examples of sugarcane and soybean to illustrate the analysis.

Finally, a concluding chapter synthesizes all chapters, reflects upon the changes observed in the two case studies in the recent years, and offers key conclusions about the role of agribusiness in the quest for more inclusive models of production in Mozambique.

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2

Literature Review

2.1. INTRODUCTION

This research aims to assess how inclusive production models contribute to the improvement of smallholder farmers' livelihoods over time. It builds on a large database of agro-investments in Mozambique, participatory organizational research, and more specifically from two empirical case studies on the soybean and sugarcane sectors. However, before delving into the empirical chapters, this chapter outlines the main bodies of literature and theoretical debates to which this thesis research contributes.

Below I demonstrate the available literature related to inclusive production models. How have these models become prominent in current academic debates and policy-making agendas? Are these models expected to contribute to smallholder farmers' livelihood improvement? And are there insights about the long-term implications of involvement (inclusion) in the models?

I begin with a brief overview of the objectives of this literature review, followed by a description of key concepts, such as land grabbing and inclusive production models. These concepts explain how early concerns with the involvement of agribusiness investments in the development agenda evolved into embodying potential solutions for common agricultural development challenges. Subsequently, I expand on what the literature posits about specific examples of inclusive production models that are relevant for this study.

Finally, based on the analyses of what has been documented, this literature review concludes that there are dimensions of smallholder inclusion in agricultural production models that have not yet been thoroughly explored. Therefore, I present 'embedded autonomy' as a suggestion to analyze the relationship between smallholder farmers and agro-investments, as a way to contribute to this gap in current debates.

2.2. OBJECTIVES OF THIS LITERATURE REVIEW

This chapter aims to provide an overview of the relevant literature that explores the evolving definitions of inclusive business and alternative production models and their implementation as substitutes to large-scale plantations. Within the agricultural sector, these alternative models have long been regarded as versatile solutions to a myriad of challenges hindering the generation of benefits for rural populations. Therefore, this review examines the multifaceted role that inclusive business - and more specifically, inclusive production models - have played in addressing critical matters such as livelihoods and

mitigation of risks and detrimental effects of participation in value chains. Two main gaps within the existing literature are brought to the forefront.

The first gap centers on the degree of involvement that smallholder farmers can expect from participating in inclusive agricultural production models. For the purpose of this thesis, this is conceptualized as the degree of embeddedness. The second, equally significant gap pertains to the degree of independence and empowerment that smallholder farmers have to make relevant decisions within the production model framework. This is conceptualized as autonomy. This chapter scrutinizes these gaps, laying the foundation for an analytical framework outlined at the end of this chapter.

The discourse surrounding inclusive business thus far lacks comprehensive discussions and a structured framework to elucidate the intricate interactions among the principal actors. Inclusive business has become a buzzword. This gap in the literature hinders our ability to fully understand how smallholder farmers perceive inclusion in production models, and to grasp the implications for the upscaling and long-term sustainability of so-called inclusive production models. As such, current debates also fall short of providing meaningful insights for policy-making (Bellemare and Bloem, 2018). Moreover, empirical studies have rarely made use of long-term evaluations of the benefits of smallholder involvement in such alternative inclusive production models. In other words, there is a dearth of studies on long-term effects of inclusion (Burnod et al., 2012; Brockington and Noe, 2021).

In an attempt to provide a balanced and in-depth review, I made certain choices to narrow the scope of this literature review. The studies included (gray and peer-reviewed literature) are conducted in English and Portuguese, in Sub-Saharan Africa including Mozambique, with the acknowledgement that there are relevant studies beyond these geographies that directly contribute to the objectives of this dissertation. The intention is to strike a balance between breadth and depth, ensuring that the literature reviewed forms a cohesive and relevant foundation for the empirical chapters of this study.

2.3. FROM LAND GRABS TO SMALLHOLDER INCLUSION

In this section, I demonstrate how inclusive production literature interacts with a phenomenon that was thoroughly examined by scholars and development practice actors over the past two decades: land grabbing. This provides justification for the selected models of inclusive production that are relevant for the empirical case studies.

2.3.1. The land grab debate

Typically, the term 'land grab' refers to the acquisition of vast tracts of land, often in developing countries by foreign or domestic actors (Zoomers, 2010). These acquisitions take many forms, such as land right purchases, long-term leases, or other arrangements, often resulting in the outright displacement of local communities (Zoomers and Van Westen, 2013).

While the concept of land grabbing is not new and has historical parallels dating back to colonial times, it has gained renewed attention over the past decade due to its unprecedented scale, pace, and new drivers (Cotula, 2013; Liberti, 2013). Those are well captured by the existing literature. For example, economic interests played a significant role in driving land grabs, including the need for food, fiber and fuel production, mineral extraction, and speculative investment, *inter alia* (Zoomers, 2010; McMichael, 2013; Kaag and Zoomers, 2014). Additionally, land grab is often associated with international and national private sector actors, but governments have also engaged in land grabs. This is typically for geopolitical reasons, with some acquisitions driven by the objective to secure access to natural resources or to enable large-scale infrastructure development (Borras and Franco, 2010; Hall, 2011; Margulis et al., 2013).

Critics argue that land grabs often lead to negative social, cultural, and environmental consequences (Davis et al., 2014). For instance, large-scale land acquisitions can displace local communities, disrupt traditional livelihoods, and lead to land degradation (Zoomers, 2010; Borras et al., 2020). These impacts have long contributed to food insecurity, poverty, and social unrest, exacerbating global inequality (Oya, 2013; Yang and He, 2021). Additionally, one of the central issues in the land grab debate is the question of land tenure and property rights (Salomao, 2020). Land grabs tend to involve land that is traditionally used by local communities where there is a lack of clear legal protections for these communities, making them vulnerable to displacement (Thomson, 2014; Lunstrum, 2016). As for the environmental impacts captured in literature, many authors demonstrate that large-scale land acquisitions can lead to deforestation, water resource depletion, and soil degradation thereby contributing to environmental degradation and climate change (Lazarus, 2014; Yang and He, 2021). Moreover, critics argue that such practices are unsustainable in the long term (Schoneveld, 2013).

The land grab debate has prompted social movements, activism, and campaigns aimed at raising awareness, advocating for the rights of affected communities, and pressuring governments and corporations to change their practices (Brilmayer and Moon, 2014; McKeon, 2016). For example, the debate has led to discussions about the need for stronger governance, transparency, and regulations related to land acquisitions. It has also emerged

in other bodies of literature, such as flex crops (Borras et al., 2016), food sovereignty (Cochrane, 2011; Weber, 2016; McMichael, 2018), and food systems (Bené et al., 2019; Steiner et al., 2020). Over time, international organizations, governments, and civil society groups have also increasingly called for guidelines and principles to ensure responsible land investments (Edelman et al., 2013).

More than one decade on, the land grab debate is well-founded, but still far from conclusive. There have been very recent calls for more interdisciplinary, holistic research, and more evidence-based data about this ongoing phenomenon (Yang and He, 2021). In summary, as a scholar concept, land grabbing has developed into a well-established field of research and an important domain for policy intervention (Zommers et al., 2017). It focuses on how to deal with increasing pressure on land which is driven by public and private actors, as well as the socioeconomic and environmental impacts of the practice. It has led actors to rethink the risks of involving agro-investments in rural development while improving social and economic benefits to local populations (Burnod et al., 2012).

2.3.2. Inclusive businesses

The extensive examination of the land grab phenomenon has led many scholars and development organizations to advocate for alternative, more inclusive business models in contrast to the prevalent large-scale land-based investments (Cotula and Leonard, 2010). Concepts of inclusivity are rooted in the reactions to discourses and practices of the 1990s' liberalization of investment and trade regimes as well as the development policies of the early 2000s. Inclusive business emerged from considerations regarding the distributive impacts of economic growth within a prominently pro-poor growth agenda (Kakwani and Pernia, 2000; Likoko and Kini, 2017), gradually evolving into a broadly embraced development principle (Schoneveld, 2020). Since then, the term inclusive business has been utilized in diverse manners by various stakeholders, as outlined in the introduction of this thesis.

In terms of agricultural development, governments often focus on employment generation and involvement of smaller producers in the value chain to spur discourse in favor of 'inclusive' agro-investments. For policy-makers, promoting inclusive growth includes balancing growth across sectors, that is, between private stakeholders and the government (De Mello and Dutz, 2012). Private sector organizations tend to use 'inclusive' concepts that are closely related to their Environmental, Social, and Governance (ESG) agendas, but also look at productive employment as a means to promote growth, increase incomes, and alleviate poverty (Zulkitabri, 2018). As for those working in the international development sector, sub-concepts that contextualize the inclusive business concept are used which make inclusive business terminology more actionable. For example, 'Opportunities for

the Majority; Business Linking smallholder farmers and small companies; Making Markets Work for the Poor; the Inclusive Market Development concept, the Pro-poor Value Chain Development concept, and the Win–Win Profit Approach’ (Likoko and Kini, 2017; p.86). As for scholars, whilst there is a general agreement in terms of the role of inclusive business’ to go beyond profit maximization, there is debate on the assumption that market forces should (and will) be willing and able to sustain interest in the well-being of the poor (Gupta et al., 2015). In addition, scholars question the belief in the sufficiency of market forces to resolve the poverty challenges of contemporary societies (Likoko and Kini, 2017).

In search of a common thread between the various uses of inclusive business concepts by different stakeholder groups, it is possible to argue that Inclusive Business (IB) and Inclusive Business Models (IBM) concepts indicate a more sustainable and positive role of business in society. For agricultural development, inclusivity is often linked to solutions for broader issues, such as food security, nutrition, minimization of environmental impacts, and generation of positive social outcomes and improved livelihoods for those involved.

Recognizing the limitations to what the public sector interventions can achieve in the post-liberalization era, many stakeholders (including governments, donor agencies, and international organizations) are challenging and encouraging the private sector to contribute more proactively towards solutions to the broader issues aforementioned (Schoneveld, 2020). For example, there is an increasing body of literature pointing out ways to understand the role of value chains for nutrition (Gelli et al., 2015; Béné et al. 2019). Also, recent research points to the need for more holistic and comprehensive analyses of how the current organization of food production, processing, distribution and consumption contributes to food security (Ericksen, 2008; Van Westen, 2021). It is widely assumed that a) businesses can be more efficient and effective in leveraging resources and expertise to deliver their goals and b) corporate profit and social goals can be complementary (Porter and Kramer, 2011; Van Westen et al., 2019).

In summary, there is general agreement that our food systems are failing us, and that coordinated action is needed from a variety of stakeholders to address the challenges (Steiner et al., 2020). Albeit without consensus, the private sector is an increasingly key stakeholder group in the efforts to promote agricultural development and inclusion (see UNDP, 2010; GIZ, 2013; IISD, 2014; Lundy et al., 2014; FAO, 2015 for instance). However, there is no formula to how agro-investments can unequivocally contribute to the development agenda and inclusiveness of local populations (Ros-Tonen et al., 2015). This happens partly because no two businesses are the same, given that they use different strategies to operate (e.g. business models). As outlined by Hall et al. (2017:1) “whether or not investments in African agriculture can generate quality employment at scale, avoid dispossessing local

people of their land, promote diversified and sustainable livelihoods, and catalyze more vibrant local economies depends on what farming model is pursued". This is where the inclusive production models literature can shed some light.

2.3.3. Inclusive production models as an alternative to land grabbing

As seen in the previous section, inclusiveness tends to be associated with the minimization of negative impacts and the creation of new opportunities under the scope of private sector participation in the development agenda (Zoomers and Otsuki, 2017; Van Westen, 2021). One of the most common ways to attempt to minimize negative impacts and create new opportunities for local populations is through the integration of smallholder farmers in agro-investments' production models (Smalley, 2013). That is, through so-called inclusive production models.

This is because one significant differentiator between the poor and the extremely poor⁵ is the higher likelihood of the latter group to rely on agriculture as their primary source of livelihood. (Bellemare and Bloem, 2018; Castañeda et al., 2018). To illustrate, approximately half the world's extreme poor work in smallholder production, and most lack access to reliable social safety nets to absorb shocks (Schoneveld, 2022). Moreover, according to KIT et al. (2006), smallholders typically participate in agriculture value chains in two ways: (1) vertically through undertaking different activities such as cultivation, post-harvest handling, and marketing of their produce; (2) horizontally, through collective action in farmer groups, such as associations or cooperatives.

As such, the specific focus on *inclusive production models* is because it is one of clearest ways to potentially generate the most positive impact for smallholder farmers either vertically or horizontally (Wach, 2012). Across a large body of literature, inclusive models of production are thus depicted as a bridge connecting smallholders, and sometimes their farmer organizations (e.g. cooperatives), to competitive value chains, while avoiding the risks that large-scale land investments involve from a private sector point of view (UNDP, 2010; Vermeulen and Cotula, 2010; GIZ, 2013; Zoomers and Otsuki, 2017).

In Sub-Saharan Africa (SSA), for instance, lack of technical knowledge, information, inputs, and access to competitive value chains enhance smallholders' risk perception and prevent the great majority of those who produce surpluses from engaging in more lucrative agricultural trade (Bijman, 2008). However, these are households with access to natural resources, such as land and water for irrigation, and extensive knowledge of local

⁵ According to the World Bank (2023), the difference from the poor to the extreme poor depends on income. Those considered poor live on less than USD 3.10 on average per day, whereas the extreme poor live on less than USD 2.15 on average per day.

agro-ecological conditions. These are valuable assets for private sector actors who are willing to engage in agricultural production and to secure supply in developing countries, but who desire to avoid the potential challenges of direct cultivation by means of land acquisition (Van Westen, 2021). The alignment of these interests is a starting point to many alternative production models that involve the private sector and smallholder farmers in, theoretically, mutually benefiting economic relationships (Masakure and Hanson, 2005; Vermeulen and Cotula, 2010; Teklemariam et al., 2015).

According to the literature on inclusive agribusiness, these production models foster inclusiveness among smallholder populations across four fundamental dimensions (Hawkins and Van Rij, 2023). The first dimension is ownership, which is evaluated by scrutinizing factors such as equity shares in the business and the ownership of critical assets such as land and processing facilities. The second dimension is voice, which revolves around stakeholders' ability to influence crucial business decisions. It encompasses factors such as the weight of their influence in decision-making processes, mechanisms for review and grievance handling, and strategies for addressing imbalances in information access. The third dimension centers on risk and how stakeholders manage it. Risk evaluation extends beyond traditional commercial production, supply, and market risks caused by various social, cultural, economic, and natural factors. It also considers broader risks, including political and reputational risks associated with the business. A final dimension is reward, evaluating the distribution of economic costs and benefits within the business model. This includes considerations related to price setting, financial, and contractual arrangements (Vermeulen and Cotula, 2010; Boche and Anseeuw, 2013).

Based on these parameters summarized by Vermeulen and Cotual (2010), the authors identify six inclusive agricultural production models: contract farming, management contracts, tenant farming and sharecropping, joint ventures, farm-owned businesses, and upstream and downstream business links.

For the purpose of this study, I focus on *contract farming* because it is widely practiced in Mozambique as an inclusive production model (Nova and Rosário, 2022).

2.4. CONTRACT FARMING AS AN INCLUSIVE PRODUCTION MODEL

There is no single, universally accepted definition of contract farming; there are multiple meanings depending on contractual terms and conditions. Contract farming arrangements depend significantly on the parties involved, the region of implementation, and the specific agricultural context (Bijman, 2008; Barrett et al., 2012; Minot and Sawyer, 2016). However,

at the heart of contract farming often lies an agricultural production arrangement in which a farmer or a farmer organization (often referred to as a 'contract farmer' or 'outgrowers') enters into a contractual agreement with a buyer or agribusiness organization, referred to as the 'contractor' (FAO, 2023). Among other elements, these contracts often stipulate production agreements, inputs, financing arrangements, and prices that the farmer can expect from the contractor. Additionally, the quality standards and volumes of production expected from the producer, and whether the producer can expect technical assistance and risk-sharing commitments are outlined (Bijman, 2008; Wach, 2012).

Contract farming has long been practiced worldwide and the focus of extensive studies by scholars for over four decades (Lamb and Muller, 1982; Glover, 1984; Jackson and Cheater, 1994; Bellemare and Bloem, 2018). With the growing global interest for inclusive production models, contract farming has become increasingly common as an instrument of agricultural production (Otsuka et al., 2016). Initiatives led by private sector organizations and backed by policy-makers and development practitioners that aim to generate tangible economic benefits for rural populations and in particular smallholder farmers are of specific interest (Wach, 2012; Meemken and Bellemare, 2020).

According to Jarnholt (2020), there have been three phases of contract farming surge as a market-driven solution to challenges faced in agricultural development. The first phase stems from many African and Asian countries' post-independence attempts to counter the decreasing attractiveness of plantation models that followed the nationalization of foreign colonial farms (Kirk, 1987). The second phase followed the Structural Adjustment Programs and market liberalization reforms implemented in several developing countries. As a reduction in state interventions created space for private investments, contract farming was in some cases promoted as a means to extend market services and solutions to smallholder farmers who were marginalized by the increasing market liberalization (Little and Watts, 1994; Kirsten and Sartorius, 2002). The third phase, as explained earlier in this chapter, was in part a response to the land grab phenomenon and the increasing claims for more inclusive production models (Jarnholt, 2020).

As such, the relation of contract farming with agro-investments is not new and has been associated with a potential avenue to trigger socioeconomic benefits for rural populations (Oya, 2012, Prowse, 2012). However, there is no agreement that this form of production – and involvement of smaller producers – is in fact beneficial to all parties (Bellemare and Bloem, 2018). The debate is normative and in essence revolves around whether contract farming is good and for whom. For years now, these debates include, among other things, whether or not contract farming has positive impacts on smallholder livelihoods, and reduces rural inequalities and rural poverty (Bolwig et al., 2009; Herrmann and Grote,

2015). Another key area of discussion is whether or not contract farming is considered more beneficial to the farmers or the companies (Oya, 2012; Ochieng, 2010; Little and Watts, 1994).

Arguments in favor of contract farming posit that under these models, farmers and buyers make advance agreements on volume, quality, time of delivery, use of inputs, and price or pricing formula (Otsuka et al., 2016). Therefore, contract farming increases transparency and manages expectations in trade relations, as opposed to purely open-market sourcing relations, for instance. Also, contract farming is viewed as a means to improving production efficiency and income of farmers in general, and small-scale farmers in particular (Maertens and Vande Velde, 2017; Khan et al., 2019), while mitigating prevalent market failures – such as inadequate access to inputs and finance, good agricultural practices and new crops – and reducing risks for smallholder farmers (Meemken and Bellemare, 2020). These arguments increasingly consist of effectiveness studies measuring the ‘welfare’ impacts of participation of smaller farmers in such models of production (Oya 2012; Bellemare and Bloem; 2018; Ton et al. 2018).

On the other hand, critics of contract farming argue that there is room for strengthening its effects on poverty reduction and that it has long been subject to conflicting ideological interpretations (Meemken and Bellemare, 2020; Schoneveld, 2020). For example, it can be argued that smallholder farmers are often trapped in a vicious cycle characterized by low-intensity farming, low yields, limited market access, and profits that are not sufficient to cover production costs, re-investing, and meeting households needs (Meemken and Bellemare, 2020; Jarnholt, 2020). Additionally, there is a growing literature on the adversities of inclusion (Hickey and Du Toit, 2007; Du Toit, 2009), in which studies show that contract farming can also generate community differentiation and deepen inequalities (Singh and Prowse, 2013; Martiniello et al., 2022).

These opposing views have polarized the debate around contract farming, which is framed either as win-win or win-lose for agribusinesses and smallholders (Pritchard and Connell, 2011; Oya, 2012). And whereas early scholarly contributions offered conceptually rich, nuanced and highly grounded perspectives (e.g. Glover 1990; Glover and Kusterer 1990; Little and Watts 1994), these effectiveness studies often reproduce crude understandings of farmers and institutions and little is discussed about how ‘inclusive’ contract farming models function in the long term. This implies that the responses to the question frequently raised in much of the literature, regarding whether contract farming leads to improved well-being for participating households, seldom are able to establish causation (Bellemare and Bloem, 2018). These responses typically pertain to a limited set of crops, a geographically constrained region, or a specific, short timeframe (Ton et al., 2018).

Furthermore, what current literature seldom provides is a comprehensive understanding of the extent to which smallholder farmers are fundamental participants within the production models into which they have been integrated. It also lacks depth into how this degree of integration - or as I call 'embeddedness in the value chain' - influences smallholders' abilities to shape pathways that align with their goals of improving their livelihoods. This reflects on key determinants of smallholder welfare, including food security, nutrition, alternative livelihood opportunities, and equality among other factors (Kissoly et al., 2017; Van Westen, 2021; Wangu, 2022).

There are authors who examine the 'embeddedness', or how integrated smallholders are in the value chains in which they participate (Ros-Tonen et al., 2019), as there are authors who examine 'autonomy' of smallholders. Autonomy can be defined as a "social construct that refers to the self-organizing capacity of people, communities, and movements", in a way that also considers their resources and agency (Van der Ploeg and Schneider, 2022:1). However, there is a dearth of studies that delve into the relationship between embeddedness of smallholders in the value chain and their autonomy within production models, as well as case studies about when various degrees of balance between these two aspects are struck.

In summary, there is a persistent question on how much autonomy there is for smallholder farmers who participate in inclusive production models and to which extent the balance of both contributes or not to sustainable and mutually beneficial commercial relationships between smallholders and agro-investments in the long run.

2.5. EMBEDDED AUTONOMY AS A CONCEPTUAL FRAMEWORK OF ANALYSIS

Drawing from the literature analyses, I have illustrated the underexplored dimensions concerning the inclusion of smallholder farmers in agricultural production models. Consequently, I propose a conceptual framework as a means to investigate the interactions between smallholder farmers and agro-investments, aiming to address this existing void in current debates. Across the case study chapters, I use thus a framework of analyses based on Peter Evans' (1995) "embedded autonomy".

A premise of this study is that variations in smallholder farmers' participation in a production model depend on the variations in the production models themselves. Neither agro-investments nor smallholder farmers (as stakeholder groups) are homogeneous. Agro-investments vary greatly in their production models and in their relationships

with participating smallholders. Smallholders' perception of their participation in such production models also differ according to their experiences. Therefore, different kinds of production models create different capacities for action and different outcomes for the socioeconomic enhancement of participants' livelihoods. Models define the range and roles that investments are capable of playing, but outcomes depend both on whether the roles fit the context and on how well they are executed, including how well they align with participants' agency and interests.

Although Evans (1995) is concerned with analyzing the variations of developmental states rather than inclusive production models, the author postulates the need for a certain kind of 'autonomy' of the state apparatus - achieved by what he calls a sense of corporate coherence - and for an 'embeddedness' of the state apparatus to a concrete set of social ties - contrarily to Weberian insulation of the state apparatus from society - that allows for a continuous negotiation and renegotiation of goals and policies with the society. He concludes that only when embeddedness and autonomy are joined together can a state be called developmental.

We borrow this logic from state development theories and apply to assess the variations and socioeconomic outcomes of inclusive production models. However, it demands an application in a two-way analysis - agro-investment to participant smallholders as well as participant smallholders to agro-investments - and a level of analysis which is closer to ground. What I propose here is the use of the concepts of embeddedness and autonomy to analyze the constantly evolving relationship between smallholders and agribusinesses in inclusive production model contexts, in order to respond to the overarching question of this study: *'how can inclusive production models improve smallholder farmers' livelihoods over time?'* For that it is necessary to combine both terms, similarly to Peter Evans' use of the concept for development theory.

This framework of analysis strengthens this thesis because it proposes that debates about how much the private sector intervenes in local (inclusive) development ought to be complemented with arguments about the effects of different kinds of involvement. Contrasts between 'social entrepreneurship', 'inclusive business models' or 'sharing value' and 'business as usual', 'horizontal integration' or 'plantation models' tend to focus on ideal types of investment-participant smallholders' interactions, but focus little on the practices and in what ways these evolve within particular contexts. They add value to the discussion, but overlook the underlying issue. Nowadays in the agricultural sector, withdrawal or involvement of the private sector are not alternatives. Private sector involvement is a given where there is profit to be made. The appropriate question is not "how much" or "what kind of" involvement, but "in what ways it evolves and shapes outcomes".

Therefore, in this thesis, we will examine the alignment of stakeholders' interests, based on the variations of agro-investments' and smallholders' involvement in particular contexts and production models. In other words, to understand how inclusion can generate long-term benefits for smallholder farmers through a determined production model, I will investigate how this group's interests are aligned with other actors', such as the agribusiness, and how much autonomy – within that context of alignment – the smallholder farmers have to act upon their best interest to improve their livelihoods.

To conclude, this framework of analysis will be applied to the empirical chapters on the sugarcane and soybean cases. For example, Chapter 5 outlines when smallholder farmers' interests and participation in a production model are to a great extent aligned to the agro-investment's, denoting a high degree of embeddedness in the production model. It does so through a comparative analysis between participation and non-participation of smallholder farmers in the sugarcane sector in three districts of Maputo Province to the benefits of inclusion in the long term. It also looks into challenges and pitfalls for inclusiveness of a model that is seemingly working for the majority of participants.

Chapter 6 shows the other side of the coin and centers on the evolution of the soybean sector in Gurue, Zambezia Province. The discussion is heavily based on the concept of embedded autonomy to examine how smallholder farmers have firstly experienced involvement in the soya contract farming and sourcing models in the district, and secondly, acted upon their experiences to better serve their interests. The chapter illustrates a case of a high degree of autonomy and the challenges to embed smallholders' interests in the production models attempted so far.

Finally, Chapter 7 examines how smallholder farmers in both sectors are supported by their farmer organizations in the process of finding a balance between the necessary embeddedness in a value chain and the autonomy to act in their best interest to improve livelihoods.

2.6. CONCLUSIONS

This chapter focused on outlining the existing literature about the outcomes of inclusive production models for the livelihoods of smallholder farmers. As such, this literature review aimed to address several questions: how have inclusive production models gained prominence in academic and policy discussions, what are their expected contributions to smallholder farmers' livelihoods, and what are the expected long-term implications of smallholder involvement in these models? What is underexplored in literature?

The review highlighted two main gaps in the existing literature. The first concerns the long-term benefits that smallholder farmers' have from being embedded in inclusive production models, and the second pertains to their independence and agency (autonomy) within the production model framework. The chapter sets the stage for a comprehensive analysis of these gaps, laying the foundation for the proposed analytical framework.

The review acknowledges the current lack of comprehensive discussions and structured frameworks to understand the interactions among key actors in inclusive production models. It underscores the dearth of long-term empirical studies evaluating the benefits and sustainability of smallholder involvement in such models. In essence, this chapter provides a roadmap for the research study, addressing the importance of understanding the dynamics of inclusive production models and the gaps in the existing literature. It lays the groundwork for subsequent empirical contributions within the dissertation.

The following chapter shows how these debates and the framework of analysis presented above are relevant for Mozambique by providing a contextual background to the selected country for analysis.

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3

Contextual Background:
Mozambique

3.1. INTRODUCTION

The previous chapter discussed how early concerns with the involvement of the private sector and agribusinesses in the development agenda evolved into calls for models of production that are more inclusive of smallholder farmers. But how do these debates play out in Mozambique, the focus of this research?

Despite its rich agricultural potential, Mozambique faces numerous challenges to enhance the socioeconomic indicators of its population through the agricultural sector (World Bank, 2023a). This chapter explores the historical overview of Mozambique's agricultural challenges and its role in the global land grabbing debate. It delves into the evolution of inclusive production models in the country, focusing on contract farming and its expected transformative impact on agricultural development in general, and in the sugarcane and soybean value chains in particular.

In the following sections, I will present a historical overview of the agriculture sector in Mozambique, its relevance for more than 4 million households, and the socioeconomic challenges that persist despite national economic growth. Following this, the land grab and how inclusive business debates unraveled in Mozambique is explored. Subsequently, I describe why I conclude that Mozambique is entering a new phase of agriculture development, starting with renewed governmental programs, such as SUSTENTA and the launch of PEDSA II and PNISA II. Finally, I present the contextual information to understand two key concepts for this study: block farming (as part of contract farming) and farmer organizations in Mozambique.

3.2 HISTORICAL OVERVIEW OF MOZAMBIQUE'S AGRICULTURAL SECTOR

3.2.1 The different phases of promotion of agricultural development

Since its independence from Portugal in 1975, Mozambique's agricultural sector has gone through multiple phases of development. It was initially dominated by the socialist model of production until the mid-1980s, marked by strong state intervention, state enterprises and farms, and a large cooperative base. This model is seen as greatly detrimental to the smallholder farmers, as it allocated most of the available agricultural financing to a few politically favored cooperatives and state farms (Hanlon, 1984). As a stakeholder group, smallholder farmers were left with little support, leading to a decline in marketed production and impairing domestic consumption (Pitcher, 2002; do Rosário, 2012).

A subsequent phase took place with the Structural Adjustment Programme (SAP), with significant social costs to women, children, the poor and, again, the smallholder farmer (Marshall, 1990; Viegas et al., 2021). Agricultural policies implemented in this period were not able to create considerable incentives for the dominant smallholder sector (Mosca, 2011) and were soon followed by a phase of renewed promises of rural development and commercial agriculture development in the decade following the General Peace Agreement, in 1992.

In a context of a post-war collapsed state, the main concern of the ruling elites was to promote cash crops (such as cotton, tobacco, and sugar), which could be a source of government revenue through exports as well as an opportunity for rent extraction (Zartman, 1995; do Rosário, 2012). This led to a period of revitalization of commercial crops, driven by privatization measures that had been adopted during the structural adjustment period and, in particular, by the availability of foreign capital willing to invest in them (Mosca, 2011). This policy contributed to the settlement of demobilized soldiers in the local economy and thousands of displaced families who began returning to their homelands (do Rosário, 2012).

Finally, I argue that a fourth phase began in the early 2000s and persisted until the appointment of President Filipe Nyusi. Before Nyusi. Under the outgoing President Guebuza, there had been a vigorous promotion of the agricultural sector in the political discourse, focused on food production and the smallholder sector. The 2007 Green Revolution Strategy and the 2008 Action Plan for Food Production (PAPA) provide examples of the paradigm shift in the sector. They were accompanied by a series of agricultural policies and strategies, including the National Programme of Agrarian Development (PROAGRI), the Rural Development Strategy of 2007, the Strategic Plan for Agricultural Development (PEDSA, 2011-2020), and its operationalization program, the National Agricultural Investment Programme (PNISA).

The government has thus strongly bet on the private sector to assist in the modernization of the country's agriculture as well as to support the transition of a sector dominated by subsistence farming to commercial farming. This strategy led Mozambique to the center of the land grabbing debate (Dalupan et al., 2015; German et al., 2016).

3.2.2. Mozambique in the land grabbing debate

Mozambique's population is predominantly rural with *circa* 70-80% of the country's 32,5 million inhabitants living in rural areas (INE, 2023). The vast majority of these people depend heavily on subsistence agriculture for their livelihoods and are often food insecure or chronically challenged by malnutrition or nutritionally poor diets (Ferrão et al., 2018;

MADER, 2021). Additionally, rural areas face significant challenges in terms of infrastructure and services (DuChanois, et al., 2019; Manhique, et al., 2021; World Bank, 2023a), denying many people the right to participate in the development process and enjoy the benefits thereof (Zadawa and Omran, 2020).

It was within this context that the role of private actors in the development agenda, including rural development, has increasingly been discussed both scholarly and politically, and put in practice in Mozambique. This is particularly true after the structural economic reforms (German et al., 2016). The underlying argument for private sector involvement was the importance of agriculture and commercial agriculture attributed by the government. To understand this argument, we have to take a step back and look at the bigger picture. Overall, agriculture in Mozambique is composed mainly of food crop production. It is the main agricultural sub-sector, occupying more than 70% of the population (INE, 2023). Traditionally, the main crops of Mozambican subsistence agriculture are maize, cassava, sorghum, groundnuts, millet, rice, sweet potato and various types of beans and vegetables (MINAG, 2011; Ferrao et al., 2018). Staple crop preferences vary according to the region but are generally composed of a mixture of cereals, tubers and, when enabled by consistent water access, some horticulture (FAO, 2010).

Conversely, smallholder commercial agriculture is not as significant; whereas smallholder farmers' agriculture accounts for about 95% of the country's agricultural production, commercial agriculture produces the remaining 5% through roughly 400 commercial farmers (FAO, 2023). The main cash crops are coconut, cashew nuts, sugarcane, tobacco, cotton, sesame and soybeans (MINAG, 2011). However, the Mozambican government sees commercial agriculture and agribusinesses as essential drivers for the modernization of the sector. This is clear in all the main governmental strategic publications of the decades following the economic liberalization in the 1990s, including the PROAGRI, the Green Revolution Strategy, the Rural Development Strategy, the PEDSA I and II, and the PNISA I and II. Also, this governmental approach towards commercial agriculture manifests in practice. The Mozambican government has been an active actor in attracting private sector investments to all economic sectors (Mosca and Selemene, 2012; Castel-Branco, 2015).

As a result, following the economic reforms of the 1990s, the number of private investments in agriculture and agroindustry grew by 25% between 1990 and 2011 (Massingue and Muianga, 2013) and continued to increase following the introduction of the PEDSA 2011-2020 (MINAG, 2011; Shankland and Gonçalves, 2016; Kaarhus, 2018). According to the World Bank (2022), developing agribusinesses continues to be high on the government's agenda, with a key focus on private sector development programs and technical assistance provided by various development partners.

Therefore, during the past decade there was, on one hand, a growing interest of investors in the Mozambican agricultural sector - promoted by the government - and on the other hand, a large and growing rural population depending on subsistence farming. The interaction between them brought about many documented outcomes, some positive (albeit limited), such as increased income and productivity for small producers (Locke, 2009; Veldwisch, 2015). Negative outcomes include adverse social and environmental effects on local rural populations (Overbeek, 2010; Andrew and Van Vlaenderen, 2011; Landry and Chirwa, 2011; Matavel et al., 2011; Norfolk and Hanlon, 2012; Lunstrum, 2016; Salomão, 2020). In fact, when compiling secondary data Aabo and Kring (2012) found that the potential positive benefits from large-scale land acquisitions did not outweigh the opportunity costs.

As a result, Mozambique has emerged as a relevant case study for the land grab debate over time. However, despite a clear public sector preference for commercial agriculture, the government has not solely promoted it. In fact, in the decades following independence, Mozambique has pursued varying agricultural policy orientations, often in conflict with the governments' primary priorities and vision, which paved the way for inclusive production models in the country.

3.3. INCLUSIVE PRODUCTION MODELS

As previously outlined, the Mozambiquan government aimed to foster entrepreneurship by supporting agribusiness through agencies like the Centro de Promotion Center (CEPAGRI), and initiatives such as the PEDSA, and the PNISA. A notable and very controversial program exemplifying this approach is ProSAVANA, which is often associated with one of the largest attempts of land grab in the country (Clements and Fernandes, 2013; Shankland and Gonçalves, 2016). On the other hand, several policy instruments were aimed at assisting small-scale producers, including the Action Plans for Poverty Reduction (PARPA). In recent years, these instruments have been strengthened by a shift in perspective following the emergence of alternative visions to large-scale land-based investments. One example is the Small Commercial Farmer Model within the SUSTENTA program (Mosca, 2023).

According to Nova and Rosário (2022), the array of governmental strategies for advancing agriculture and rural development in Mozambique are underpinned by two contrasting visions. One envisions accelerating production and productivity growth, recognizing the challenges small family farms face in competing in the market due to difficulties in adopting modern agricultural technologies. The other emphasizes the need to achieve

substantial investments in agriculture on a large scale to yield swift economic impacts, particularly in terms of the agricultural trade balance.

To address the challenge posed by large-scale land-based investments, the prevailing rhetorical approach to bolster commercial production from smallholder farming is the widespread promotion of outgrower models, chiefly exemplified by contract farming (Veldwisch, 2015; Nova and Rosário, 2022).

3.3.1. Contract farming in Mozambique

While contract farming in Mozambique has its roots in colonial times, it gained strength in the 1990s, following the processes of market liberalization and privatization. Many scholars advocate for a continued application of this model to industrial crops such as tobacco, cotton, and sugarcane (Mosca, 2005; Dias 2012; 2013a; 2013b).

According to Nova and Rosário (2022), there are currently three predominant ways in which contract farming operates in Mozambique, especially in the central and northern regions. These are a) assisted production contracts (e.g. soya production in the district of Gurue), which involve technical assistance, but not necessarily close integration of smallholder farmers into the agro-investment production model; b) supervised production contracts (typically exemplified by nucleus-outgrower schemes, as is the case of sugarcane); and c) turnkey contracts, in which exploitation rights are provided to investors for a fixed period of time (e.g. banana, cotton, and tobacco production) under concession schemes (Mosca and Bruna, 2015). The latter constitutes a monopsonistic scheme for a given product in a delimited geography. The concessionaires provide technical support and inputs on credit to the sub-contracted producers, who sell their production to these companies, deducting the costs of the inputs previously supplied from the sale price (Hanlon and Smart, 2013; Niño, 2018; Nova and Rosário, 2022)⁶.

Nevertheless, there have been setbacks for this type of inclusive production model, as evidenced in cases of crops for biofuel production (Schut et al., 2010; 2014; Slingerland and Schut, 2014). The literature also demonstrates that the policies to transform smallholder producers into commercial farmers - which are mainly based on contract farming models - have a limited scope (Ros-Tonen et al., 2015). This limitation is both in terms of the number of producers that are covered in determined geographies (inclusion as participation), and the sectors in which contract farming has succeeded as a production model in Mozambique (Spierenburg et al., 2012; Mosca and Nova, 2019; Veldwisch and Woodhouse, 2022). That is, there is a clear issue in terms of scalability and replicability of the

⁶ Contract farming is not common in staple crops production due to a high prevalence of side-selling (Di Matteo and Schoneveld, 2016).

models, which keeps the majority of smallholder farmers excluded, which in turn impacts communities' power relations (Hickey and du Toit, 2007; Da Corta, 2008). Moreover, these models reproduce existing inequalities and power imbalances between value chain actors (Sahan and Fischer-Mackey, 2011; Bitzer and Glasbergen, 2015; Van Westen, 2021), and have a particular detrimental effect for women (Laven, 2010; Bolwig et al., 2010; Pyburn, 2014; Navarra, 2019; McDougall et al., 2021).

In addition, numerous studies highlight the adverse consequences of integrating small producers into production models through contract farming schemes (Du Toit, 2009). This integration has the potential to place smallholders in a vulnerable position, as they become subordinate to powerful corporate actors operating within mainly economic objectives and a monopsonistic framework. Additionally, they often indirectly bear the brunt of the price volatility prevalent in international markets for such products (Da Via, 2011; Nova and Rosário, 2022; Veldwisch and Woodhouse, 2022). A large part of this case's examples are concentrated in former colonial agricultural system areas, and are typically represented by large-scale monoculture cultivation, such as cotton, sugarcane, and tobacco (Dias, 2012; 2013a; 2013b).

Therefore, a comprehensive analysis of such 'inclusive' models of production should note risks and adversities. It should discuss aspects such as exclusion (i.e. non-participation, voluntary or not), the potential unintended consequences of integration, and the need to monitor and manage anticipated and unanticipated consequences in the long-run (Howell et al. 2018; Schoneveld, 2020).

Mozambique's agricultural sector has experienced significant investment interest, has strong importance attributed by the government, is dominated by smallholder farmers, and faces considerable social inclusion challenges. Therefore, it provides an interesting case to further explore the nexus between agribusiness, smallholder, and inclusiveness. Given how contract farming has increasingly been promoted in Mozambique and the distinct opportunities and challenges outlined in the literature, it is worthwhile to examine how inclusive production models improve smallholder farmers' livelihoods.

3.3.2. The failure of agricultural production models to improve living conditions

Despite institutional attempts to promote various models of both commercial and smallholder farming, it is possible to argue that policies which have centered on supporting small-scale agriculture have consistently fallen short of meeting the rural population's expectations for improved living conditions (Massingue and Muianga, 2013; Mosca, 2023). As such, despite rhetorical and documented political support, the agricultural sector has not delivered benefits to the greatest part of the millions of families who currently

depend on agriculture for their livelihoods. Poverty remains the predominant challenge for the majority.

To illustrate this, key indicators of Mozambique's agricultural sector were selected and compiled in Table 3.1 below. These indicators were extracted from documents and online information from the Institute of National Statistics (INE, 2023), the World Bank (Baez Ramirez et al., 2018); the Ministry of Rural Development (MADER, 2021); and the New Partnership for Africa's Development (NEPAD, 2017).

Table 3.1: Key indicators of Mozambique's agricultural sector

| Indicator | Value |
|---|---|
| General | |
| Arable land | 30-36 million hectares (ha) |
| Population (of which rural) | 32,5 million inhabitants (approx. 70%) |
| Agricultural GDP as a share of total GDP | 25% |
| Annual growth of the agriculture value added (agricultural GDP) | 2,6% |
| Public agriculture expenditure as a share of total public expenditure | 6,9% |
| Socio-economic indicators | |
| Incidence of poverty for rural households, as defined by the World Bank, 2023b (international poverty line) | 63,4% |
| Food security index | |
| Prevalence of stunting and wasting as % of children under 5 years of age | 44% and 4%, respectively |
| Share of households depending on subsistence agriculture as main livelihood strategy | 71 % |
| Production indicators | |
| Total cultivated area by small and medium-scale operations/explorations/ landholding | 5,5 million ha and 4,3 million agricultural operations (including livestock): <ul style="list-style-type: none"> ● 97,8% small-scale (<10 ha*), ● 2% medium-scale (<50 ha*), ● less than 1%, i.e. 873 large-scale (>50 ha*) operations. |
| Share of small and medium-scale operations smaller than 2 ha | 80,9% - National average is 1,4 ha/household |
| Share of people engaged in agriculture having access to financial services | 0,4%-0,6% |

Table 3.1: Key indicators of Mozambique's agricultural sector (*Continued*)

| Indicator | Value |
|--|--|
| Participation in saving groups (i.e. Village Saving and Loan Associations, VSLA) | 8,9% |
| Use of production inputs by small and medium-scale operations (incl. pesticides, manure, chemical fertilizers, and irrigation) | 5,5%-9,1% |
| Reach of extension services to small and medium-scale operations | 6,9% ⁷ |
| Reach of price information to small and medium-scale operations | 39,9% |
| Percentage of smallholder farmers belonging to any type of association | 3,5% nationally (ranging 1,7%-8,2% in different Provinces), of which 76,6% are in associations of producers, 6,3% in cooperatives, 9,7% in private enterprises, 7,4% in Farmer Field Schools |
| Other indicators | |
| Share of women and men, respectively, with knowledge of the Land Law in small and medium-scale operations. | 11,2% and 13,7% |

Source: Author's compilation of indicators from NEPAD, 2017; Baez Ramirez et al., 2018; MADER, 2021; INE, 2023

*For definition purposes, see the table below (3.2) defining the limiting criteria for smallholder agriculture:

Table 3.2: Official criteria for defining smallholder agriculture in Mozambique

| Criteria | Limit for smallholder agriculture |
|---|-----------------------------------|
| Cultivated non-irrigated area (ha) | 10 |
| Cultivated irrigated area yielding production | 5 |
| Cattle herd size | 10 |
| Herd size for goats, sheep, and swines | 50 |
| Number of birds | 5000 |
| Tree groves size (e.g coconut, cashew trees) | 149 |

Source: MADER, 2021

With this overview of the challenges to deliver benefits to smallholder farmers, we can conclude that the Mozambican food system has historically and systematically failed its smallholder farmers. There is limited participation of those in more structured and higher-remunerating value chains. Also, there is uneven access to extension services and technical support as well as limited access to production inputs (such as seeds and fertilizers), irrigation, and finance. Overall, there are limited benefits from access to

⁷ 2,4%-7,8% variation by Province, except Sofala, whose reach of extension services is 23,9%

high value local, regional, national and international markets, as well as in a stagnating socio-economic development.

3.4. A NEW PHASE OF AGRICULTURAL DEVELOPMENT STARTS

With the closing of the PEDSA (2011-2019), of its operationalization program, PNISA (2013-2017, extended to 2019), and of the Leading Plan for the Development of Agribusiness (PDDA 2013-2020), I argue that a new cycle of agricultural strategies has just begun in Mozambique. In 2017, the National Programme for Sustainable Development (PNDS) was launched as well as several programs in the past few years, such as SUSTENTA (FNDS, 2017). At the same time, PEDSA II and PNISA II were being formulated and are now published.

Despite its formulation under the scope of the Comprehensive Africa Agriculture Development Program (CAADP), PEDSA was conspicuous in its lack of positioning for the inclusive involvement of smallholder farmers in the value chains. In fact, the draft version clearly outlined that subsistence farming should decrease, whereas commercial agriculture should increase:

In Mozambique this sector is dominated by subsistence producers, producing a wide range of products primarily for domestic consumption. The transformation of agriculture will result in the growth of commercial agriculture, and a consequent reduction in the number of small farms and increase in average farm size and productivity.” PEDSA (2011-2019), MINAG (2010:61)

This extract was later removed from the final approved version, but the sentiment of the private sector as the primary driver of development was aligned with the remnants of the neoliberal logic of the time (Macuane, 2012). Under this logic, constraints on commercial agriculture should be lessened at all stages of the value chains, through corridors of agricultural development, agricultural financial systems, and support for rural markets. The principles applied to PEDSA’s operationalization included promoting private initiatives and assigning responsibilities for each key actor identified in the document, especially in public-private partnerships. As such, the private sector was defined as ‘the largest group involved in economic development’ (MINAG, 2011:62).

PEDSA, PNISA, and PDDA failed to establish a role for smallholder farmers and clarify how commercial agriculture would stimulate the inclusive involvement of smallholder farmers. As it is unrealistic to think that all 4 million households that depend on subsistence agriculture would successfully engage in commercial agriculture, one could also argue

that connections to other development trajectories (i.e. urban development, migration, off-farm employment, etc.) were also needed. This was attempted with the Action Plan for Poverty Reduction (PARP 2011-2014), designed to operationalize the 5-year plan of the Government of Mozambique (GoM) and achieve inclusive economic growth and poverty reduction.

PEDSA was therefore not alone in tracing strategies for Mozambique's economic development. It was similar to other GoM strategies, policies, and action plans to address the challenges to developing sectors of the economy, including agriculture. For example, PAEI and the Rural Development Strategy (EDR), which are also currently in use, did not pay enough attention to the productive involvement of smallholder farmers within supply chains. As assessed by the government and the New Partnership for Africa's Development (NEPAD), the results are not yet fully satisfactory, with indicators such as 'ending hunger by 2025' and 'enhancing investment finance in agriculture' designated as 'not on track' (MASA, 2017, and NEPAD, 2017 indicators).

MASA's (2017) evaluation illustrates a limited performance of PNISA, highlighting the limited use of high-quality inputs, limited access to finance, a weak organization of smallholder producers, and the limited role of the private sector as a driver of inclusion.

In summary, despite the formulation of comprehensive and ambitious strategies, operationalization plans and programs, the attention to smallholder farmers as key agents of locally-led development was diluted in these official documents. Smallholder farmers' integration processes in the production chains and stakeholders' responsibilities were not sufficiently outlined. Additionally, there was no clear guidance on how to ensure that the inclusion processes would result in tangible benefits for smallholders and improvement for their livelihoods. PEDSA and other strategies may have failed to satisfactorily address this issue, but a new cycle of strategies is beginning. PEDSA II and PNISA II were designed with the support of key actors, such as government officials, private sector, civil society, and international organizations.

3.5. SUGARCANE AND SOYBEANS IN MOZAMBIQUE

An important element of the contextual background of this thesis is the overview of the sugarcane and soybean sectors in Mozambique. It provides understanding as to why I selected these sectors for examination.

3.5.1. Sugarcane and soybeans as 'inclusive' sectors in Mozambique

Sugar and soya-based products – such as soy milk, tofu, and soy sauce – are familiar to consumers all over the world. Sugar is long loved for its sweetness and soya-based products are increasingly sought after in Western and emerging-market countries due to changing preferences in protein-based diets (Ncube et al., 2017; Langthaler, 2018; Rizzo and Baroni, 2018), increased search for feed for livestock (e.g. poultry) production, and to governments efforts to curb protein deficiency (Khojely et al., 2018). While these products are widely sought by consumers and in some cases promoted by governments and organizations, the production of sugarcane and soybeans are somewhat more controversial. This is because these are crops usually associated with large-scale monocropping-based agribusiness models which have for centuries represented more 'exclusive' models of production.

Sugar is traditionally known as a crop that shaped the world's early capitalist system. Its economic significance increased with the Portuguese and Spanish colonization of the Atlantic Islands, Caribbean, and the continental Americas, which brought sugarcane production to those regions. Needing large volumes of water and labor, sugarcane production found fertile grounds in the tropical Iberic-ruled areas, where large amounts of forced labor could be readily accessed through Amerind and African slaves (Mintz, 1986). More recently, sugarcane production has also often been widely associated with a growing competition with food crops for land, threatening local food production and food security (Harvey and Pilgrim, 2011; Müller et al., 2021). In addition, considerable environmental issues can be attributed to sugarcane production. This includes decreased air quality and increasing greenhouse gasses emissions (El Chami et al., 2020), a harmful impact in biodiversity and endemic species (Joly et al., 2015), and stress on water resources due to irrigation needs (Smit and Singels, 2006). These issues are pervasive to sugarcane plantations, despite the availability of documented guidelines for effective and sustainable agronomic practices in sugarcane cultivation (Omwoma et al., 2014).

Soybeans are also traditionally known for their large-scale production models in North and South America and which has been a key driver of deforestation, biodiversity loss, land right conflicts, and human rights violations in vast expanses of the southern continent, including the Amazon and Atlantic rainforests, the Cerrado, and the Chaco regions (The Dutch Soy Coalition, 2006; Goldfarb and Zoomers, 2013; Fehlenberg et al., 2017).

Adding to the disrepute of these production models, the relatively recent academic framing of 'flex crops' allowed scholars to identify issues inherent to and deriving from the very same characteristic that makes flex crops economically so relevant: their multiple and flexible purposes of use, which give them a high economic importance (Borras et al., 2014; Borras et al., 2016). While recognizing that there is nothing new about the fact that most

crops and commodities are used for many purposes, Borras et al. (2014) point out that the convergence of multiple crises provoked the phenomenon of the global commercial expansion of flex crops and that it is in this context that academics can find numerous drivers for social injustices, exclusion, and imbalance of power.

Therefore, we have in sugarcane and soybeans two crops marked by the rise of a new political economy and changing dietary preferences. At the same time, they are also characterized by increased production in Low and Middle-Income Countries and the social, political, and economic transformations that derive from the flexibility of these crops and their use as commodities. These transformations include crop-use and land-use change and subsequent effects on food security, nutrition, environment, and social justice and inclusion. In other words, there are profound effects on local and global food systems.

As such, flex crops have increasingly attracted scholarly attention. Some are positive, related to these crops' versatility and possibilities for meeting the demands of various downstream markets (Bastos Lima, 2018) and thus broadening the economic benefits of producers. However, the bulk of the literature is critical of flex crops (Gillon, 2016; Oliveira and Schneider, 2016). In Mozambique, flex crops have attracted negative attention through news, reporting, and publications that suggest that already-vulnerable people and communities end up bearing a disproportionate share of the costs of flex crop production (Dauvergne and Neville, 2010; Franco et al., 2010; Slingerland and Schut, 2014; Oliveira, 2016; Zaehring et al., 2018). Nevertheless, in Mozambique, these crops have also represented sectors that are described as 'inclusive business' sectors with benefits for smallholder farmers.

So why are sugarcane and soybeans presented as inclusive sectors in Mozambique and referenced in major current and recent agricultural programs in the country, such as SUSTENTA and the National Production Plan 2020-2021 (MADER, 2021; Mosca, 2023)? It is possible to connect this rhetorical and practical attribution to three main arguments: i) the importance given by the government to agriculture and, more specifically, agro-investments and commercial agriculture - as expanded earlier in this Chapter (see section 3.2); ii) the multi-dimensional importance of sugarcane and soybeans in Mozambique iii); the success of these sectors in addressing some of the market failures for smallholder farmers in the areas where production of these crops has been encouraged. The following sections expand on the second and third arguments.

3.5.2. Importance of sugarcane and soybeans

The Mozambican government has placed importance on the modernization of agriculture through commercial farming. However, the importance of sugarcane and soybeans goes

beyond its potential to modernize agricultural production in Mozambique. First, sugarcane is historically relevant in Mozambique. It has been a chief export crop for more than a century. Following a production decline due to the Civil War and Portuguese exodus in the aftermath of independence (Hanlon, 1984), the industry has been rehabilitated by investments from the Mozambican government and South African investors. The sector has experienced growth in terms of both production and capacity (Dias, 2013a). Under a series of treaties of preferential access to world markets and price regulation instruments, sugarcane has developed into one of the leading export crops in Mozambique and is, therefore, encouraged by the government.

Sugarcane also has great sectoral relevance. Sugarcane is one of the main commercial crops in Mozambique. This is because Mozambique benefited from the status of the least developed country (LDC) since the early 2000s, giving it access to European Union (EU) markets without restriction or quotas, as long as it respects the Everything But Arms initiative (Sonneveld, 2012). It also has duty-free access to the United States (US) market under the Generalized System of Preferences (Schut et al., 2010). Additionally, it benefits from the Economic Partnership Agreement (EPA) between Southern African Development Countries (SADC) and the EU (Bagstam and Cagnan, 2005; Dias, 2013a). Without these incentives, the sugarcane sector would arguably be less competitive and would likely be given less relevance by the government.

Additionally, sugarcane generates 5,6% of the total industrial output in Mozambique, employing around 45% of the industrial workers by 2017 (Leite et al., 2020). As one of the leading agricultural export commodities, the government has given it significant sectoral relevance for many years.

As for soybeans, a sectoral relevance also applies. Soya production has grown in importance in recent years in Southern Africa and Mozambique due to the emerging domestic chicken feed market (Smart and Hanlon, 2014; Khojely et al., 2018). Higher incomes in urban areas have increased the national demand for chicken. Able to produce chicken more competitively than, for example, Brazil and South Africa (who typically export chicken to Mozambique), the national poultry industry has steadily grown.

However, the most interesting trait of the soybeans sector in Mozambique is its innovative production system and its implications for inclusive production models. Typically produced in large-scale monoculture plantations in South America (Goldfarb and Zoomers, 2013), the soybean sector in Mozambique has developed as a smallholder crop. At the time of research in 2016, more than 10,000 smallholders produced soya for the domestic market, offering palpable alternatives to large-scale soya plantations. It continues to satisfy smallholder

farmers' direct needs with income and with voicing their concerns to the government (Solidaridad, 2023). However, the failure of the original contract farming schemes and the subsequent integration of the same smallholders in the value chain through sourcing schemes, present us with valuable insights into previous mistakes and ways forward to develop functional, inclusive business models. This is especially true when compared with the more top-down/vertically integrated scheme observed in the sugar sector, which at first glance can seem counterintuitive. This also provides the government with arguments to promote further investments, involving even more smallholder farmers.

In sum, the relevance of sugarcane is historical and sectoral, whereas the relevance of soya beans is sectoral and for development practice. Furthermore, in light of the land grab debate and its relation to food security and export-orientation of land-based investments, it is possible to assert that there is great academic relevance in studying sugarcane and soybeans contract farming schemes, which involve a large number of smallholders in Mozambique. Especially relevant is the replicability potential and the lessons applicable to other countries in Sub-Saharan Africa (SSA). Moreover, these are respectively a successful and a flailing sector in terms of integrating smallholders into the value chain through agribusiness production models, with different degrees of smallholders' embeddedness and autonomy towards the production models. The contrasting results from both sectors thus offer valuable insights for academia and inclusive development practitioners and policy-makers.

3.5.3. Will inclusion address market failures for smallholder farmers?

Finally, in terms of smallholder involvement in alternative production models to large-scale plantations, some investments have successfully integrated smallholder production into the value chain in Mozambique. For example, sugarcane, cotton, and tobacco have incorporated more than 350,000 smallholder producers throughout the country via contract farming schemes (Dias, 2012; 2013a; 2013b). However, while cotton and tobacco integrate considerably large and dispersed groups of smallholders in their value chains, sugarcane has developed its business models based on land consolidation. There is currently more than 50,000 ha of refurbished infrastructure for sugarcane production, in comparison to 40,000 ha in 2010 (FAO, 2010; FAOSTAT, 2021), including many thousands of hectares of smallholder land.

According to the latest Integrated Agricultural (IAI) Survey (2020), sugarcane and soybeans are, respectively, the second and third cash crops which involve the most smallholder farmers in terms of percentage of total smallholdings in Mozambique. Nationally, the figures amount to 3,4% of total small and medium landholdings for sugarcane and 3,1%

for soybeans, behind sesame (14%) and followed by cotton (1,7%) and tobacco (1,5%) (MADER, 2021).

The regions with the largest production of sugarcane and soybeans in terms of harvested area and smallholder farmer involvement are the provinces of Maputo and Sofala, for sugarcane, and Zambezia and Tete for soybeans. Soybeans production integrates a considerable number of smallholder farmers in the value chain in the district of Gurue (Joala et al., 2016). However, there are variances within these systems with different results for smallholders, via contract farming (Di Matteo et al., 2016). Hence, in terms of empowering smallholders, the soybean and sugarcane sectors show how success in including smallholder farmers can take different forms and definitions.

Having established that these crops became inclusive production models in Mozambique despite the controversies, it remains for us to discuss what lessons we can extract from these Mozambican cases. Furthermore, we can analyze whether, in practice, these production models also promote inclusion over time and to which extent. Ultimately, these are valuable lessons for ongoing sugarcane and soybean productions around the world, both in terms of establishing the production models and the potential outcomes (for smallholder farmers) in the operationalization of these models.

3.6. PRODUCTION MODELS EXAMINED IN THE STUDY

This section will deepen our understanding of a specific production model that is practiced as inclusive in Mozambique, particularly in the sugarcane sector: block farming.

In the soybean sector open market relationships are the most common form by which off-takers source produce from smallholder farmers. In contrast, block farming in the Maputo Province sugar value chain is an example of a production model that derives from contract farming. The integration of block farming and the internal structures of this production model are beginning to gain more attention among investors and policy makers, but it still remains fairly unexamined in Sub-Saharan Africa.

Within the contract farming literature, reports and analysis of block farming are not new. However, in SSA, there is very little research available on the long-term benefits of block farming. Block farming denotes the consolidation of many smallholders' plots into larger blocks of commercial production. It is meant to facilitate the coordination of inputs and services delivery, operations, and harvest on a larger scale. The term *block farming* has

mainly been attributed to agricultural schemes within SSA, although it has been studied in the other countries as well (Barreiro et al., 2023).

According to Sulle et al., (2014, p. 3-4), block farming is:

“the farming system whereby the interested local farmers put together their small plots to form a block. The members cultivate, irrigate, fertilize, harvest and manage the production collectively. (...) The model also allows members to supply (produce to the off-taker) using a single transporter. The main advantage of this model is that it reduces the transaction costs to be incurred by individual farmers while enjoying economies of scale. However, if not well run, it risks submerging individual control to those of group leaders and powerful farmers.”

As such, literature is recognizant of advantages and disadvantages of this type of contract farming model. In some countries, it is positively associated with food security and referred to as an inclusive solution to promote commercial agriculture among smallholders, but it is also perceived as risky (Turner, 2009). To illustrate, Hall et al. (2017, p. 520) point out that block farming is typically led by investments in medium- and large-scale farming and require land consolidation, which can cause “displacement, while creating various opportunities for on-farm employment and thus instigating new dynamics of social differentiation”. Block farming may also require large government or private investment, and there is also critique regarding smallholder exit limitations and waiving of decision-making over land use (GoL, 2008; Benin et al., 2013).

However, there is a gap in empirical work at the household level which evaluates how smallholder farmers benefit from and are affected by block farming. This assertion was also noted by Smalley (2013:18). Therefore, there is very little empirical evidence that can support policy-making in designing inclusive practices in block farming policies. More specifically, there is scant literature in Mozambique, where this commercial solution already exists and is further proposed in large areas of development interest, such as the agricultural corridors (Beira Corridor, 2010; Hall et al. 2017).

In other words, this is an underexplored example of an inclusive production model that requires a degree of embeddedness of smallholder farmers and generates implications for the autonomy of these stakeholders.

3.7. HISTORY OF FARMER ORGANIZATIONS IN POST-INDEPENDENCE MOZAMBIQUE

To conclude this contextual background chapter, this section presents a brief overview of the history of farmer organizations in Mozambique. Farmer organizations play a crucial role for many smallholder farmers across value chains in the country. For instance, the block farming model (as seen above) was possible due to the formation of farmer groups. These groups provide a series of support to smallholder farmers and can be the conduit of inclusive development, as will be explored in detail in Chapter 7.

Farmer organizations in the country can be dated back to the early 20th century, before Mozambique's independence (Libombo et al., 2011). The first cooperatives in the country were established by the Portuguese colonial government, largely to promote colonial interests. Agricultural cooperatives were created with strong government intervention and were formed and led by the *regulos* (traditional local authority) chosen by the colonial government (Adam, 1989). During this period, farmer organizations largely did not have voice and generally served colonial interests of social control, preventing any sort of autonomy and positive economic participation of local populations.

After independence in 1975, the government of Mozambique prioritized the development of cooperatives as a means of improving the living conditions of rural communities. The government promoted a socialist system of cooperatives, resettling farmers in communal villages. In this model, state investment was intended to be the largest driver of production and transformation of rural areas (Hanlon, 1984; Silva, 2002). The premise was that, by organizing the smallholder farmers in larger groups of producers, the government would be in a better position to provide services (such as extension and agricultural inputs), distribute resources, and concentrate rural development efforts (Nanthapa and Bata, 2020). However, the majority of the cooperatives were not successful, due in part to the lack of effective support from the government, favoritism and cronyism towards a few select cooperatives, and the lack of involvement of local farmers in the decision-making process (Hanlon, 1984), creating a sense of disillusionment among the vast majority of organized smallholder farmers (Nanthapa and Bata, 2020).

Compounding the challenges faced by the socialist experiment with agricultural cooperatives, the civil war that followed independence and the economic challenges of the 1990s further hindered the development of farmer organizations in Mozambique. It was not until the end of the civil war in 1992 and the implementation of the structural adjustment, following the Economic Recovery Programme sponsored by the World Bank economic reforms (Marshall, 1990), that cooperatives began to gain traction in the

country. In the words of Bowen (1991, p. 45) “government turned away from large-scale, capital-intensive projects and placed emphasis on more decentralized, market-oriented, small-scale projects. It dismantled many of the country’s state farms, distributed land to peasant and private farmers, and withdrew from many spheres that it formerly dominated”.

On the one hand, these reforms paved the way for greater involvement of the private sector in key Mozambican agricultural value chains. For instance, it was at this time that the sugarcane sector received renewed interest from investors – this time South African (Jelsma et al., 2010; O’Laughlin, 2016). On the other hand, it was also in the context of these reforms (1980s-1990s) that farmer unions were created, namely the General Cooperatives Union (UGC), the Mozambican Women Organization (OMM), and the National Peasants Union (UNAC).

In the 21st century, the government of Mozambique has continued to support the development of farmer cooperatives through various initiatives and programs. Projects were launched with the aims of strengthening the capacity of cooperatives and of improving their access to credit and markets (Amilai, 2008; Vala, 2009). To illustrate, in 2011 the Mozambican government launched the PARP (2011-2014), which promoted the creation of more cooperatives and associations⁸ in rural areas as a means to reduce poverty by generating economic growth. Following this, 5% of the Mozambican population participated in 2,300 farmer organizations, which totaled 165,000 members (Chissancho and Ussene, 2015).

In many cases, private sector initiatives also tried to promote cooperatives to attempt to make contract farming more viable in Mozambique. However, even with increased efforts to promote their development, farmer organizations in Mozambique continue to face challenges such as a lack of access to land, inputs, and technical assistance, land grabs and displacement, inadequate infrastructure, and limited access to credit and higher-value markets. Despite the challenges, the potential for farmer organizations to improve the livelihoods of smallholder farmers and contribute to the country’s inclusive socioeconomic development remains significant.

3.8. CONCLUSIONS

In this chapter, I have painted a comprehensive contextual background of Mozambique and its agricultural sector. I explored how commercial agriculture has a strong political

⁸ The difference between associations and cooperatives in Mozambique is marked by the organizations’ finality. Cooperatives have economic finalities, whilst associations have social goals. In this study, the term farmer organizations will be used to refer to both cooperatives and associations.

importance and outlined the evolution of concepts such as inclusive production models in the country.

This chapter shows that Mozambique has gone through different phases of agricultural development and that government promotion of commercial agriculture, in order to modernize the sector is a priority. The identified phases included varying degrees of support to smallholder farmers. However, even in the phases where smallholder inclusion in value chains was a key concern, the benefits of this inclusion did not seem to reach the majority of the rural population. On the contrary, in general, the focus of most policies and agricultural strategies since independence has been primarily on the development of a strong agricultural private sector and of larger commercial farmers.

With a new phase of agricultural development promotion beginning in the wake of the launch of PEDSA II, PNISA II, and the government flagship program SUSTENTA, there are renewed calls for inclusive production models and stronger involvement of smallholder farmers and farmer organizations. This supports an investigation into past agro-investment periods in order to extract lessons for this new phase of agricultural production.

What are the characteristics of agro-investments that garnered support in this context? What was expected of those investments and how did they actually evolve in the ground? And in what ways did they involve smallholder farmers?

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4

Geographies of private
agro-investments in relation to
smallholder inclusion

4.1. INTRODUCTION

As written in the Mozambican constitution, agriculture is the basis for the country's development. Under this logic, the government of Mozambique has prioritized agricultural development since the country's independence from Portugal in 1975. This has manifested in decades of political discourse as well as agricultural policies (do Rosário, 2012; Salomão, 2020). In previous decades, this relatively sparsely populated and natural resources-rich SSA country has experienced a steady economic growth (average over 5,9% from 2000 to 2022; World Bank, 2023a). Although this growth has been chiefly geared by mineral resources exploitation, agriculture has not lost its importance, accounting for just shy of 25% of the Gross Domestic Product (GDP).

In addition to contributing to the GDP, agriculture is particularly significant for more than four million households whose livelihoods significantly depend on it, 97,8% of which are smallholdings (MADER, 2021). During colonial times, all Mozambican populations were historically accommodated with at least a small piece of land (Hanlon, 1984). Moreover, despite considerable urban growth, Mozambique's population is still largely rural (Cunguara et al., 2012). Therefore, it is no surprise that fifty years after independence Mozambique's population is strongly connected to its land. Roughly 70% of the total population is engaged in subsistence farming (MINAG, 2011a; World Bank 2023b). However, with the majority of rural families relying on traditional agricultural practices on plots smaller than two hectares (MADER, 2021), agricultural production is low and household vulnerability to food insecurity is high. This has led to criticism about the mismatch between the observed growth in the agricultural sector and production, and the meager distribution of its benefits to the significant part of the population (Castel-Branco, 2003; 2006), particularly in rural areas, where half the people live below the official national poverty line of 1,90 USD/day (INE, 2015; World Bank, 2023c).

As such, questions remain among scholars and practitioners about the role of commercial agriculture (and the private sector as a key actor) in the Mozambican agricultural sector, as well as its responsibilities and influence in a sector dominated by smallholder farmers. In the quest to answer how inclusive production models improve smallholder farmers' livelihoods over time, it is first necessary to illustrate the key features of production models that have been instituted in the past year, especially those that involve smallholder farmers within the value chain.

Therefore, this chapter focuses on answering the first sub-question presented in the introduction of this thesis: *What are the characteristics of agro-investments in Mozambique and in what ways do they involve smallholder farmers?*

It will investigate how agribusiness investments have established their presence in Mozambique and, in particular, at the ways they have involved and affected smallholder farmers in various ways during this process. It will use the general agribusiness-related databases collected during research between 2013 and 2016 to unpack issues such as land use and land conversion directions as well as agribusiness practices involving smallholder farmers.

In doing so, this chapter paints a background picture about the extent of involvement of smallholder farmers with agribusinesses. It is an attempt to analyze the nature of investment flows during this period of research (e.g. the geographies of investments) using a unique and comprehensive database. As part of this analysis, this chapter also examines whether or not smallholders are involved in comparison to other literature in the field.

Below, the methodology for this paper is presented. Following this, the chapter discusses the role of agribusiness encouraged by the national policies and discourse which were examined in the previous chapter. Using an overarching database of national investments, we will notice the increase in (foreign and national) agribusiness investments over the past decades and will gain insights into land access and concentration. The data provided by 69 surveyed agribusinesses will elucidate questions about land use (and change of uses) and what it means for matters such as smallholder farmers' inclusion and exclusion. Finally, we will also examine selected agribusinesses' practices, in particular those that involve smallholder farmers, illustrating how most investments in fact have neither generated inclusion nor benefits for smallholder farmers so far. These sections will be followed by the concluding remarks.

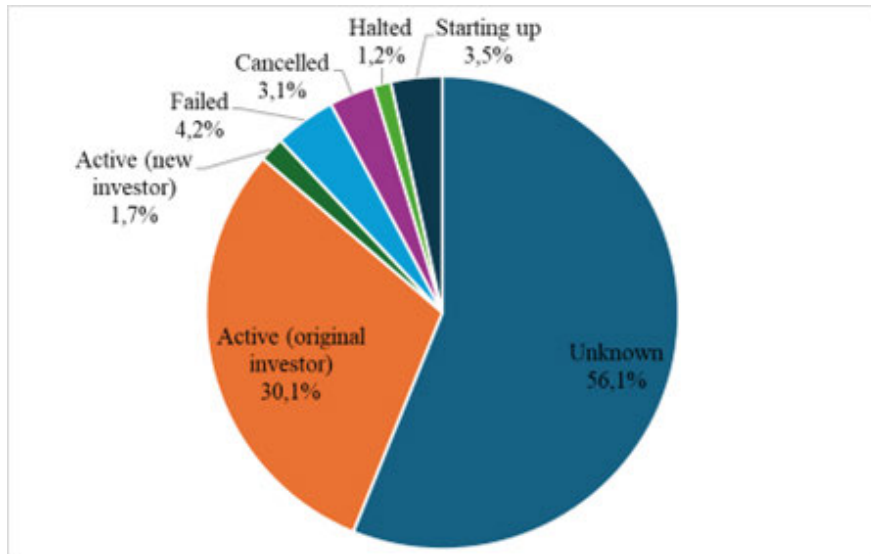
4.2 METHODOLOGY

To achieve the objectives outlined, this research carried out a thorough literature review of legislation and agricultural policies and strategies, which was accompanied by interviews with key current and former governmental officers of a series of agencies and ministries. Additionally, data was collected with the former Ministries of Planning and Development (MPD) and Coordination of Environmental Affairs (MICOA), as well as the National Library in Maputo City. The most useful data was obtained from two ministry directorates, the Centre of Investment Promotion (CPI) and its former agricultural affiliate, the Agriculture Promotion Center (CEPAGRI) under the former Ministry of Agriculture (MINAG). This data was then consolidated into one dataset of 482 officially approved agricultural investments between 2002 and 2013. CEPAGRI's provincial offices were subsequently visited since they tended

to have the most accurate information about investor status. This was complemented by numerous key informant interviews in six of Mozambique's ten provinces.⁹

Despite issues with reliability and comprehensiveness that are illustrated in Figure 4.1, the available dataset offered substantial insights into national investment trends and geographic and sectoral patterns. For example, Figure 4.1 demonstrates the difficulty to obtain official information about agribusiness operations in Mozambique: out of 482 investments listed in official databases, less than half could be confirmed by the government or by on-site visits to the investments (211 investments). Of those, 72.5% were confirmed as operational (153) and 19.5% (41 investments) had been canceled, halted or failed, due to financial and/or operational difficulties or the revocation of investment licenses. Investments with an unknown status are, according to sources, mostly failed investments or those that are yet to commence operations. However, some investments located in remote and poorly accessible locations may not be well captured by the former regional CEPAGRI offices that were responsible for monitoring and evaluation before discontinuation in 2016.

Figure 4.1: Investments' status at time of survey (N=482)



Source: Authors' own, from data obtained from CPI, CEPAGRI, and district visits (SDAEs).

The data collected through national level governmental bodies in 2013 and 2014 (CPI and CEPAGRI) forms the backbone of this chapter's general overview of investment patterns

⁹ The complete list of organizations and key informants contacted are referred to in the Annex A, Phases I and II.

in Mozambique. More specific characteristics of investments are then addressed based on a survey with agro and forestry companies (Annex B). The survey draws from a range of active investments that could be visited (see the limitations section below). More than 40 districts with a high prevalence of intended investments, except the ones located in Sofala, were visited as part of a consultation process with their District Services of Economic Activities departments (SDAE, in Portuguese). In total, more than 120 investments were contacted, with participation of 69 in the research.

Respondents are very diverse. They operated in various sectors, such as cereals, sugar, cotton, soya, fruits, nuts, and livestock, under a large variety of operational structures, from small to large-scale, and from start-ups to well established businesses. The non-respondent population was equally diverse, operating in the sugarcane, cereals, horticulture, and livestock sectors, particularly in southern Mozambique, and tobacco, tea, and soya sectors in the central and Northern provinces.

Limitations

There were three key limitations for this chapter's research. The first was the lack of a central government database keeping track of all land use types in the country. Difficulties in monitoring and tracking land use were evident at the central level, as well as the provincial and district levels.

The second limitation was the dynamism of Mozambican agro-investments. Visits to the provincial CEPAGRI in Manica and Zambezia in 2013 and 2014 illustrated the difficulties in monitoring and reporting on activities. For example, in addition to a lack of resources for monitoring agribusiness activities, the governmental agencies had difficulties monitoring the expansion of small investments. Other investments would register as associations, allegedly for tax reasons, or would be listed under different names than those registered at central level. Additionally, investments would fail, change ownership, not materialize due to a lack of finance or because the entrepreneur would leave the country. Moreover, investments initially registered as agribusinesses could actually pursue other activities, such as mining or tourism, without properly communicating these activities to the governmental agencies. These issues resonate in other countries (see Antwi-Bediako, 2021 for example) and escapes governmental oversight. Moreover, Mozambican commercial smallholders add to these record-keeping challenges by being unable to register their land rights, hindering governmental control over investments and land use types in the country, thus jeopardizing statistics and effective policy-making.

Finally, the third limitation were natural obstacles (e.g. floods) and security issues, which prevented travel in certain areas of Manica and in Sofala and limited the reach of this study.

4.3. LAND ACCESS AND GEOGRAPHIES OF INVESTMENT

4.3.1. Increasing agro-investments

Mozambique is a country of about 800,000 km² (INE, 2023). Given that 5.5 million hectares (ha) of land are occupied by smallholder farms, there are arguably from 30 to 36 million ha of arable land (Arndt et al., 2008; MINAG, 2011a), which means that despite population growth and land competition increasing in many regions, authorities can still claim that Mozambique is far from being a densely populated country. According to MINAG (2011b) and the World Bank (2020), local communities occupied only 14% of the arable land in 2010 and 17,2% in 2020¹⁰.

This discourse, together with Mozambique's coastline linking SADC to important ports in the Indian Ocean, and vast regions of abundant water resources make Mozambique a potential investor's paradise at first glance. It is not by chance that this image formed the central argument of the government to attract agro-investments for the better part of the 2000s and 2010s. In that period, land rights were requested at a fast pace for various reasons, including agricultural investments. This had direct and indirect implications for the discussion on inclusive production models. However, before delving into that discussion, it is relevant to use national databases to understand land access and geographies of investment. By doing so, it is possible to paint a background picture that will also enable a better examination of the criticism towards agribusiness' role for smallholder inclusion.

According to Mozambique's Land Law of 1997, the right to use and benefit from the land is a right for all the Mozambican people. It is called DUAT (*Direito de Uso e Aproveitamento de Terra*, in Portuguese) and it can be provisional or permanent. It can be formalized via recognition of customary right to the land in question or via legal authorization of request, which follows a legal procedure. Such requests are made to the relevant Cadaster Services at the Province where the land right is to be obtained.

Data provided by DNTF in 2013 shows that 17,953 DUAT requests were made in Mozambique between 2008 and 2012, covering an area of approximately 10.75 million hectares. Approximately 62% of the area requested and 68% of requests were approved (Table 4.1), with the average DUAT approval concerning an area of 546 ha. In addition to agriculture investments (Table 4.2), approvals also included community demarcations, real estate, industrial development and tourism.

10 However, this argument is criticized by civil society and academia, who alert that although discourses point out unutilized virgin land, the land is actually traditionally used or followed by a scattered population (Ekman, 2012).

The discourse at the time was that investments in general were crucial for economic development and that agribusinesses in particular were essential for the modernization of the agricultural sector. This is clear in the agricultural strategies, policies, and plans of action of the time (see MINAG 2007; 2008a; 2008b; 2011b; GoM 2006; 2010a; 2010b; 2011) and indicated by the number of agricultural DUATs approved in the same period.

Table 4.1: DUATs requests and approvals, 2008-12

| Year | Number of requests | Area requested (ha) | Number of approvals | Area approved (ha) |
|-------|--------------------|---------------------|---------------------|--------------------|
| 2008 | 3,857 | 4,618,230.90 | 3,080 | 4,137,717.07 |
| 2009 | 2,895 | 1,636,025.96 | 2,528 | 1,208,749.08 |
| 2010 | 2,123 | 653,821.03 | 2,175 | 279,781.10 |
| 2011 | 3,338 | 2,210,693.30 | 2,468 | 387,609.50 |
| 2012 | 5,740 | 1,624,254.40 | 1,947 | 648,040.05 |
| Total | 17,953 | 10,743,025.59 | 12,198 | 6,661,896.80 |

Source: collected at the former DNTF in 2013

Table 4.2: DUAT requests and approvals for agricultural investors, by sector (N=159)¹¹

| Sector | Number requested | Average area requested (ha) | Number approved | Average area approved (ha) |
|------------------|------------------|-----------------------------|-----------------|----------------------------|
| Food | 85 | 4,782.5 | 43 | 4,183.0 |
| Biofuel | 22 | 6,674.5 | 10 | 10,129.6 |
| Unknown sector | 18 | 12,691.1 | 14 | 6,221.2 |
| Multiple sectors | 14 | 9,639.2 | 6 | 3,515.0 |
| Wood | 13 | 112,575.2 | 8 | 139,568.3 |
| Textile | 5 | 10,700.0 | 5 | 9,156.0 |
| Other | 2 | 2,750.0 | 4 | 1,872.4 |
| Total | 159 | 15,341.0 | 90 | 17,656.6 |

Source: Author's dataset.

The influx of agricultural investments over the 2000s and 2010s clearly showed a preference for a subset of regions. Figure 4.2 disaggregates investment intensity at district level.

¹¹ Only 159 investments of the 482 investments in the larger dataset had accessible data available on DUAT requests. The average investor requested a comparatively sizable 15,341 ha. For 90 investments, DUATs were in fact allocated, as confirmed through official government data. The average area of land allocated was 17,657 ha per investor; especially for larger investments, this typically involves multiple DUATs. The average area allocated exceeds the average area requested, largely because a number of large forestry and biofuel investments acquired more land than they initially applied for. On average, forestry, biofuel and textile investments acquired the largest areas of land.

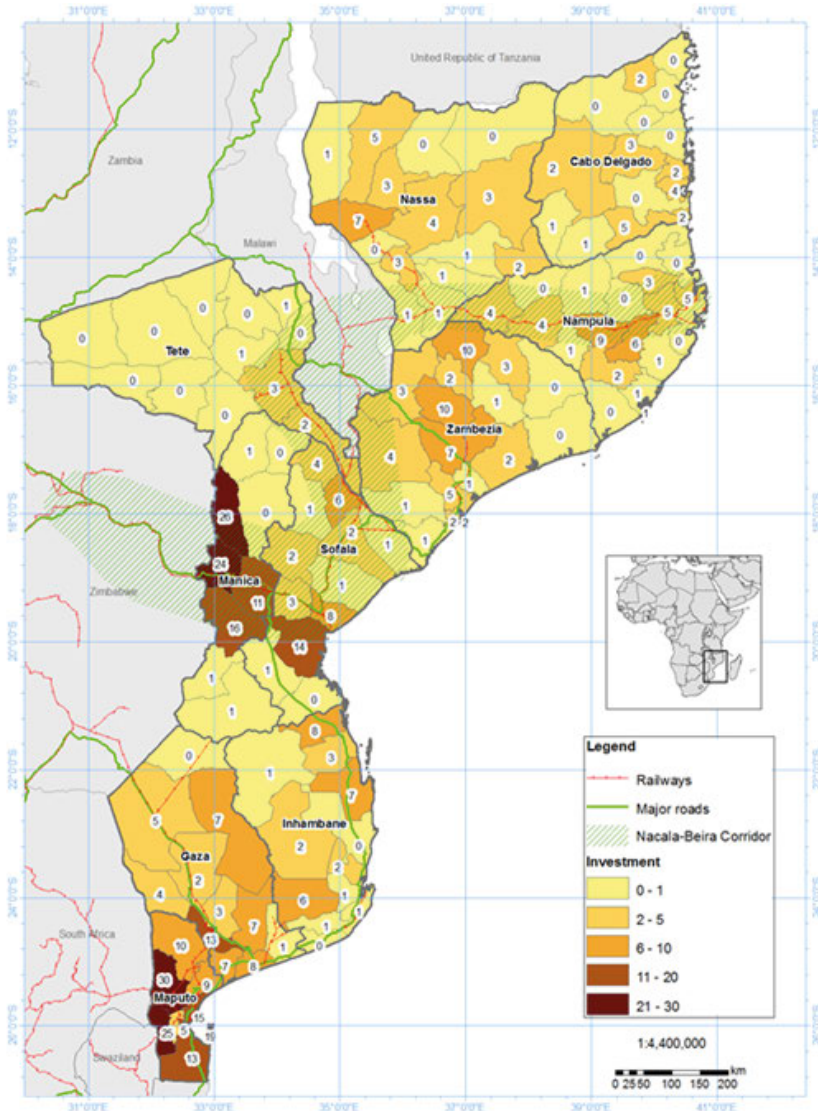
Table 4.3: Distribution of investments by province (N=478)

| Province | Surface area of Province (ha) | Suitable and available land for investments (ha) | Proportion land area available and suitable for investments | Number of investments | Area of suitable and available land per investor (ha) |
|--------------|-------------------------------|--|---|-----------------------|---|
| Tete | 10,066,225 | 2,358,152 | 23.4% | 10 | 235,815 |
| Niassa | 12,958,020 | 2,354,910 | 18.2% | 20 | 117,745 |
| Inhambane | 6,877,537 | 1,863,206 | 27.1% | 32 | 58,225 |
| Cabo Delgado | 7,785,097 | 569,848 | 7.3% | 22 | 25,902 |
| Zambezia | 10,313,290 | 728,598 | 7.1% | 41 | 17,771 |
| Nampula | 7,813,213 | 592,744 | 7.6% | 43 | 13,785 |
| Sofala | 6,775,315 | 575,973 | 8.5% | 46 | 12,521 |
| Gaza | 7,533,385 | 628,937 | 8.3% | 56 | 11,231 |
| Manica | 6,228,724 | 873,743 | 14.0% | 81 | 10,787 |
| Maputo | 2,360,515 | 11,000 | 0.5% | 127 | 87 |
| Total | 78,711,321 | 10,557,110 | 13.4% | 478 | 22,086 |

Source: Courtesy of MINAG in 2013 (unpublished): land suitability and availability data

The analysis of the geographic distribution of agro-investments shows a particularly high concentration of investment in Manica and Maputo provinces, both in absolute numbers and relative to the area of the provinces (Table 4.3). Additionally, relative to the area of land considered by MINAG (unpublished) to be suitable and available for commercial agriculture, forestry and livestock investments (10.56 million hectares or 13.4% of Mozambique's land area), similar patterns can be observed. This highlights that the risk of land use competition – for example, with land already under cultivation and forests – is especially high in these provinces. However, insufficient reliable data is available to evaluate whether more land has been allocated in these provinces than is potentially suitable and available.

Figure 4.2: Distribution of investment by district



Source: Map produced by compilation of authors' data. Courtesy of Di Matteo and Schoneveld (2016).

In Maputo and Gaza, investments are concentrated within the fertile agro-ecological zone that is locally referred to as the 'Maputo's interior'. This includes most districts in Maputo, as well as Chokwe district in southern Gaza. Those districts, under Portuguese colonial occupation, became some of Mozambique's most commercially oriented areas of agricultural production. The comparatively well-established on-farm infrastructure, such as irrigation and road and rail networks, connecting these farming areas to the Maputo port

and neighboring countries has made this area highly attractive to agricultural investors. Despite its strategic location, Gaza's countryside has attracted less investor interest due to its arid climate and poor infrastructure for irrigation and market access. Primarily, the area is typically targeted by livestock investors.

In other provinces, most investments are concentrated within emerging growth corridors, where major road and railway networks are being established and/or rehabilitated. These include major private and public–private consortiums developing and managing infrastructure in the Nacala Corridor such as the Integrated Nacala Logistical Corridor (CLN), the Northern Development Corridor (CDN), and the Nacala Road Corridor Development. These projects intend to provide more efficient and cost-effective routes for transporting goods from Malawi, Zambia and the provinces of Tete and Niassa to the ports in Nacala and Nacala-à-Velha in Nampula. Infrastructure projects in the other major growth corridor project, BAGC, involve the rehabilitation of major road and railroad networks that link the port of Beira in Sofala westwards to Harare in Zimbabwe (through Manica) and northwards to Lilongwe in Malawi (through eastern Tete).

Outside these corridors, target areas include the fertile medium to high altitude areas in Zambezia, such as Gurue and Lugela districts. Under Portuguese occupation, these areas were important production centers for cash crops, such as coffee, tea, banana, and various tree crops. Due to its proximity to the Malawian border and established agricultural infrastructure, this area is emerging as an important investment hotspot. Though comparatively remote and underdeveloped, parts of Niassa province have also attracted considerable numbers of large forest plantation investments in the 2000s and 2010s.

However, the considerable influx of investments has brought about new challenges, especially in terms of the relationship between the private sector and rural populations. Negative reports and criticism to the policy have intensified, creating mounting pressure on the government. Land concentration in the hands of (foreign) investors often made headlines, and corroborated the perception of scholars and civil society organizations about land grab in Mozambique (Salomão, 2020).

That being said, it is important to note that the data on Table 4.1 also highlights that the government has become more conservative in allocating land since 2010. For example, in the period 2008–9, 85% of DUAT applications were approved, as opposed to 29% in the period 2010–12. This is partly attributable to the government's efforts to screen land applications more stringently on their viability and desirability following a moratorium in

2010, which responded to the 2008 - 2009 food and energy crises and increasing criticism of land grab.

In addition, it would be imprudent to overlook the past decade of agricultural investments and dismiss the potential that it has to generate lessons to inform future efforts to promote a sector that is more inclusive of and beneficial to smallholder farmers in the long run. Therefore, the following sections will look at selected key features of agribusiness' investments and production as well as examine how the trends in Mozambique respond to the wider trends of the land grabbing debate.

4.3.2. The criticism about the role of agribusiness investments

It has been widely reported that the food, energy, and financial crises of 2008-2009 have led to a sharp increase in land-based investments in developing countries in general. In Mozambique, this was no different (Schoneveld, 2013; Salomão, 2020), as outlined in tables 4.1 and 4.2. Many of these investments sought to capitalize on opportunities in global commodity markets by producing food, biofuel crops, and other agricultural commodities on cheaply acquired land. This has become the subject of numerous academic articles, media reports, and advocacy campaigns, which often equate these investments with 'land grabbing' (Nhantumbo and Salomão, 2010; Kaag and Zoomers, 2014; Dalupan et al., 2015).

In Mozambique in particular, the increased global demand for land coincided with governmental efforts to attract foreign direct investment into the agricultural sector following the liberalization of the economy in the late 1980s and early 1990s (Macuane, 2012; Dalupan et al., 2015; Salomão, 2020). The resulting increment in agricultural investments was often viewed as new enclosures serving mainly the interests of foreign capital, export markets, and the macro-economic goals of national governments, without contributing meaningfully to local food security, inclusive growth, and to addressing rural market failures (Cotula, 2013; Schoneveld, 2013; German et al., 2016).

In this sense, the land grab debate generated substantiated criticism based on the perceived trends noted by scholars. For example, a first noteworthy perception relates to the origins of investors. Investors from the Global North have been reported as main drivers of land investments as they pushed for cultivation of biofuels and flex crops to accommodate demand and production commitments in their home markets. In addition, newer hubs of global capital and market demand - such as Brazil, Russia, India, China and South Africa (BRICS), some Gulf States and other middle income countries (MICs) - started to play an increasingly important role in shaping what is produced, how it is produced and where it moves across borders (Margulis and Porter, 2013; Margulis et al., 2013; McMichael, 2013; Milgroom, 2015; Porsani et al., 2017; Bruna and Mbanze, 2023).

Another common perception concerns the reported trend towards large-scale monoculture. Literature on agricultural investment tends to assume an investor proclivity in favor of industrial plantations and commodification of land, as opposed to production models which include small farmers, such as contract farming (Toulmin et al. 2011; Deininger and Byerlee 2012). This is also evident in Mozambique (Nhantumbo and Salomão, 2010; Mousseau and Mittal, 2011; Kaarhus, 2018; Bruna and Mbanze, 2023). The debate on large- and small-scale farming in terms of its benefits and disadvantages has been the focus of a number of publications (Scoones et al., 2010, White et al., 2012 and Hanlon et al., 2013).

Finally, a third common analysis is the social and economic consequences of property conversion and land use change. Displacement of previous land users has been repeatedly observed as an effect of land investments, often without adequate – or any – compensation. These injustices, together with potential negative environmental consequences of land conversion, are the reasons why 'land grabbing' became a widely publicized issue (Dekeyser, 2019). The presence of international market actors has generated additional concern, despite the fact that foreign agro-investments might contribute to increased production of food and commodities in target countries. The conversion of large expanses of land for biofuels and flex crops production for export could adversely affect the resources available for local people to meet their subsistence food requirements (Borras and Franco, 2012; Porsani et al, 2017; Bruna and Mbanze, 2023).

As such, we observe a challenging context where governmental plans to accommodate rural populations' needs clash with the modernization plans for agriculture. At the same time, very little progress that is attributable to agribusiness has been observed. Indeed, there has been no systematic transformation of the rural areas: there has been very little change in the rate of population living in rural areas against urban areas – 67% of Mozambique's population currently live in rural areas compared to 69% in 2008 (Maloa, 2019); 70% to 80% of the population depends on subsistence agriculture; and smallholder farmer agriculture represents 98% of the agricultural holdings (*explorações*), mostly without irrigation and in landholdings of 1,1-1,4 ha on average (FNDS, 2017; MADER, 2021).

In summary, agricultural policies and implementation strategies are the main instruments for governmental intervention on agriculture. On paper, these policies and strategies have long been aimed at achieving food security, sustainable economic development, and reducing levels of absolute poverty by supporting smallholder agriculture. However, in practice, commercial farming growth was the real priority of the government. Whereas smallholder farmers were regarded as important actors, priority was continuously given to the promotion of commercial agricultural growth (Birgegård, 2006; Virtanen and Ehrenpreis,

2007; do Rosário, 2012). A recent publication of the Mozambican *Observatório do Meio Rural* illustrates that this prioritization still exists in new agricultural programs, such as SUSTENTA (Mosca, 2023).

4.4 SAMPLED AGRIBUSINESSES AND THEIR FEATURES OF INVESTMENT AND PRODUCTION

This section will assess the findings from a sample of 69 agro-investments stakeholders interviews (2013-2016). It examines land use change and implications for inclusive development, as well as agribusiness practices, including value chain activities and sourcing practices. This section outlines whether and how agribusiness practices of production have fallen short on inclusion and the generation of benefits to smallholders.

4.4.1 Land use change and the growth of “exclusive” development

In the previous sections we have discussed DUATs and land access more generally. This section assesses the primary data collected.

Access to land

As previously mentioned, the increased global interest for farmland made “farming a more attractive business proposition” (Cotula, 2013: 1605). With this interest, concerns about access to land by investors and by smallholder farmers became central tenets in literature (Hall, 2011; Borrás and Franco, 2012). Whilst interviews with 69 agribusiness representatives showed a diversity of production models in Mozambique, it also indicated the importance of access to land for the interviewed investments.

Despite smallholder involvement in some production models, 56 agribusinesses declared to directly cultivate at least part of their produce, two others were engaged in livestock activities and one was planning to directly cultivate land. Accessing land was thus indispensable for 85,5% of the sample. Moreover, the size of land acquired by the investors was not negligible. Over half a million hectares were declared to be secured by interviewed agribusinesses through DUAT emissions or DUAT transfers. In very few cases land belonged to Mozambican nationals by customary use. Additionally, investors had indirect access to an additional 140,000 hectares approximately through outgrower smallholders, concessions, or lease (see Table 4.4).

Table 4.4: Declared land access in hectares

| Declared land access* | Hectares |
|---|----------|
| Land assigned to project* ¹ | 538.609 |
| Access through smallholders* ² | 110.548 |
| Access through land concessions* ³ | 20.980 |
| Access through lease* ⁴ | 6.974 |
| Total of declared hectares | 677.111 |

Source: Authors' sample

Table 4.4: Size in hectares of the disclosed land access of interviewed agribusinesses according to type of access, that is direct or indirect access to land.

*This table is based on 62 out of 69 survey firms. Seven interviewees could not give land access information.

*¹ Sample size: Fifty-six out of sixty-two agribusinesses – excludes access to land by way of lease and concessions.

*² Sample size: Seven agribusinesses out of the 29 investments working with smallholders were able to estimate land access in hectares.

*³ Sample size: Two agribusinesses have land concession agreements.

*⁴ Sample size: Six agribusinesses operating only through lease agreements.

Most investments secured land through DUAT applications (52,2%). However, quite a few cases gained access to land by transference of rights (14,5%), lease (8,7%) or concession (2,9%). Although *leasing* land and *DUAT transfers* are not illegal, these means of access to land are still to be regulated and no formal guideline is presently available. *Concession* schemes¹² appear to be a recent instrument used by the government under the Land Law of 1997. These cases represent a gray zone with unclear implications for smallholder farmers that could benefit from further regulation, preferably with popular and civil society participation. The former DNTF, now DNDT (National Directorate of Land and Territorial Development), is currently working on the elaboration and public consultation of a new Land Law which is supposed to address this matter, *inter alia*.¹³

Among the projects that acquired land, two Scandinavian and three African investments accounted for a massive 88% of the total land assigned. It is worth mentioning that this pattern is caused by the forestry sector. Alternatively, when excluding the seven forestry companies in the sample, Mozambican projects dominate direct control of land (44%), followed by Zimbabwean (18%) and South African projects (13%). Together these three countries account for three quarters of the land in the non-forestry survey population.

One interesting finding, is the pattern of leading investors' nationality, with most of the land acquired in the sample under use by African investors. Only in the case of forestry do we

12 Concession schemes have been observed in cases where the government seizes an area invoking the national interest in order to develop infrastructure such as water and irrigation systems. It is then able to make concession agreements with investors who want to use parts of the newly developed area. This is the case of *Regadio do Chokwe* in Gaza Province (Ganho and Woodhouse, 2014).

13 According to an interview with the National Director of Land and Territorial Development, in Maputo, in July 2023.

notice a large involvement of Scandinavian countries. Although more DUATs were allocated to Mozambican investors, on average foreign investors had access to significantly more land (11,398 ha) than domestic ones (3,689 ha). In some provinces, such as Zambezia and Nampula, foreign investors obtained four to eight times the areas granted to Mozambicans (Di Matteo and Schoneveld, 2016). On average, forestry projects obtained the largest holdings (56,531 ha) and horticulture the smallest (1,045 ha).

The considerable area obtained by investors, according to interviewee statements, derives mainly from the forestry sector (more than 300,000 ha), with eight additional very large agribusinesses, securing at least 10,000 hectares each. These results are interesting, as Mozambican and foreign investors have acquired access to vast expanses of land that are seldom unoccupied (as seen in Tables 4.5 and 4.6).

The problem for the analysis is that acquiring land does not necessarily translate into using land. The survey indicates that only 21% of land obtained was actually being used, whilst a similar amount was chiefly (but not exclusively) reserved for conservation (20%) in forestry projects¹⁴. Several factors can explain why the majority of land (59%) was apparently unused. The most probable is that 29% of the sample is constituted of start-up investments, which may gradually expand their cultivation over time. Other investments are rotating land, using different plots over time. Nevertheless, Mozambican law states that land assigned must be in effective use in accordance with the business plan filed in the project application. Lest the investors fail to follow the plan, according to the current Land Law, the government can revoke the right to use the land.

Given the aforementioned, it is unclear how investments that have been granted access to land translate this access into benefits for communities that ceded the 'unused land'. Nor is it clear when (how long after land assignment) the effects of land use may take place. Therefore, it is on the 21% of land actually in use and on the future use plans that the following analysis is based.

Directions of land use change

This section concerns the nature of land conversion and use by the companies surveyed during the period of research¹⁵. There are established scholar concerns that large tracts of land are diverted from the production of food crops (normally for subsistence) to

14 Sample size: 55, as 14 out of 69 investments did not make direct use of farmland (11) or could not state the size of land used (three).

15 As such, the information regards the latest information about land use of the companies, but in terms of nature of land conversion, it can allude to land conversion done many years before the survey. That is because the age range of the surveyed companies varies from centenary ones to start-up.

commercial ends. Numerous studies prove that this fear is well grounded in Mozambique (see Borrás et al., 2011; Matavel et al., 2011; Norfolk and Hanlon, 2012; IRIN, 2013; Maptoe, 2013). However, there is little aggregate reporting on investments effects on property change and directions of land use conversion. Therefore, it is worthwhile to analyze the surveys to generate more insights about this matter.

Most investments in the sample were aimed at food production (63%), while most common previous land uses tended to combine *food & non-food* land uses (50%). Mozambique's population is widely dispersed across its territory and thus it is virtually impossible to find unused or unclaimed land (Ekman, 2012). Land use conversions therefore stemmed mostly from smallholder land and natural landscapes, such as forests, shrub land, and wetlands. Although a considerable part of investments converted *non-food* land (19% – primarily forest or shrubland, but also degraded/marginal land), previous land uses solely for *food* production (24%) were also converted to new food production uses. In some of these cases, conversions involved smallholder dispossession and unresolved land conflicts – particularly for investments demanding large tracts of land. Conversions also consist of cases where crops shifted from subsistence-based to commercial ends.

Table 4.5. below offers an overview of the informed use of land prior to the introduction of the sampled investments. It shows that many investments from the sample (n=68) gained access to land occupied by natural land, smallholder land, commercial farming, and marginal/degraded or pastureland. In some cases, urban land was also accessed for agricultural finalities. To understand how land use impacts the discussions on inclusive production models, we must assess the directions of land use change. In this respect, we can adapt Hall's (2011) analytical framework categorizing the main directions of change (Table 4.6). Since many investments performed land conversions both to *food & non-food* ends, this category was added. The discussion that follows centers on the dynamics of land use and property changes observed in Mozambique.

Table 4.5: Land use before investments (N=68)

| Previous Land Use | Number of Investments | % of Investments |
|---|-----------------------|------------------|
| Natural land: shrubs, forests, wetlands | 38 | 55,88% |
| Smallholder land | 32 | 47,06% |
| Commercial farm | 28 | 41,18% |
| Marginal/Degraded/Pastureland | 10 | 14,71% |
| Urban | 2 | 2,94% |

Source: Authors' own.

For almost all types of land use directions, it should be stressed that smallholders tend to be present in non-negligent numbers in land sought by large-scale agribusiness projects. These observations have considerable outcomes for the inclusivity debate. Unresolved displacements trigger a number of intra-community and inter-community tensions. This includes stronger competition for land and other natural resources among community members as displaced households attempt to secure new plots of land, and as community members in more favorable positions accumulate resources (see German et al., 2013; Schoneveld, 2013).

Land conversions targeting biofuel production are not included in Table 4.6 due to the fact that Mozambican biofuel investments experienced failure throughout the 2000s. The Mozambican biofuels project gained momentum when high level officials stimulated *jatropha* production by smallholders in all districts of the country. Nevertheless, the lack of support conditions, such as technical assistance, follow-up and market connections soon crippled the initiative (Schut et al., 2010; Antwi-Bediako et al., 2019). Despite the failure, the government identified three other crops for fuel production, namely sugarcane, sorghum, and coconut, this time for large-scale commercial investments. Although all three are well-established crops in Mozambique, none have actually developed into biofuel production projects, with only some sugarcane companies contemplating a future possibility of producing ethanol. According to Schut et al. (2010: 5156), a total of 245,404 ha of land were requested for biofuel ends until 2008, mostly for projects originating from South Africa and Europe, but no projects reached production goals.

On the other hand, flex crops are prominent in Mozambique. Soya, cassava, sunflower, cotton and even the aforementioned coconut and sugarcane crops are among the sampled investments for crops that can have multiple uses, such as for food, feed, fuel and textile *inter alia*. As noted by Borras et al. (2016), these crops are part of the current era of flex commodities, intertwining land use and land tenure issues, and posing direct, yet underexplored implications to smallholders and the environment. Although in Mozambique land use conversions for flex crops mainly involve smallholder land together with forests and shrubland, and are best represented by Types H and I (Table 4.6), there is no official aggregated data on land use conversion at central level. Therefore, further research on this topic could be of use for the formulation of pro-rural development, inclusive, and environmentally sound policies in the country.

Table 4.6: Main directions of land use changes in Mozambique's agriculture (N=68)

| To food | To non-food (including biofuels) | To both |
|---|--|--|
| <p>Type A <i>Food to food</i> Very common type (23,5%); generally involving land user change from smallholders to commercial farmers, but also presenting land rights transfer between commercial farmers. Examples include relatively small-scale investments.</p> | <p>Type B <i>Food to non-food</i> Few cases (5,9%); forestry, cotton and beer projects.</p> | <p>Type C <i>Food to food and non-food</i> Not common (1,5%); a dairy company, producing feed for its own cattle.</p> |
| <p>Type D <i>Non-food to food</i> Common type (14,7%); tends to involve marginal/ degraded land and forest/ shrub land conversions to plantations.</p> | <p>Type E <i>Non-food to non-food</i> Not common (3%); the use of urban areas for feed production and the establishment of a forestry plantation in marginal/ degraded and natural landscapes.</p> | <p>Type F <i>Non-food to food and non-food</i> Not common (1,5%); cooking fuel production alongside food crops.</p> |
| <p>Type G <i>Food and non-food to food</i> Very common type (23,5%); usually involves the conversion of forest/ shrub land together with smallholder land into large plantations and cattle pastures. Examples are banana plantations in southern Mozambique.</p> | <p>Type H <i>Food and non-food to non-food</i> Not uncommon (13,2%); often conversion of forest/ shrubland, smallholders and community land to plantations of feed crops, such as soya beans. Also to forestry projects.</p> | <p>Type I <i>Food and non-food to food and non-food</i> Not uncommon (13,2%); follows the patterns of type H, but commonly involves investments producing two or more different crops, of which at least one is a food crop and at least one other is a cash crop.</p> |

Source: Authors' own.

The implications are clear. In Mozambique, there is a great interest among investors for land stemming from natural landscapes and previous production areas. In this sense, the pressure for land from natural landscapes has higher environmental impact than the use of marginal or degraded land would. At the same time, many former uses of land for food production are diverted for new production, typically still food, but for commercialization or animal feed. Smallholders often find themselves impacted by these new directions of land use, either as part of the production or by being displaced. However, studies based on aggregate information about land investments, such as this one, corroborate views on the deeper implications that happen at a more micro level of analysis of land-based

investments. Therefore, the need for further studies on the effects of different types of production models has never been more pressing.

Exclusionary development

The data suggests that the majority of agricultural investments were established through the titling of land within the customary land domain. Because the Mozambican land law requires investors to consult and seek the consent of affected communities when community lands are acquired (GoM, 1997), communities are often able to define land alienation conditions typically through their traditional representatives. In most cases, such conditions include the payment of compensation for displacement and the contribution to community economic and social development through, for example, the adoption of preferential hiring policies, the provision of production inputs at concessionary rates and the construction of schools, boreholes, or other communal buildings.

However, investors that accessed land by, for instance, renting or purchasing land already titled for commercial agricultural purposes were found to be significantly less inclined to comply with responsible land acquisition procedures or to invest in community development activities. This is because when investors rent land, responsibilities towards host communities tend to lie with the titleholders, while investors who purchase land that is already titled, are absolved through the Mozambican land law from any direct responsibility by rendering land users within the titled lands as illegal occupants. If investors are absolved from legal responsibility in these situations, they are less compelled to respond to the needs of host communities (Norfolk et al., 2020). The survey results below outline these observations.

Table 4.7: Displacement, consultations, and compensations (N=55)

| Type of land access | N | Proportion involving displacement | Consultations | Compensation for farmland | Land replacement |
|----------------------------|-----------|--|----------------------|----------------------------------|-------------------------|
| New DUAT | 30 | 83.3% | 90.0% | 68.0% | 3.3% |
| Old DUAT | 13 | 7.7% | 53.8% | 7.7% | 0.0% |
| Lease | 9 | 44.4% | 66.6% | 33.3% | 0.0% |
| Customary | 4 | n/a | n/a | n/a | n/a |
| Total | 55 | 51.8% | 72.7% | 47.9% | 1.8% |

Source: Adapted from Di Matteo and Schoneveld, 2016.

Table 4.7 shows the percentage of investments under four different types of land tenure, which caused displacements, realized community consultations, compensated populations for loss of farmland, and replaced households onto new land.

In the survey, over half (51.8%) of those investments that acquired land for cultivation conceded that their establishment directly displaced smallholder farmland and/or settlement. Displacement was most prevalent amongst investments with new DUAT titles, where 83.3% involved some form of displacement (Table 4.7). Not surprisingly, investments that acquired new land titles were more likely to displace people. However, allegedly they almost always conducted community consultations and provided compensation for farmland loss. On the other hand, regardless of the effectiveness and fairness attributed to those consultations and compensations, cases involving land rights transfer (old DUAT) and land leases on average consulted with local communities on fewer occasions and compensated smallholders for land loss. These latter cases should, therefore, receive more attention than they have so far.

However, there are clear limits to our understanding of the processes of land acquisition, displacement, consultation and compensation. It is not clear whether all cases of agribusiness seeking land occupied by smallholders have performed a fair and mutually acceptable land acquisition process. Extant literature indicates that this is seldom the case (Salomão, 2020). Also in cases of transfer of land rights from previous commercial farms it is practically impossible to ascertain displacements and commitments. It is concerning that provincial and district authorities were also not able to provide data regarding this type of information, which may suggest that there is a gap in the government's ability to enforce smallholders' rights.

4.4.2 When smallholder farmers do get involved: 'inclusive' agribusiness practices

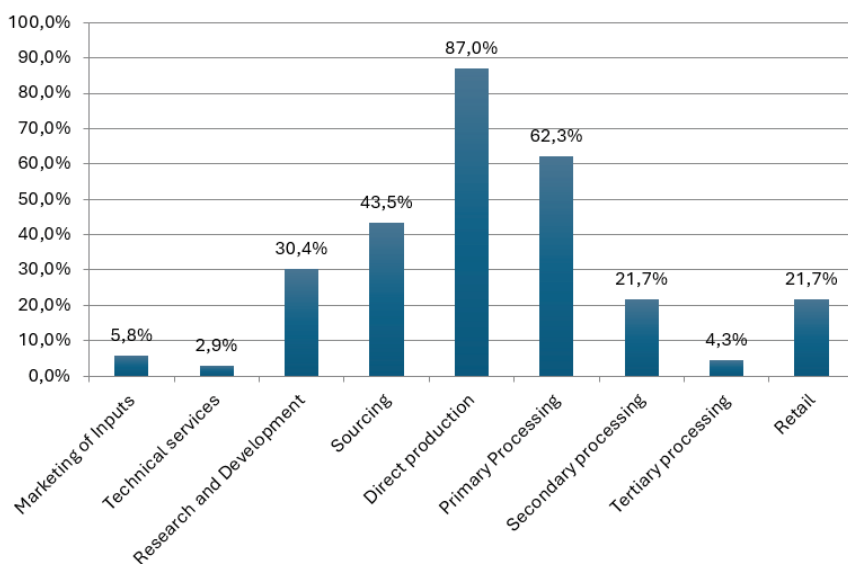
There are myriad agricultural production models. Some involve smallholder farmers and some do not (Vermeulen and Cotula, 2010). In Mozambique, the most common production model involving smallholder farmers are outgrower schemes, which requires intensive smallholder labor (Mosca, 2023). Indeed, fifty-nine of the sampled investments are involved in direct cultivation activities, but their production model choices were not exclusively geared towards large-scale monoculture plantations. Often, the value chain activities of sampled agribusinesses involved smallholder farmers through various forms of sourcing. The implications of these models will be illustrated in the following sections.

Value chain activities

As far as value chain activities are concerned, many investments have developed or plan full control over their value chains. For that reason, sampled investors tend to be involved in a range of value chain activities. Foremost, 87% are involved in direct production, meaning they produce primary commodities themselves through investor-owned plantations. A total of 43.5% of investors are involved in sourcing primary commodities from third parties – in

all cases involving smallholder producers – with 30.5% of investments engaged in both sourcing and direct production and 13% only in sourcing (Figure 4.3).

Figure 4.3: Value chain activities



Source: Author's investments sample.

Most investments were undertaking some form of primary processing, for example, drying, threshing, or dehusking. Another 21.7% were engaged in secondary processing, which tended to involve ginning, milling, sawing and extraction. Only 4.3% were involved in tertiary processing; this included the production of ethanol gel, ice cream and soap. Additionally, 60.8% of investments were involved in three or more of the listed value chain activities.

These results indicate that many of the interviewed businesses are concerned with more than just direct cultivation and raw-material trade, which tend to exclude local communities from economic participation. Processing, research and development, distribution and retail are part of many business models, for instance. This suggests that multiple value chain activities are done in-house, with positive implications for adding value to Mozambican products. These results suggest that a few agro-investments may generate economic participation for smallholder farmers and local community members. However, this should not be exaggerated as the bulk of the investments are limited to processing raw materials (62.3%) and does not involve considerable skill development or substantial income improvement because the activities are limited to primary processing.

The results also indicate a considerable number of investments engaging in sourcing practices, even though an analysis of volume of produce commercialized *versus* volume of own production would be more informative in this respect. Investigating sourcing practices is of great importance to understand the nexus between investments and smallholder producers, with relevant implications for understanding the extent of inclusiveness of these 'inclusive' production models.

Sourcing practices

Although more than half the sample was engaged in crop plantations (estates), six investments operated pure outgrower schemes (8,7%) and 24 other agribusinesses included smallholders in their operations (34,8%). As such, more than 137,000 small producers organized in cooperatives, associations, or as individuals were included in the various production models observed. This is a remarkable number of individual farmers for the 26 investments that provided this information; an average of more than 5,200 smallholders per investment. Seven investments operated with more than 1,000 smallholders as outgrowers, with the highest number of smallholders linked to cotton and sugarcane investments. Sourcing companies in cereal value chains were also responsible for high smallholder involvement.

Table 4.8: Types of sourcing mechanisms contracting smallholders (N=30)

| | % of investments |
|--|------------------|
| Nucleus estate model | 66,7% |
| - Contracting smallholders | 64,9% |
| - Sourcing without formal contract | 35,1% |
| Purely external sourcing | 33,3% |
| - Contracting smallholders | 39,9% |
| - Sourcing without formal contract | 60,1% |
| Total | 100% |
| - Models that have formal contracts with smallholders | 56,7% |
| - Models that do not have formal contracts with smallholders | 43,3% |

Source: Author's investments sample.

Investors who obtained financing through grants or credits from international financial institutions were most inclined to engage in external sourcing (78.6% of this sub-sample). In all cases, this exclusively involved smallholders. Nevertheless, external sourcing is undertaken through diverse arrangements. The most common form is through an investment producing via its own estates combined with supplemental production through external suppliers: outgrowers (66.7% of investments that source - Table 4.8),

in a type of model known as 'nucleus estate model' (Vermeulen and Cotula, 2010: 39). From this group, 64.9% arranged sourcing through contractual relations with smallholder producers; others through open market relations. From the 33.3% of external sourcing investments that rely exclusively on the practice, only 39.9% did so through contractual relations with third party suppliers. There are no clear patterns in terms of types of crops that are associated with external sourcing.

On aggregate, 56.7% of sampled investors engaged in sourcing from contracted smallholders. While this constitutes a majority of the sub-sample (n=30), it is surprising to note that many investors, especially those that rely exclusively on external suppliers, opt not to secure access to adequate crop volumes through more formal contractual relations. A substantial number of sampled investors who were not relying on contracting at the time of research had attempted to do so in the past. However, they had abandoned this model in favor of more open commercial relations with their suppliers. This was, by and large, attributed to the prevalence of side-selling (e.g. contractors dishonoring exclusive offtake agreements). As a result, most companies were unable to recuperate investments made in smallholder productivity (e.g. in the form of production inputs and technical support), the costs of which tend to be subtracted from the value of purchased output. The types of companies that avoided or abandoned contracting arrangements were those that source subsistence crops traditionally cultivated in the areas they operate (e.g. maize, rice, and cassava). With such investments, the risk of not meeting sourcing targets tends to be considerably lower due to the abundance of local supply.

The remaining investments engaged in contract farming were typically focused on cash crops, such as banana, sugarcane, and cotton, and to lesser extent soybeans. Except for soybeans, the risk and viability of side-selling for these cash crops tend to be considerably lower due to lack of alternative offtake opportunities (e.g. few commercial buyers are active in the areas these investors operate). In the case of soybeans, while a number of investors remain engaged in contract farming, albeit heavily downscaled, many abandoned these sourcing activities altogether in favor of the plantation model due to rapidly increasing rates of side-selling (see Chapter 6).

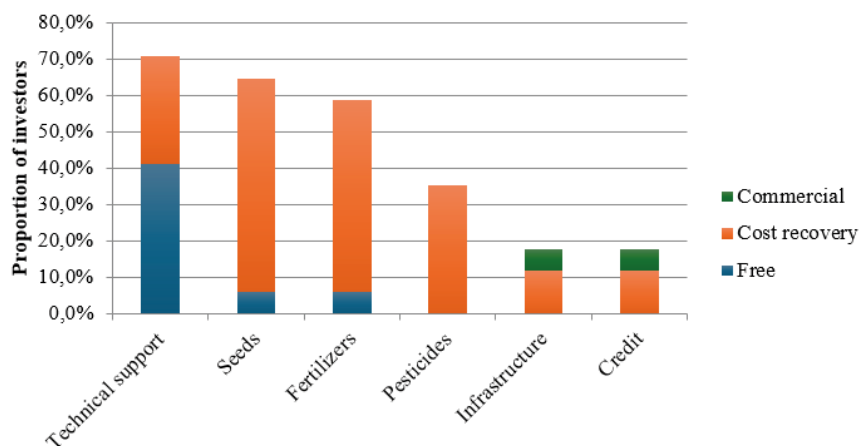
Low technical and financial barriers to adoption and the influx of independent traders also played a role in undermining contract farming viability among many investors sourcing subsistence crops. As for cash crops, although cotton is widely cultivated by smallholders in Mozambique, the sector works through a concession system. Hence, the risk of side-selling is comparatively low. The concession system allocates investors a geographically confined area where they have the sole right to contract smallholders. Since this system is heavily

regulated by the state, independent traders that could undermine the contracting system are typically absent.

However, the lack of more formal contractual relations reveal another relevant implication for inclusiveness. Although most of the investments involving smallholder farmers in their production models were able to gauge the number of producers from whom they sourced, a very small amount (seven, see Table 4.5) were able to estimate the hectares of land accessed via this model. From an inclusiveness point of view, there is a positive aspect to it, as investments are, in theory, able to grasp the amount of people directly affected by involvement in the production model. Nevertheless, there is also a negative side to it, which is that the great majority of investments do not know their smallholder supplier base and, thus, cannot possibly fathom indirect implications, such as contribution to land competition, environmental and social impact within their supply chains, and inter- and intra-community imbalances, to name a few. Their contribution to the smallholder farming sector is therefore limited to direct commercial relationships with farmers and constrained by the lack of knowledge of their impacts.

Along these lines, all sampled investors involved in contract farming provided some level of support to the smallholders they contracted in order to incentivize participation and enhance productivity. This tends to involve technical support and the provision of seeds and fertilizers (Figure 4.4). Technical support is mostly provided for free and seeds and fertilizers are provided on a cost-recovery basis. Infrastructure development for smallholders was undertaken exclusively by rice and sugarcane investors; all of which was for irrigation purposes.

Figure 4.4: Input provision and terms (N=17)



Source: Author's investments sample.

Many investors also rely on farmer organizations (e.g. smallholder associations) rather than individual farmers. For example, smallholder associations played an integral role in the production models of ten investors involved in contract farming. In most cases, investors sought to generate economies of scale and reduce transaction costs by using associations to disburse inputs, coordinate the collection of crops and disseminate knowledge. This can be observed in the sugarcane sector (see Chapter 5). Moreover, crop payments were often organized through the associations. Associations also help reduce the risk of side-selling; for example, by enabling them to capitalize on existing social capital to enhance social pressure to fulfill contractual obligations (e.g. by ascribing responsibility for contract breaches to the collective). However, in some cases the opposite effect was observed as associations instead served to legitimize side-selling when their leadership set bad precedents by engaging in side-selling themselves. This was typically observed in the soya sector (see Chapter 6).

Smallholder 'inclusion' in agro-investment production models is part of a broad debate (Prowse, 2012). In Mozambique it is often limited to 'integration or involvement', which entails a strategy for accessing land while avoiding time – and resource-consuming community consultations required for direct land acquisitions, with subsequent risk of land conflicts. It does have its positive aspects, such as extension of technical assistance, access to inputs, access to markets, and sometimes to finance (Figure 4.4, for illustration). However, it brings about underexplored intra-community and inter-community dynamics that do not always imply positive outcomes for the whole community or even for the farmers involved.

In terms of strategies to access land and avoid conflicts between investors and communities, these results have implications for the discussion on land use and property conversion. But so far, investing resources in contract farming is not popular as the chief strategy for agribusiness in Mozambique. Although we find cases in which companies' production models are viably working with outgrowers – tobacco and cotton chains in central and northern provinces, and sugarcane in the South and Center for example – most trials involving smallholders ended up failing.

This being the case, we observe large tracts of community land that were used for large-scale plantations; monocropping in slightly more than one third of the cases (34,8%). Moreover, less than half the investments can be considered inclusive in Mozambique. When they are, a great deal of them *involve* smallholder farmers, but not necessarily *generate benefits* as expected in government strategies and inclusive production literature.

4.5 CONCLUSION

In this chapter, the characteristics of agribusiness in Mozambique were outlined in terms of the geographies of investments and trends regarding access to land, land use, value chain activities, production practices and the involvement of smallholder farmers. In contrast with existing land grab debates, there is a remarkable participation of smallholder farmers in the models sampled. The smallholder involvement in 43,5% of the sampled investments contradicts many expectations within the land grab literature, such as the seizing of large tracts of land for monocropping plantations finalities, chiefly geared to exports. This makes sense in a country where virtually no productive land is unoccupied (Ekman, 2012). Through the data in this chapter, we also observed that there is a considerable amount of investments diversifying production and processing their products nationally, rather than exporting raw materials. In addition, the results showed that many investments also produce food for national consumption, such as soybeans and grains.

However, as far as inclusion is concerned, it became clear that involvement of smallholder farmers is limited in many senses. Not all investments integrate smallholder farmers within their production models, and many investments have accessed land previously used by smallholders. When investments involved smallholder farmers, it was also clear that there was little concern in understanding this stakeholder group. Access to inputs, technical assistance, and other relevant services for increment of production volumes and quality may well be provided in some cases, but most investors were not able to estimate farmer profiles. Furthermore, most investments knew how many farmers they had commercial relations with, but very few had knowledge on how much land these farmers had access to.

This raises questions about the limitations of the role of the private sector agro-investments as an agent of development in Mozambique.

In summary, in a sample of 69 agro-investments, the relationship with smallholder farmers (in a country whose agricultural sector is dominated by this group) was marked by many cases of exclusion (e.g. direct cultivation models), and by virtually no demonstrated intention of generation of tangible benefits through inclusion¹⁶, except for the provision of services and inputs which ensure commercial access to additional supply (a basic form of smallholder farmers' involvement). Indirect effects of exclusion and partial inclusion were also found lacking. This research provides additional contextual framing for the overall thesis while also raising key questions to explore in the subsequent empirical chapters.

A new cycle of agricultural policies, strategies and plans of action is beginning following decades of neglect of the smallholder farming sector. There are critical lessons to be learnt from the failure of previous policies in terms of smallholder inclusion and support. Arguably, the government's intentions to generate inclusion are more clearly outlined in this new cycle. While this is promising, the challenge in translating the lessons of the past into practice remains.

As it would be unfair to assume that no private sector initiative has generated relevant lessons for inclusion, the subsequent empirical chapters will expand on how and why the sugarcane and soybean sectors in Mozambique have been relatively more successful, despite many challenges, in involving smallholder farmers.

16 With the sole exception of one investment in Zambezia that insisted on a failing contract farming model, because the investors believed in business responsibilities towards the surrounding community.

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5

Smallholder sugarcane
production in Maputo Province:
Effects from long-term
participation in contract
farming schemes

5.1. INTRODUCTION

From 2014 to 2015, I conducted my first case study field research to explore the participation of smallholder farmers in the production models of Maragra S.A.R.L. and Açurareiras de Xinavane, known as Maragra and AdX respectively, located in Northern Maputo Province. This was Phase III of my study, following the phase in which I identified the sugarcane sector as one of the most active in involving smallholder farmers in Mozambique. Consequently, the government considers sugarcane to be an inclusive value chain.

However, scrutinizing the nuances of the sugarcane production models quickly reveal a distinctive structure and control system compared to most other agricultural value chains in Mozambique. Here, the reins of production, logistics, and aggregation of sugarcane are held with a tighter grip, under a model called block farming, in which smallholder farmers pool their land together and manage the blocks of farmlands under an association or cooperative (see 5.2.).

This realization shifted the focus of my research towards understanding the processes behind smallholder involvement and how smallholder farmers perceive their involvement. I aimed to understand what it meant for these farmers to be participants in a sugarcane production model characterized by such high levels of control. What were the smallholders' perceptions of this production model, and what tangible benefits did they derive from involvement?

During Phase III of my research, it became evident that there were clear benefits. Smallholders expressed a strong desire to remain part of the production model, while those not yet involved aspired to join this system. Undoubtedly, challenges had arisen along this path to smallholder participation (O'Laughlin and Ngove, 2013; Leite et al., 2016; O'Laughlin, 2016; Lazzarini, 2017), but generally the rewards seemed to outweigh the hurdles.

In Phase IV of my study (2023), I returned to the same sugarcane farms to assess the long-term consequences of smallholder participation. I sought to establish whether the benefits persisted, whether new challenges had emerged, and how smallholders were dealing with any changes which had arisen since 2015. While I found that smallholders still expressed satisfaction with their involvement in the sugarcane production models of the region, it also became clear that participation alone does not suffice for inclusion. Disproportionate floods in early 2023 ravaged the sugarcane and food crop fields in Manhiça district, with daunting effects for smallholder farmers in particular. Therefore, both persistent challenges and the emergence of new, climate-related challenges highlighted the need for enhanced resilience and alternative strategies for sustainable and inclusive development.

Inclusion is a frequently used term, yet its meaning often goes underexplored. Therefore, this chapter emphasizes the relevance of a longitudinal study like this, which captures developments over time. It seeks to differentiate between inclusion as mere participation and inclusion as a transformative process that generates benefits and positive experiences for smallholder farmers. Through this lens, we gain a deeper understanding of the complex dynamics at play within these sugarcane production models and the evolving needs of the smallholder farmers in Northern Maputo Province.

5.2. SMALLHOLDER PARTICIPATION THROUGH BLOCK FARMING

The production of sugar destined for the sugar mills Maragra and AdX (Figure 1.3 and 1.4) takes place in the districts of Manhiça, Magude, and Moamba. The mills have their own plantation estates, but production is complemented with smallholder produce. Smallholder sugarcane production is predominantly organized through associations and cooperatives. Development cooperation agencies and the sugar mills supported the establishment of these farmer groups, as it facilitated the formation of farm blocks.



Sugarcane fields in Xinavane, Manhiça district. Author's picture taken in July 2023.

The catchment area for Maragra is mostly Manhiça, whereas AdX receives sugarcane from associations and cooperatives in Magude and Moamba. However, for both sugar mills, farm blocks are a key strategy to source sugarcane under contract. The model also has certain advantages for smallholder farmers, as it facilitates the provision of support and services by the mills, such as access to production inputs, heavy machinery, technical assistance,

and irrigation¹⁷, which is essential for sugarcane production and rare in Mozambique (Van der Zaag et al., 2010; Ducrot, 2017). Therefore, the promotion of block farming has become popular as a way of maximizing productivity, reducing transaction costs, and delivering services more efficiently to smallholders.

Block farming in the region has increased since 2015 and involves the consolidation of smaller plots of smallholder land into larger ones, in order to operate on a larger scale. These are managed collectively through farmer associations and cooperatives. Farm productivity is thus improved through a greater land area, and an integrated production system with infrastructure, land preparation, inputs, and technical assistance provided by the sugar mills throughout the cultivation process.

Smallholder production is often consolidated and controlled by the sugar mill and associations or cooperatives. This stands in contrast with typical individual production models in which the production responsibility tends to fall onto individual households (Jarnholt, 2020). This has particular importance for the discussion ahead.

Agricultural inputs are generally acquired by the associations and cooperatives at the mills and repaid after harvest, through a revenue deduction system (cost-recovery) specified within contracts. Entry to production models varies according to the mill. For example, Maragra accepts outgrowers independently of land size and productivity. However, AdX limits entry by instituting standardized methods of production and delivery to the mill. This is virtually only possible for farmers organized in farmer groups or large-scale outgrowers (Table 1).

17 Whereas individual producers typically use their own land to produce sugarcane and production is rainfed.

Table 5.1: Variations of production models observed in the case study

| Production model variations | Description | Maragra | AdX |
|--|---|----------------|---------------|
| 1.Contract Farming | Production agreements between farmers and buyers that set the conditions for production and marketing of farm products. May involve the provision of inputs and technical advice, as well as land preparation services*. | Yes | Yes |
| 1.a Associations or cooperatives with block farming schemes | Consolidation of smallholders' plots of land into larger blocks of farmland, in order to organize and coordinate operations, inputs distribution, and harvest on a larger scale. Cultivation responsibilities fall, therefore, mainly under associations/cooperatives and mills' purview. | Many cases | Norm |
| 1.b Associations or cooperatives without block farming schemes | Cultivation responsibilities are that of the individual households. Actions such as input provision, distribution, harvest can be organized by associations/cooperatives. | Few instances | Few instances |
| 2. Independent production (not contract farming) | No production agreements in place. Individual farmers and associations of farmers may organize the logistics to bring sugarcane to the sugar mills. | Yes | Very rare |

*Based on FAO's definitions available at <https://www.fao.org/in-action/contract-farming/background/what-is-contract-farming/en/>, accessed on 06th July 2023.

The process of forming associations and the resulting configuration of the sugarcane farming space highlight key points for the discussions which follow. As demonstrated in the results of Phase III (See section 5.4), the block farming model is beneficial for those who are part of the model in comparison to smallholder farmers who are not involved. This is often enough for more smallholders to want to join the model and for current participants to want to stay involved. However, there are issues to this involvement that need to be highlighted, as they challenge smallholders' voice and agency, and thus, challenge the process of inclusion.

Based on the data collected, I will examine three challenges: exclusion of community members, forceful early integration of smallholders to the sugarcane production model, and degree of autonomy of smallholder farmers in regard to the sugar mills. These are aspects of the integration process that lead to relevant discussions for the inclusiveness debate. The first highlights the shortcomings of 'inclusive' production models that tend to involve parts of communities, but cannot involve whole communities. The second highlights a negative aspect of smallholder involvement in agribusiness production models. The

third highlights a potential negative aspect of involvement: the ability (or lack thereof) of smallholders to reject contracts that they do not deem beneficial and make changes to their participation in local value chains.

The silver lining in the sugarcane case in Maputo Province is that the early processes which began as a forceful integration of smallholders who would otherwise not want to join the contract farming model, led to smallholders' active opposition to the process, which in turn led the sugar mills to rethink the process of integration of block farms in their production model (Buur et al., 2011; 2012). This led to a change of approaches to formation of associations and cooperatives, instead, leading to the contract farming models studied.

5.3. METHODS AND DATA ANALYSIS

To address the issues outlined in the previous section, this chapter begins by looking at the differences between participant and non-participant groups through household characteristics, livelihood portfolio, agricultural production system, and socioeconomic development (section 5.4). The choice for these four major groups of indicators is to substantiate the analyses on whether smallholders involved in the sugarcane contract farming schemes are indeed better-off when compared with non-participants. This contributes to the discussion about inclusion in the sugarcane sector in Maputo Province. It establishes a pull factor for participation in the contract farming schemes. However, this does not address the key challenges to inclusion. Subsequently, the challenges to inclusion will be examined in the discussions of the findings (Section 5.5), which includes findings from Phase IV of the research, conducted in 2023.

5.3.1. Field research activities

Both quantitative and qualitative methods are employed in this study. Focus group discussions (FGDs) were carried out using questions designed to capture local context, understand how sugarcane outgrowing works, and identify differences between participants and non-participants as well as issues unique to each sugarcane mill studied. Primary data was obtained through household surveys developed in conjunction with CIFOR's LIFFE project in 2014 and 2015 (See annexes). The surveys were administered with both scheme participants and non-participants. Non-participants are those households who were not producing sugarcane at the time of research. Therefore, they were not part of a sugarcane outgrower scheme, but were residing within the same communities as those who did participate in the schemes. While the selection of households was random, quotas for numbers of participant and non-participant households were used in order to gain similarly comparable sample size across sampled communities.



Author during FGD with sugarcane association “Heróis Moçambicanos”, in Magude district.

Two sugarcane investments were selected as case studies, both in Maputo Province. Those were Maragra Açúcar and Açucareira de Xinavane (AdX), in Manhiça district. Due to its proximity and operations in other districts, AdX also included Magude and Moamba districts. With the exception of a few cases, communities generally corresponded to the Mozambican *localidades* (localities). A total of 19 FGDs and 365 randomly selected household surveys were conducted in seven communities. Specifically, 181 households were engaged in sugarcane production activities as outgrowers, and 184 were not producing sugarcane for the mills. In 2023, field research included interviews with the Agriculture Directorate in the DPAP of Maputo Province, located in Matola, as well as with the Agriculture Directorate of the SDAEs in Manhiça and Magude. Additionally, FGDs were organized with four smallholder farmer associations and cooperatives (including a Federation of cooperatives in Manhiça) that produced sugarcane. Finally, representatives from the sugar mills Maragra and AdX were also consulted.

5.3.2. Data Analysis

The analysis draws on the data collected from the household surveys, FGDs, and key informant interviews. Through descriptive t-test statistics¹⁸ this chapter highlights key differences between participants and non-participants. Differences are observed across four themes: household characteristics, livelihood activities, agricultural production dynamics,

¹⁸ A t-test is a type of inferential statistic. It is used to determine if there is a significant difference between the means of two groups. It is mostly used when the data sets would follow a normal distribution and may have unknown variances. A t-test is used as a hypothesis testing tool, applicable to a certain population.

and socioeconomic development. Variables included in the analysis are listed in tables 5.2 through 5.5. Four different indices were constructed for this analysis. The livelihood diversification index (LDI) and the crop diversification index (CDI) are constructed using methods proposed by the Intergovernmental Panel on Climate Change (IPCC) to monitor livelihood vulnerability (Hahn et al., 2009). LDI is calculated as the inverse of the number of different livelihood sources a household is engaged in + 1. The livelihood sources cover commercial agriculture (including, but not limited to sugarcane), subsistence agriculture, off-farm employment, business, pension, remittances, livestock, forestry, and fishing. The CDI is calculated as the inverse of the number of different crops a household cultivates + 1. Values for both indices range from 0.1 to 1.0, with lower values denoting increased diversity. The food insecurity index is based on the Household Food Insecurity Access Scale (HFIAS), developed by USAID to estimate prevalence of food insecurity (see Coates et al., 2007). The index is the sum of nine food insecurity scores, with each score denoting the frequency of perceived insecurity on a given dimension. Frequencies are measured on a scale of 0 to 3, with higher values denoting higher frequency. The value of the food insecurity index, therefore, ranges from 0 to 27.

The welfare index is based on the ownership of 27 different types of assets. An asset-based approach was employed to measure the relative socioeconomic status of households, as an alternative to income and consumption expenditure. Especially in cross-sectional studies, income and consumption expenditure often measure long-term welfare less accurately than asset ownership since they tend to suffer more from recall and social desirability biases and produce skewed results in case of short-term economic shocks. In constructing the welfare index, the approach recommended by Filmer and Pritchett (2001) and widely adopted by the World Bank involving Principal Component Analysis (PCA) is used. In this approach, each asset/component is weighted, using the first principal component, which explains the largest proportion of the total variance.

Although the empirical approach adopted yielded valuable insights into differences between scheme participants and non-participants, it does not control for confounding variables or endogeneity and simultaneity biases. This implies that observed differences could not be conclusively attributed to scheme participation, particularly since the approach cannot account for self-selection biases. For example, when the likelihood to participate in an outgrower scheme is shaped by differences in household characteristics and activities. However, since research activities involved the collection of extensive qualitative data, the analysis of results and discussion of selection into the schemes drew on qualitative analysis of local processes, notably household perceptions of participation benefits and participation and non-participation motives and constraints as shown in the focus group discussions.

5.4. RESULTS OF PHASE III: DIFFERENTIATION IN CONTRACT FARMING PARTICIPATION AND NON-PARTICIPATION

This section looks at the differences between participant and non-participant groups through household characteristics, agricultural production system, livelihood portfolio, and socioeconomic development, collected through household surveys in 2015. The section is structured to demonstrate how the contract farming production model (block farming) affected outcomes. Furthermore, the aim of this section is to look at how participation potentially interacts with livelihood activities and agricultural production and how this might have converged to produce socioeconomic development outcomes amongst participants *versus* non-participants.

5.4.1. Household characteristics and composition

This section looks at literacy and educational level of household heads, household size, dependency ratio and number of people contributing to household livelihood activities (Table 5.2). By doing so, it presents household characteristics which may affect participation and the composition of participant and non-participant households.

Table 5.2: Household characteristics

| Variables | Predominantly block-farming schemes (Maputo Province) (n = 365) | | |
|--|--|-------------------------------|-------------------|
| | Participants (181) | Non-participants (184) | Difference |
| | Mean (SD) | Mean (SD) | t value |
| Literacy of household head | 0.5691 (0.49658) | 0.625 (0.48544) | -1.088 |
| Highest educational level of household head | 0.8729 (1.24739) | 1.0543 (1.48849) | -1.261 |
| Household size | 6.1326 (3.18575) | 5.0054 (3.245) | 3.348*** |
| Household dependency ratio | 1.0761 (1.05566) | 1.3431 (1.55383) | -1.918* |
| Number of persons contributing to the household | 3.2928 (1.95431) | 2.3261 (1.31497) | 5.553*** |

*** = signif < 0.01 ** = signif <0.05 * = signif <0.1

Source: Author's dataset

It is worth highlighting two indicators for discussion: a) dependency ratio in households, and b) the literacy and educational level of the average household head.

From an inclusive production model perspective, household composition is an important variable to consider. That is because household composition will help determine the ability

of the household to decide on and perform diverse livelihood strategies (Mazibuko, 2013; Mao et al., 2020). For illustration, larger households may experience certain economic benefits, as the more household members contributing to livelihood activities, the more activities the household can engage in.

In the cases studied, household composition differs between the participant and non-participant samples. The number of people contributing to the household's livelihoods relative to total household size is higher in participants' households than in non-participants. Therefore, there is a lower household dependency ratio among participants. The lower dependency ratio indicates that a household is better able to spread livelihood activities across members. The difference in dependency ratio has implications for how households make employment and farming choices based on the amount of household labor available. These choices may involve employment in the sugarcane sector, generating a source of additional income, but they can also mean additional labor to invest in complementary agricultural production or in off-farm business. The underlying point here is that the lower a household's dependency ratio is, the better a household can diversify livelihood strategies and, with that, affect the socioeconomic state of the household. Farmers under contract (participants) are better able to diversify livelihoods beyond contract farming. This point is relevant for the discussion ahead, regarding livelihoods portfolio and inclusivity.

As for the literacy and education level indicators, both are higher for non-participant households. This suggests that education did not seem to play a significant role in integration in the contract farming scheme. In the case of sugarcane block farming, entrance into the scheme was arranged by the sugar mills through the creation of associations and block farms. As such, the results suggest that the block farming system helped reduce smallholders' aversion to risk, as risk is instead managed collectively and in collaboration with the mills. This means that farmers who did not believe they had the technical capacity to produce sugarcane were able to do so with the associations and the mills' oversight. As a result, households that might previously have abstained from sugarcane production may have considered sugarcane farming a less risky option under the block farming production model.

However, the process of sugarcane production expansion through smallholder land in such a large-scale initiative in the region is slow and heavily dependent on access to external financing. Finance is required to set up the associations and to organize production in farm blocks per association. Expansion is also dependent on the capacity of the mills to absorb and process the production of members of the associations and cooperatives. As such, many smallholder farmers who would like to be part of the production schemes are excluded, (according to all the FGDs with local communities in 2014 and 2023). Even so,

the number of smallholders involved has increased steadily over the past decade, upon expansion of credit and processing capacity.

During the privatization of the sugar mills under the structural adjustment reforms of the late 1990s and early 2000s, the mills first attempted to increase access to productive land by forming farmers associations alongside roads and close to access to the Incomati river. In some instances smallholder communities were coercively integrated to these schemes, leading to revolts (Jelsma et al., 2010). To avoid further land conflict, the sugar mills began coordinating the processes to form associations and cooperatives, and provided access to technical assistance and credit by serving as guarantors to donor grants and commercial bank loans.

In sum, the shift from early forceful integration of smallholder land to block farming and contract farming schemes in Maputo Province encouraged the integration of smallholder households in a way that generated less aversion to the model and was less dependent on previously existing socioeconomic conditions. Farmers did not have to consider whether they had the technical capacity to produce sugarcane, because technical assistance was provided by the sugar mills and the sugarcane production management was taken over by the farmers' associations and cooperatives. Therefore, block farming presented a less risky form of contract farming from a smallholder farmer perspective compared to individually grown sugarcane.

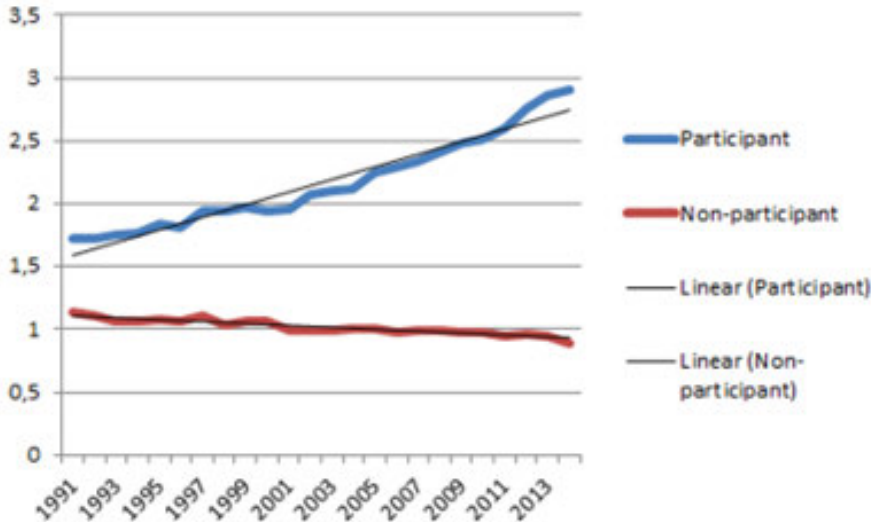
5.4.2. Land use and agricultural production

An analysis of agricultural production and land assets was done to examine how they differ across the two samples (participants and non-participants). Differences were determined by changes in land ownership and acquisition over time, as well as how land was used for agricultural production.

Land use

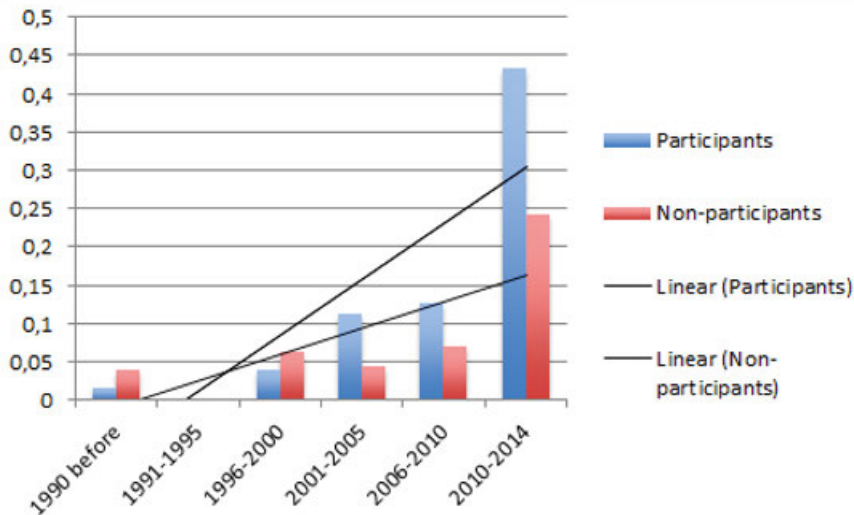
An assessment over time of average land ownership (Figure 5.1) shows that participants owned more land than non-participants prior to the integration of households into sugarcane farming. In addition, a declining trend in land ownership is observable for non-participants, whereas participants have substantially increased the size of their land. While decline in landholding is typically linked to population growth in a region, it also affects productivity and has implications for socioeconomic differentiation (Josephson et al., 2014).

Figure 5.1: Evolution of the average land ownership (ha) of participants and non-participants by year



Participants' households only need to manage land that is not in the block farms, whereas the same is not the case for non-participants. Non-participant households typically must manage all their land by themselves. Non-participants must devote time to cultivate their own plots, whereas participants may devote time to cultivate additional land, while sugarcane production is managed by the sugar mills and the farmer group of which they are members. Therefore, what we observe in these results is that participants are reinvesting time and resources in more land. This is done through market-like mechanisms despite the absence of a formal land market (Figure 5.2).

Figure 5.2: Portion of land acquired through market mechanisms (buying or renting)



This indicates that participants seek out new farmland areas (available plots nearby). For non-participants, the greater proportion of land acquired through market-like mechanisms alongside decreasing land ownership suggests that they are currently more prone to rent and sell land among themselves and to participants as a source of income. This makes sense in the cases studied if we consider the role of block farming. By switching from individual land ownership to land aggregation under an association or cooperative, participants have two main incentives to look for new land. First, they have more free time to cultivate other plots. Second, by no longer making decisions regarding their own land use, they may look for new plots to cultivate crops they would like to grow individually. Since most land in the region is already claimed, market-like mechanisms are the most readily available option.

Agricultural production system

The larger landholdings of participants also seem to translate into more use of land (Table 5.3). Results show that participants have on average a significantly larger area of land under both food and commercial crop production in comparison with non-participants. On average, participants produce food in 1.37 ha, sugarcane in 1.43 ha, and other commercial crops in 0.09 ha. Non-participants, on the other hand, produce 0.69 ha, 0.07 ha, and 0.02 ha, respectively. Again, this makes sense under the logic of block farming. As previously highlighted, block farming passes on the responsibilities of sugarcane cultivation to either the association or to the sugar mill (via the association), leaving participant households with more free time to invest in other crops. In non-participant cases, they likely need to divert time from other activities to food production. Moreover, almost half the block farming participant households indicated that they hire labor, enabling them to expand their area under non-sugarcane production.

Table 5.3: Agricultural production system

| <i>Variables</i> | Predominantly block farming (Maputo Province) (n = 365) | | |
|---|--|-----------------------------------|-------------------|
| | Participants (181) | Non-participants (184) | Difference |
| | Mean (SD) | Mean (SD) | t value |
| Food land area, in hectares | 1.37 (2.0797) | 0.6912 (0.98427) | 3.987*** |
| Commercial crop land area, in hectares | 0.0925 (0.49084) | 0.0174 (0.0779) | 2.049** |
| Total land area under sugarcane, in hectares | 1.4259 (1.49071) | 0.0688 (0.80831) | 10.808*** |
| Total land ownership area, in hectares | 2.994 (3.02587) | 0.8712 (1.30245) | 8.715*** |
| Total land cultivated area, in hectares | 2.8885 (2.97948) | 0.7774 (1.23838) | 8.849*** |
| Number of inputs used for food crops | 1.3094 (1.39578) | 0.5707 (0.79301) | 6.23*** |

Table 5.3: Agricultural production system (Continued)

| Variables | Predominantly block farming (Maputo Province) (n = 365) | | |
|---|--|------------------|-----------|
| Proportion of households hiring labor | 0.4917 (0.50132) | 0.2337 (0.42434) | 5.31*** |
| Proportion of food area only for consumption | 0.8956 (0.27972) | 0.9175 (0.27651) | -0.572 |
| Crop diversity index (CDI) | 0.2316 (0.07313) | 0.42 (0.28311) | -8.671*** |

*** = signif < 0.01 ** = signif < 0.05 * = signif < 0.1

Source: Author's dataset

Furthermore, the CDI shows that participants tend to diversify their agricultural production more significantly than non-participants. This reinforces the perception that they have more time, resources, and incentives to dedicate to agricultural activities besides sugarcane cultivation. Also, the use of agricultural inputs – such as quality seeds, fertilizers, and land preparation mechanisms (tractor or animal traction, for example) – are much higher for participants than non-participants. These results together with the capability to hire labor suggest that participants have (on average) access to more capital than non-participants.

The proportion of food crop area used purely for households' own consumption is very similar for participant and non-participant households, despite block farming participants using almost double the land of non-participants for consumption purposes. This suggests that participants are reluctant to abandon food crops for cash crops.



Example of agricultural production from 'Associação Macuvulane I', where farm plots belonging to smallholder farmers produce both cash crops (sugarcane) and food crops (maize). Author's picture from field work in 2014-15.

5.4.3. Livelihood portfolio and inclusivity

Having established that pre-existing household composition indicators affect livelihood strategies, including land use and agricultural production, we now turn to the livelihood portfolios of participant and non-participant households.

The aim of analyzing livelihood portfolios (Table 5.4) is to identify how activities differ between the two samples and what this suggests in terms of changes in livelihood strategies *vis-à-vis* integration in an 'inclusive' production model. This section shows that participation in the sugarcane contract farming scheme has benefits for participating households that are not easily accessible to non-participants. These benefits manifest not only in the form of preferential employment in sugarcane associations, but also as freedom and resources to invest in alternative and more lucrative livelihoods. These conclusions are outlined in more details below.

We begin with the livelihood portfolio of the participant and non-participant households that were surveyed. Differences between the two groups were stark in terms of engagement in agriculture, employment (sugar – fixed and casual), livestock, and in terms of the LDI.

Table 5.4: Livelihood portfolio diversification (LDI)

| <i>Variables</i> | Predominantly block farming (Maputo Province) (n = 365) | | |
|---|--|-------------------------------|-------------------|
| | Participants (181) | Non-participants (184) | Difference |
| | Mean (SD) | Mean (SD) | t value |
| Agriculture | 1 | 0.8315 (0.37531) | 6039*** |
| Business | 0.2541 (0.43659) | 0.2514 (0.43499) | 0.061 |
| Employed (Fixed, other sector) | 0.2873 (0.45375) | 0.1858 (0.39001) | 2.289** |
| Employed (Fixed, Sugar) | 0.4475 (0.49862) | 0.2459 (0.4318) | 4.125*** |
| Livestock | 0.6409 (0.48107) | 0.4918 (0.5013) | 2.894*** |
| Forestry | 0.0718 (0.25891) | 0.0929 (0.29108) | -0.73 |
| Fishing | 0.0884 (0.28466) | 0.1038 (0.30587) | -0.498 |
| Remittance | 0.105 (0.30737) | 0.0765 (0.26653) | 0.944 |
| Employed (Casual, other sectors) | 0.2099 (0.49454) | 0.1848 (0.49982) | 0.483 |
| Employed (Casual, Sugar) | 0.0331 (0.17952) | 0 | 2.505 ** |
| Livelihood diversification index | 0.1937 (0.06333) | 0.3093 (0.14084) | -10.082*** |

*** = signif < 0.01 ** = signif < 0.05 * = signif < 0.1

There were more participant households involved in livelihood activities likely to generate steadier income or sources of food, such as agriculture and employment (fixed and casual within sugar). This too can be attributed to the block farming schemes, as associations prefer to hire their own members for sugarcane production activities and association administration. This means that sugarcane production absorbs fewer non-participant community members. Participant households were also involved in activities that represent a higher social status and assets accumulation, such as livestock rearing. Similar proportions of participant and non-participant households are engaged in small business activities. However, a difference in the types of businesses is noticeable. For non-participants, lower income-generating businesses such as re-selling used clothes, selling pastries, and re-selling farm produce were usual. For participants, restaurants, inns, and small product stands were frequently reported. Finally, non-participant households are proportionally more involved in fishing and forestry activities than participants, but these activities generate less income and are typically used to supplement diets.



Example of small business of participant smallholder farmers. Author's picture from fieldwork in Magude district, 2014-15.

For casual employment in sectors other than sugar, overall there was higher involvement of participants in comparison with non-participants. There is greater availability of casual labor especially in the nearby urban areas of Manhiça, Magude and Xinavane, but also on neighbors' farm plots. This can also be explained by the time availability of household members. Participant household members can opt to be less involved at the production of sugarcane, as activities are controlled by the associations with technical assistance of the sugar mills. In predominantly individually-grown sugarcane areas, arguably the lack of resources, time, and opportunities nearby to spend on activities other than sugarcane cultivation can implicate a more strict relation between participants and sugarcane production (Jarnholt, 2020).

In terms of general fix-term employment, participants are significantly more likely to be employed in both sugar and non-sugar sectors than non-participants, meaning that the bulk of the work on the sugarcane blocks does not necessarily fall on the household. The size of the households likely influences this result. In the studied cases, participant households are (on average) larger than non-participants and there are more people contributing to the household activities (e.g. lower dependency ratio). This, in addition to block farming adsorbing comparatively lower household labor, may also explain why block farming participant households are more likely to have fixed and casual jobs in other sectors than non-participants. If sugarcane is grown individually (i.e. not in blocks),

the inverse is arguably the case, as participant households need to spend more time on intensive sugarcane cultivation than those who manage their sugarcane farming in blocks (Francis et al., 2020; Jarnholt, 2020). This shows that participants have more often both the choice to be employed in the sugar sector and the luxury to opt to not work on sugarcane production, if they so prefer.

However, the results demonstrated that there are no significant differences in remittances from family members supplementing household income between the two sample groups. This raises the question on whether, despite the opportunities generated by the sugar sector, there is still a lack of substantial opportunities, which leads many household members (especially the younger ones) to migrate. Historically, seasonal migration to work on South African mines was a livelihood strategy for many households in Maputo Province (Lucas, 1987). This trend persists in the region today (Mendola, 2017). Additionally, many young people have also moved to Maputo City, in search of employment. Involvement in the sugarcane value chain does not seem enough to attract the interest of new generations of farmers. Together with natural disaster risks, this raises questions on the sustainability of the model, which is discussed in more detail in subsequent sections of this chapter.

The observed results translate into a LDI that is significantly higher for non-participating households than for participating households (0.3093 against 0.1937 respectively). Participant livelihoods are thus more diversified than non-participants. However, specialization in sugarcane production is not observed in the cases studied. In fact, participants also invest less in sugarcane expansion. Most households cannot expand independently, implying that they are unable to specialize in sugarcane production. Although one of the two mills does accept independently produced cane, fewer production skills are typically transferred to households. This happens because block farming does not seem to involve participant households in production to the same extent as in individually-grown cases, which reduces household preparedness to cultivate cane independently. Instead, participant households - where sugarcane does not necessarily affect household labor availability - are investing in off-farm activities. In addition, many households claimed that they have reinvested profits from sugarcane into other lucrative activities, such as their small business, and have been able to meet basic needs such as house building or improvements, education and health coverage.

The outlined results suggest that involvement in the sugarcane production model generates considerably different livelihood strategies for participants and non-participants. Participants are often in a better position to choose livelihood activities that grant them higher social status. They are also often in a better position to invest time and resources in activities of their choice. This contrasts with non-participants livelihood diversification

(Table 5.4) and raises questions on the socioeconomic trade-offs for local communities. This includes questions on process of exclusion within an 'inclusive' context, where an agricultural production model generates net positive benefits to parts of the agricultural community in a region, but is unable to include all segments of the same community.

The results presented have significant outcomes for the socioeconomic wellbeing of participant households, but they also have crucial effects for reinforcement of intra-community inequalities and exclusion. This will be further explored in the Discussion section of this chapter.

5.4.4. Socioeconomic development

Thus far, this chapter has shown how participation in the sugarcane sector affects smallholder agricultural production and diversification of livelihood portfolios. To complement the results and to allow a more thorough discussion on inclusiveness, this section analyzes additional indicators. These are the food insecurity index, socioeconomic status index, and 'better-off perception'.

Table 5.5 demonstrates that participants are significantly better off across all of the selected indicators. This means that participants in the studied sugarcane contract farming schemes are statistically more food secure, have a higher socioeconomic status, and perceive themselves to be better off (compared to five years before) than non-participants.

Table 5.5: Additional indicators of socioeconomic development

| <i>Variables</i> | Predominantly block farming (Maputo Province) (n = 365) | | |
|------------------------------------|--|-------------------------------|-------------------|
| | Participants (181) | Non-participants (184) | Difference |
| | Mean (SD) | Mean (SD) | t value |
| Food insecurity index | 6.5359 (6.67292) | 9.1413 (7.54307) | -3.493*** |
| Socio-economic status index | 12.7267 (6.7213) | 10.7284 (6.9849) | 2.784*** |
| Better-off perception | 0.5304 (0.50046) | 0.375 (0.48544) | 3.011*** |

*** = signif < 0.01 ** = signif < 0.05
* = signif < 0.1

Food security

The higher food insecurity index presented for non-participants indicates that they are more food insecure than participants. There are two potential reasons for this difference: firstly, the number of inputs used in agriculture and cash availability among participants. Participant households use more agricultural inputs than non-participants and hence are

more likely to have higher productivity levels. Also, participants have more income to buy food. Furthermore, in block farming cases, participants have more land that they use for food production for their own consumption (Table 5.3). Therefore, the explanation for better food security results among participants lies in the greater availability of cash and land that they have at their disposal.

In summary, participants experience overall higher levels of food security in comparison with non-participants, who have less land, less inputs, and less cash, and thus score comparatively worse in the food insecurity index.

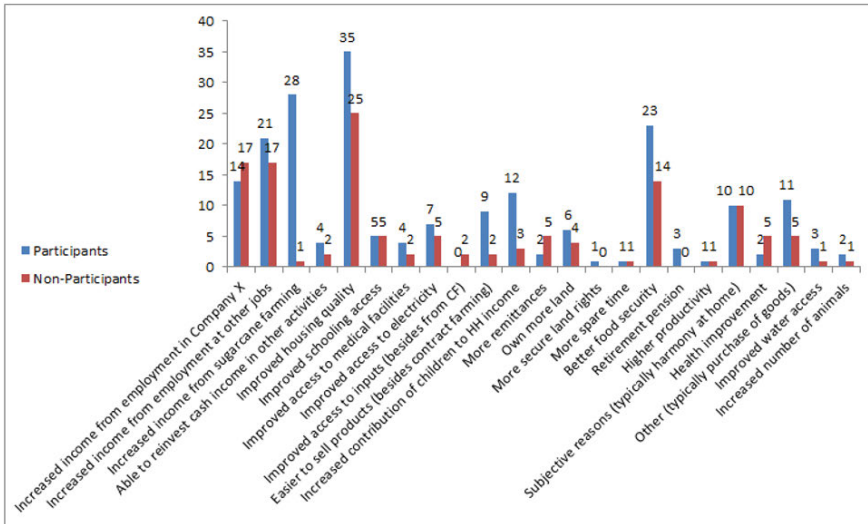
Socioeconomic status

The participant group had a significantly higher socioeconomic status in comparison with non-participants. When interviewing participants about how they used profits from sugarcane, it was found in a number of cases that households invested these profits into building or improving houses, as well as acquiring home goods and transportation means, which could also constitute an increase in socioeconomic status. With participants also owning more land, which often is an important indicator of welfare, prior to scheme participation, it does suggest that on average participants may have been more affluent prior to participation, reinforcing patterns of inequality. As the section below also suggests, upwards social mobility is likely to be more prevalent among participants.

Better-off perception

Participants were far more likely to claim to be better off than five years before than non-participants. In total, 97 households (54% of the participants) responded they were better off than five years before, typically because of increased income from sugarcane farming and employment, leading to improved housing conditions and food security. For non-participants, only 68 households (37% of the non-participants) said they were better off than five years before, typically because of employment income, which tends to lead to improved housing conditions and food security. Below (Figure 5.3) are the reasons for why households were better off at the time of the survey *versus* five years before.

Figure 5.3: Better-off perception



Source: Author's dataset. Answers by participants and non-participants that consider themselves better off than 5 years before (N=97/181, participants; N=68/184, non-participants).

The underlying point is not only that more participant households in contract farming schemes are better off than five years before than non-participant households, but that the reasons they are better off are often attributed to their participation in sugarcane farming. This qualitative information helps with the self-selection bias issue, mentioned in the methodology section. It is known that in Maputo Province farmers that joined the scheme did so because they were geographically in the right place¹⁹, and could join the scheme with lower risk perception – sometimes coercively. There is, therefore, a clear correlation between perception of well-being and participation in a sugarcane scheme, which also explains why smallholder farmers in the region want to be involved or to continue to participate in the contract farming schemes with the sugar mills.

5.5. RESULTS FROM PHASE IV: OLD AND NEW CHALLENGES FOR SUSTAINABLE INCLUSIVE DEVELOPMENT

In Phase IV of this research, I returned to Maputo Province to gain fresh insights into the experiences of smallholder farmers participating in sugarcane production models of Maragra and AdX. This phase was designed to provide a comprehensive understanding of how these farmers continued to navigate the processes of inclusion within the regional

¹⁹ Or in the 'wrong' place for those who were forced into sugarcane farming, lest they would lose their lands. This was the case of at least one community interviewed during the focus group discussions.

sugarcane production systems. To achieve this, I conducted interviews with key informants, including representatives from the government and sugar mills. Additionally, I organized FGDs with smallholder associations and cooperatives, ensuring a holistic exploration of the evolving dynamics in the sector. This phase yielded a set of key findings that significantly contribute to the overarching argument of this thesis.

Firstly, a number of the long-standing challenges observed in earlier phases of the research persisted. For example, internal conflicts within and between smallholder associations remained a recurrent issue. The household surveys in 2015 captured a total of 66 households that claimed to have had conflicts for plots of land (both linked to sugarcane production and other crops), mostly with neighbors. This represents 18% of the sample, which is not negligible. In 2023, the FGDs with four associations in Magude also indicated internal conflicts within and between associations. This resulted in the division of a number of larger associations into smaller ones. One of these examples is the Association Eduardo Mondlane, which stems from the Association Maria da Luz Guebuza, left with around 30 ha out of more than 260 ha at its establishment.

As shared by one member of the new association:

“We were simply not happy anymore with the management and the decisions they would make. Also, it did not seem to generate enough income for some members. So, we decided to start our own association. That meant that the land had to be divided and the plots reshaped.” - Interview with adult male smallholder farmer in July, 2023.

In addition to frictions among smallholder farmers, I also observed some conflict between the farmer associations and the sugar mills continued. Although the nature of these conflicts evolved, tensions between smallholder associations and the sugar mills endured. Unlike the earlier disputes over land, the focus had shifted to matters concerning sugar prices and contract terms. There was a consensus among smallholder farmers and representatives of the SDAE in Magude that contracts could benefit from increased transparency. Alternatively, the mills were urged to collaborate more closely with farmers to enhance their comprehension of contract intricacies, which could for example be tackled by supporting smallholders' contract literacy.

However, a notable concern that emerged from the 2023 field visit was the suspicion among smallholders that a few mill workers were not accurately accounting for the quantities of smallholder-produced sugarcane delivered. Allegations ranged from undercounting saccharose values for some associations to overcounting for independent private

outgrowers. This is an issue that the provincial government is also aware of and is currently attempting to resolve with the management of the mills.

A final example of the long-standing challenges was the recurring complaints about the financial dynamics within associations and cooperatives. While some received grants during their formation processes, others were only able to secure loans via the agreements the sugar mills had with commercial banks. The extended repayment periods for loans has always been a point of contention, as it meant that some smallholder producers would not benefit from substantial income from sugarcane production until their debts were fully repaid. In 2023, only a few associations still grappled with this issue, as most had successfully repaid their loans.

Secondly, there are new challenges facing the smallholder farmers. One significant and unforeseen challenge in the production region of Manhiça was the devastating floods of 2023. The floods had a considerable impact on the sugarcane production landscape, introducing a fresh set of challenges for both smallholders and the industry as a whole. The region of Manhiça experiences recurring cycles of droughts and floods, which culminated in the calamitous floods of February 2023. It is estimated that up to 7,000 ha of land, including more than 1,000 ha of smallholder farmland and the totality of Maragra's plantation were flooded at some point during the period. This resulted in the destruction of the largest part of the sugarcane and food crop fields of smallholder farmers. Activities in the sugar mill were halted and the little sugarcane that was harvested during the campaign was being processed in Xinavane, by AdX at the time of research.

In view of the strong limitations of production models to upscale and involve larger numbers of smallholder farmers, as well as of the ever increasing risks imposed by climate change and natural disasters, development actors and governments need to invest in alternatives. This necessitates large-scale infrastructure development (for example, dams and irrigation ditches) and policies spearheaded by the government and MADER that take into account and promote on- and off-farm alternatives (Van Westen et al., 2019; Banco de Moçambique, 2022).

For three decades, sugarcane has been a vital industry in Manhiça, according to the district's SDAE. By 2023, Maragra alone directly employed 3400 people. Alongside this is the employment and income generated by large independent sugarcane producers and by the smallholder associations and cooperatives. Therefore, floods such as the one in 2023 represent a serious crisis for the district, rivaling the recent COVID-19 crisis, but considered worst by local stakeholders as the negative economic impact felt in 2023 will potentially extend into 2024/25. Conscious of this predicament and of its over-dependence

on sugarcane, the government at district and provincial levels are eager to promote investments in alternative value chains, such as maize and sesame, so the risks of one key model collapsing are diluted.



Picture showing the extent of the floods in the sugarcane fields of Maragra and smallholder farmers producing for Maragra. Five months after the floods, some areas were still under water. Author's picture, July 2023.

It is not only the government that seeks to promote diversification of value chains among smallholder farmers. Most members of sugarcane associations would like to have alternative secure markets for other produce, especially members who earn less income (e.g. members of associations that are still indebted).

These findings lay the groundwork for the ensuing discussion section, where the implications of these dynamics will be thoroughly examined. The persistence of old challenges alongside the emergence of new ones underscores the complex and evolving nature of smallholder participation in sugarcane production. These insights not only shed light on the present state of production but also inform future directions for research, policy, and practice within this dynamic agricultural sector.

5.6. DISCUSSION

To discuss the findings, this section is divided in four subsections a) the block farming production model as a source of inclusiveness, b) the challenges of the model for inclusion, c) the replicability, viability, and sustainability of the model, and finally d) the changes

implemented since 2014/15 and how these changes respond to the quest for more inclusiveness in the model.

5.6.1. The production model as a source of inclusiveness

The results from both phases of the research, but especially Phase III form the basis of a main argument: the organization of the production models around block farming proved to be effective in bringing about benefits and economic inclusion to those participating in the association-led contract farming scheme. Firstly, participants are better off than non-participants in terms of the indicators presented in this chapter. Secondly, block farming tends to be less biased towards previous socioeconomic conditions. Finally, the patterns of land use and change observed in the results are influenced by block farming design and feed into the discussions about land accumulation and its direct effect on food security. As such, the production model is directly linked to the generation of tangible benefits for those partaking.

Regarding the first point, the results – corroborated by qualitative information collected in the FGDs and questionnaires – show that participants are better off than non-participants across a number of assessed variables. Participants are more likely to have a more diversified livelihood portfolio, be engaged in higher income-generating activities, be formally employed, produce more food, hire more labor, diversify agricultural production, use more agricultural inputs, and experience greater welfare. Participants also have a higher sense of being better off than non-participants, enabling them to stand up better to risk. In the words of a member of the association “Macuvulane I”, in 2015 in Magude district:

“We can choose to hire people instead of working the land ourselves. We are also able to buy cars, motorbikes, and improve our houses with better materials. For many years, other people [farmers] wanted to start a sugarcane association. Some are able to do that. But many still want to join.” - Interview with adult female smallholder farmer in 2015.

While the results in household characteristics may explain, in part, the differences between participants and non-participants, it is still possible to infer that involvement in sugarcane farming had an effect on these differences. Turning to responses from the FGDs, participants confirmed that they believed to be better off due to sugarcane farming. Respondents who are part of block farming schemes consider themselves their own ‘bosses’. They demonstrate pride in being able to hire people to work their blocks while they do the administrative work necessary to run the farm blocks. Non-participant groups are eager to join the sugarcane contract farming schemes and resent that they are not able to enjoy the same socioeconomic up-scaling observed among their participant neighbors.

In summation, participant groups attributed their success to being part of the sugarcane scheme. As a result, the number of smallholder farmers entering the contract farming scheme has steadily increased, particularly after 2018/19, where years of droughts gave way to years of good rainfall.

While other scholars have also found similar differences between participants and non-participants in contract farming schemes (Warning and Key, 2002; Bolwig et al., 2009; Miyata et al., 2009; Bellemare, 2012; Veldwisch, 2015), including sugarcane case studies (Herrmann and Grote, 2015; Wendimu et al., 2015; 2016), their focus rarely went beyond income and productivity. This chapter showed that participants also have a series of other tangible and intangible benefits.



Example of a focus group discussion (FGD) with community members who were not involved in the sugarcane production model of either of the sugar mills until 2015.

This chapter compares participant households (organized in blocks of sugarcane farming) to non-participant households (who did not produce sugarcane and were not organized in farming blocks). Based on the highlighted results from participant household surveys, it is possible to argue that participants have more time and capital available to invest in other agricultural activities. They also diversify activities more often than non-participants, because of the block farm structure. Greater use of inputs for food production, higher rate of hiring labor, and more diversified crop portfolios substantiate these claims. The FGDs substantiate these claims, as farmers recognize the time and resources they have to hire

labor for their land. Their free time is used instead for other tasks, such as cultivating other plots of land and taking care of small businesses. The main inference from these results is that the block farming model offers participant households more choice to use their time to dedicate to other activities, including off farm activities

Finally, this chapter found that land accumulation patterns differed between participants and non-participants. Interestingly, participants already had accumulated more land on average prior to sugarcane contract farming opportunities than non-participants. Land use among participants increased sharply over the observed time period, and an increasing number of these transactions happened through market-like mechanisms, despite the lack of a formal land market. It is possible to partly attribute the causes of this accentuated change to block farming models. Since participants had more time and higher income than non-participants, their new land acquisition trends reflect the increased interest for new plots to produce food and commercial crops (other than sugarcane). This means that land accumulation patterns are changing and despite the inexistence of formal land markets, smallholders are increasingly selling and buying land. It contributes to participants' food security, as seen in the results, because they have increased their land under food crop production.

However, these patterns of land accumulation should be further explored to better understand the implications of different types of contract farming models on agricultural land use dynamics and in terms of reinforcing intra-community inequalities. In terms of the inclusive production models debate, there are demonstrated positive outcomes of block farming but there are also underexplored (potentially negative) effects in the community that deserve attention in future studies.

These results add value to the debates about contract farming, inclusive production models, and food systems by focusing on different aspects than most empirical contract farming studies. Much of the debate around inclusive business is whether or not it reduces poverty by using indicators such as income or productivity. Food systems debates require more careful examination and holistic analysis of how the current organization of food production, processing, distribution and consumption contributes to food security and social justice and equality (Ericksen, 2008; Béné et al., 2019; Van Westen et al., 2019). This research focuses on contract farming model design and how it affects land use change, agricultural production, and livelihood indicators in order to provide a more nuanced understanding of contract farming's effects on the local population. This chapter shows evidence of differences in land acquisition, livelihood strategies, food security, and agricultural production between participants and non-participants that can explain the model's 'pull effect' for smallholder farmers.

5.6.2. The challenges of the production model for inclusion

Having established that the block farming production model is directly linked to the generation of benefits for those households participating in it, we should also explore the challenges to considering the model inclusive (i.e. beyond just involving smallholder farmers). There are three arguments to explore here: the exclusion of community members, the forceful early integration of smallholders to the sugarcane production model, and the degree of autonomy of smallholder farmers from the sugar mills.

First, exclusion of community members could be observed in at least two forms: exclusion from the production model and from employment opportunities. As seen, the involvement of smallholder farmers in the production model happens largely through the formation of farmer associations. As such, the process of sugarcane expansion through smallholder production was slow and heavily dependent on access to external financing to set up the associations and cooperatives. Therefore, many smallholder farmers are still excluded, as pointed out by the FGDs with local communities in 2014 and 2023. Furthermore, the employment generated by those farmer associations is often limited to family members of the smallholder farmers who establish the association in the first place. Therefore, the opportunities created by both involvement in the contract farming scheme with the sugar mills and via employment in the farmer associations are limited to those members of the community who are not part of a farmer association vertically integrated with the sugar mills. The exclusion of many community members is, thus, the norm.

Second, even when there was integration of smallholder farmers in the production model, the process did not necessarily translate into inclusion beyond just participation. The FGDs conducted before the research's household survey stage enabled a comprehensive grasp of the early and later processes of smallholder integration in the sugarcane production system in Maputo Province. Soon after privatization of the sugar mills, there were some instances of smallholder farmers' land forcefully integrated with the sugarcane production of the mills, which led to revolts (Jelsma et al., 2010). While this represents a blatant misalignment with inclusive premises, the outcry did lead to a rethinking of how smallholder farmers should be involved in future productive area expansions (Sonneveld, 2012).

Finally, regardless of the processes of formation of the farmer associations, block farming does seem to decrease the perception of risk that smallholder farmers might have towards the production of a new intensive cash crop. This allows for more involvement, in comparison to individually grown sugarcane. However, this type of production model also considerably decreases the smallholder autonomy from the mills, given the nature of the contracts. There is clear control of the sugar mills over land preparation, irrigation, production, harvest, and delivery. This control is often through cost-recovery financing and

technical assistance. As such, even though the farmer associations receive the benefits of being part of the contract farming, they can find themselves locked into such contracts. Moreover, there are complaints among association members about the lack of transparency in the contracts, both between the sugar mills and the associations and between association leaders and other members. This creates a context of outspoken frustration towards the information asymmetry between smallholder farmers, associations, and the sugar mills (Leite et al., 2020). Furthermore, the block farming model not only creates the described dependency on the sugar mills, but also dependency on the farmer associations themselves. Once smallholder farmers cede their land to an association for the formation of a farming block, it becomes extremely hard to regain control over the land. In summary, participation in block farming embeds the smallholder farmer in the production model. It decreases the farmers autonomy *vis-à-vis* the decision-making about their own plots of land, and increases their dependency on the mills and farmer associations.

Along these lines, more nuanced attention should be paid to the debates about contract farming models. As outlined in this research, block farming seems to be less biased towards pre-existing social differences than models that prioritize individual growth of sugarcane, or that do not organize the production system. This has a positive side, as was the case in Maputo Province, albeit instrumental in reproducing patterns of social exclusion and inequalities as far as social status and land-holding is concerned. These results directly dialogue with findings in Wendimu et al. (2015; 2016) for example, which highlight the negative effects of inclusion on productivity potential.

This chapter touched on the process of block farming formation, but did not assess the nuances of this process for the communities involved, such as impacts on people coerced into the model. However, as the entry into block farming was based on other aspects rather than capital, this indicates that it was more likely to include various social classes of land owners. As such, from a local community perspective, block farming is less exclusive for it organizes the production of all its land-owning members equally. However, these processes ignore pre-existing power relations that resulted in land ownership configuration prior to the start of the contract farming model (Fairbairn, 2013) and likely perpetuate social differentiation – factors that should be further studied if we are to consider a model genuinely inclusive.

Finally, when we examine the requirements for entering sugarcane outgrowing models, the main determinants pointed out in literature (Jarnholt, 2020) are the willingness of farmers to join the scheme and the ability of the individual farmer to grow sugarcane, i.e. to have enough capital to invest and start growing sugarcane. This indicates that growing sugarcane is determined in large part by the household's socioeconomic status

in accessing or having capital. This aligns with Prowse's (2012) remarks on the main criteria for selecting participants of contract farming. However, in the models studied, entering the scheme was more strongly correlated to the capability of being part of an association or a cooperative and being located in areas with easy access to main roads and water sources. Participating in an association which is vertically integrated with the sugar mill production model decreased the perception of risk and gave smallholders access to capital and technical assistance through the mills to undertake activities such as land preparation, planting, treatment and harvesting of the sugarcane, and in some cases to maintain an irrigation system.

5.6.3. Replicability, viability, and sustainability of block farming as an inclusive production model

To deepen the discussions, it is worth expanding on the results' implications for the replicability, viability, and sustainability of inclusive production models. As argued in the introduction, Mozambique is beginning a new cycle of agricultural development programs, with PEDSA II, PNISA II, and SUSTENTA. Therefore, these lessons are relevant to inform decision-making in the new cycle.

A key determinant of the social viability of a contract farming scheme is the barriers to entry and exit of the production model. Of particular interest in the block farming model was the variance in how and who could access the scheme. This research has shown that access and entry to contract farming models is not equally distributed, which could cause different outcomes and, in some cases, biased selection processes. In terms of replicability, it is important to note that each case will be different, based on context. However, the results of this research provide some generalizable lessons.

For example, the way the smallholder inclusion process was conducted in Maputo Province likely produced fewer selection biases than if it was not organized by the sugar mills at all. The implementation of block farming by integrating smallholders into associations who were located on land suitable for sugarcane production made the process more dependent on geography and less by own decision-making and availability of initial individual capital. Conversely, in individual production systems private capital and, potentially, the educational level of households have a larger influence on participation in the schemes (Jarnholt, 2020). In such systems, one can argue that it leads to the exclusion of more marginalized groups in joining sugarcane schemes. It does not mean, however, that pre-existing social differences and inequalities were not reinforced by the apparently neutral selection process based on geography. As argued, households with land with prime access to resources and roads, were likely already more affluent than their counterparts.

Another lesson is that, although in theory the block farming entry scheme allows relatively less social differentiation and the integration of fewer capital-rich households, the system is heavily dependent on large amounts of capital to establish associations, and to produce sugarcane on a large scale. In practice, the system is quickly saturated, upon lack of external credit (normally coming from grants secured by the government or commercial bank loans secured by the sugar mills), or upon reaching the sugar mills capacity. This touches on what Schoneveld (2022, pp. 1) calls the “scaling dilemma” of inclusive business models, in which upscaling reduces the ability of the model to achieve depth in impact.

Furthermore, in terms of the model’s sustainability, it is crucial to consider natural disasters and climate change as additional factors (Cunguara et al., 2018).

The results in this chapter invite further questions about which groups are included into contract farming models, particularly in terms of inclusive production models, the evolution of processes of inclusion, and the sustainability of these processes. If a production model is to be inclusive, it must also be inclusive by *process* of inclusion of who can participate – not only inclusive by *results* to those who were ‘included’ via geographical or status chance. This chapter’s data suggests that methods of entrance into sugarcane contract farming models in Maputo Province were more inclusive due to the process of block farming that included people based on geography, access to land and water resources, rather than individual capital to invest and individual risk perception. They were also more inclusive because they allowed a larger degree of mutual embedment of interests (of sugar mills and smallholders) at the same time as the associations were autonomous – albeit very limitedly – within the embedding framework. However, the evidence also shows that block farming reveals the nuances of so-called inclusive production models, where some community members are excluded (Otsuki et al., 2017). This raises doubts about whether inclusive production models, such as contract farming through block farming are inclusive enough, from a community point of view. Based on comparisons between participants and non-participants, the response is likely negative. If investments in new value chains do flow into Manhiça and Magude as desired by the local government, will the stakeholders take these lessons into consideration? It remains to be seen.

5.6.4. Changes over time and their effect for inclusiveness

Over the years since Phase III of the research, several changes have taken place within the sugarcane production model, influencing the experiences of smallholder farmers. Three key elements are highlighted, as they enable a comprehensive summary of the contextual changes in the model and add nuance to our conceptualization of inclusiveness: prices, climate, and the well-being of smallholder farmers.

First, throughout the years, prices have not been a significant concern due to the sugar price control mechanism implemented within the sector. Unlike most other agricultural sectors, the government regulates and protects sugar prices through import taxes (MEF, 2019), providing a certain level of stability for the sugar mills and their producers. However, the lack of transparency in contracts remains a major challenge for smallholder farmers. Associations often struggle to comprehend the pricing calculations and the deductions made from their revenues, leading to a lack of trust and proper communication, and occasionally conflict (MMO, 2021)²⁰. Addressing this issue requires improved contract transparency and effective communication channels to ensure farmers have a clear understanding of the pricing mechanisms and deductions involved.

Second, the region is characterized by uncertain weather patterns, alternating between periods of reliable rainfall and droughts. Natural disasters, such as the devastating floods experienced in February 2023, further compound the climate challenges. These climate-related events have a direct impact on the communities producing sugar, on the production model itself, and on food security. The unpredictable nature of climate conditions necessitates measures to enhance climate resilience and adaptation, such as implementing climate-smart agricultural practices and providing support systems for smallholder farmers to mitigate the risks associated with extreme weather events. These include large-scale investments in protective infrastructure that should be spearheaded by the national government and should target commercial and food crop areas.

Finally, regarding the well-being of the smallholder farmers, the majority of sugarcane producers have seen improvements in their livelihoods over the past decade. Many associations and cooperatives have successfully repaid their debts, which led to a noticeable increase in their income. However, as seen, the benefits of sugarcane production do not reach everyone in the communities, nor it has prevented conflicts over land and profits within the associations and between these groups and the sugar mills. Additionally, the recent floods have clearly set some associations back, underscoring the vulnerability of smallholders in the face of climate disasters. Maragra will only have resources to initially rehabilitate its own estates and will not provide any sort of insurance to its outgrowers. Likewise, many of Maragra's employees will not receive a source of income for the next production campaign.

Therefore, it is essential to analyze whether the inclusion of smallholder farmers in contract farming exposes farmers to risk, particularly when climate-related disasters occur. Agriculture is risky, especially with increasing climate change (Li, 2015; Partridge and

20 Also based on interviews and FGDs with the SDAE and farmer associations in Magude in July 2023.

Wagner, 2016). Therefore, assessing the lack of provision of insurance or support by the mills to smallholders during such crises is crucial in understanding the level of risk-sharing and resilience-building within the production model.

In general, contracts within the observed sugarcane production model offer more stability and lower risks compared to individual sugarcane production. Producers have historically enjoyed some protection and advantages over non-producers, as they were better positioned (financially) to stand up to risks. However, the recent floods have highlighted the vulnerability of smallholders, and of the whole community, particularly as the affected mill prioritize its own reconstruction and rehabilitation efforts, while the government's support will initially prioritize the larger independent producers, with smallholder farmers and their associations receiving attention and resources at a later stage, if available.

These changes over time demonstrate the evolving nature of inclusive production models and the challenges that arise during crises. It underscores the need for continued efforts to improve contract transparency and smallholders position in the negotiation table. It also highlights the need for enhanced climate resilience and equitable support mechanisms for smallholder farmers within the sugarcane production model.

5.7. CONCLUSION

This chapter aims to expand on smallholder socioeconomic inclusiveness by investigating sugarcane contract farming models in Maputo Province. It set out to examine the processes behind smallholder involvement in models which exhibit high levels of control by the sugar mills and how the smallholders experienced this participation. To do so, this chapter examined what factors determine, characterize, and differentiate participation and non-participation in the models and the contrasting outcomes. This includes agricultural production systems, land accumulation, livelihood portfolios, and other socioeconomic indicators, within the framing of block farming as a production model that involves thousands of smallholder farmers in the sugarcane value chain.

We found stark differences between those who participated in the contract farming models via block farming and those who did not. Therefore, during Phase III of research, it became evident that the benefits were substantial. Smallholders expressed a strong desire to remain part of the production model, while those not yet involved aspired to join this system. However, Phase IV assessed the long-term experience of smallholder participation. It was established that key benefits from participation persisted, but also that new challenges had emerged. While the research found that smallholders still expressed

satisfaction with their involvement in the sugarcane production models of the region, it also became evident that participation alone does not suffice for harnessing the full potential of inclusion and its benefits for smallholders' lives.

Smallholder farmers emphasize the need for alternatives to sugarcane production. Currently, the primary source of substantial income in the region is derived from the sugar value chain. However, both smallholders and the local governments, as stakeholder groups, advocate for the establishment of alternative value chains and livelihood pathways to enable income diversification. The results of this chapter suggest that the long-term effects of participation in the sugarcane production model are beneficial for smallholders who are included in the model. Notwithstanding, for socioeconomic inclusion to really take place, old and new challenges still need to be tackled. Inclusion in the sugarcane models is preferable, but it is not enough.

Existing literature tends to examine 'inclusive' production models, such as contract farming models, for signs of poverty reduction. However, truly inclusive integration into value chains requires an understanding of the conditions under which contract farming is successful beyond income and productivity indicators – conceptually as well as empirically. This research highlights that if models like these are to be replicated in other schemes, entrance into the production model must be carefully examined and designed. To the same extent, nuances of different types of contract farming production models must also be carefully scrutinized.

While not without challenges, the results indicated that these production models do lead to a certain degree of local development and are to some extent more inclusive of households otherwise marginalized in comparison with smallholders who do not participate. However, the desirability of a production model by participants should not ignore the potential for over-dependency and lock-in situations. It should not take away the ability of households to engage and diversify in other activities, because if the model was to collapse – as it did for Maragra's contract farming model in 2023 – households need to be able to mitigate that risk.

More research is needed to truly understand what kind of effects contract farming and other types of 'inclusive' production models have on social differentiation. Future research could, for example, look into the differences in livelihood outcomes for those who were voluntarily integrated in the sugarcane production schemes *versus* outcomes for those who were coercively integrated. Also, future research could focus on establishing the degree of influence that financing methods have in the observed outcomes for block farming participants in this chapter. It is known, for instance, that some sugarcane associations

in Maputo Province were formed based on grant financing, while others were through commercial bank loans. It would be highly relevant for literature on inclusiveness to understand how positive outcomes are linked to the different types of association formation, including through different mechanisms of external financing.

Modes of entrance into the model should also be taken into account by agribusinesses when designing production models, and by officials when designing policies that are meant to enable inclusive production models. In addition to promoting a more equal as well as free-choice access to schemes, production models and policies should also promote fluidity in being able to exit the scheme. The ability of sugarcane farmers to exit a scheme they consider negative is equally as important as being able to enter a scheme to begin with. In the cases studied, that would not be possible without waiving rights over land or by division of associations in smaller ones. This is a stark difference to the results we will observe in the soybean chapter, where agency and decision-making plays a key role in the smallholder farms relationship with other stakeholders in the value chain.

More nuanced approaches on the understanding of production models and entry-exit limitations are thus necessary. Studies like this provide conceptual and practical lessons for the understanding of the dynamics and nuances of production models that claim to be inclusive.

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6

Soybean expansion in
Mozambique: Exploring the
inclusiveness and viability of
soya production models

6.1. INTRODUCTION

Before the onset of the coronavirus pandemic, Mozambique was one of the fastest growing agricultural markets in the world (Hanlon and Smart, 2008; Di Matteo and Schoneveld, 2016). After the adoption of the Structural Adjustment Programme in the late 1980s and the end of the prolonged civil war in 1992, the country strived to expand commodities production and accelerate economic development by increasing foreign investment and support from international donors to establish agricultural development projects. These projects, which were shaped during Mozambique's post-independence socialist state-building, were increasingly exposed to private sector involvement that sought large tracts of land concessions for agribusinesses – supported by active governmental promotion (MINAG, 2011). As such, foreign direct investments (FDI) increased steadily, peaking in 2013 (World Bank, 2022). As all the land in Mozambique is 'public', spared for the country's population who are in majority smallholder farmers, these early private concessions were seen as typical cases of land grabbing that sought to squeeze out small-scale poor farmers from their land (Nhantumbo and Salomão 2010, Borrás et al., 2011).

In the 2010s, the debates on land grabbing drew attention to particular crops, such as sugarcane and soybeans, as these 'flex' crops spurred the land grabbing process. More recently, the debates on food systems draw attention to the negative effects on nutrition and food security of changing production from food crop to cash crops (Béné et al., 2019). Flex crops are those that can be used for food, feed, and fuel production and that are planted in a large scale monoculture as typically seen in South America. As food is integrated into the feed and fuel markets, they can have significant impacts on local food security and quality (Gillon, 2016). At the same time, little is still known about the impact of such crops at the micro-level in Mozambique and how they interact with social relations, capital accumulation and power relations (Borrás et al., 2015).

In particular, flex crop development typically uses contract farming in order to include smallholders into their business operation as a way to make business more inclusive (Robertson and Pinstруп-Andersen, 2010; Hall, 2011). However, the process by which the experience of contracted farmers in integration into new cash-based production systems and how they exercise their agency and optimize benefits remains unclear. This chapter aims to explore how farmers are included in and also eventually excluded from so-called inclusive production models. It also explores how these models reshaped the soybean sector in Gurue district, which has witnessed extensive agrarian and landscape transformations through the integration of more than 10,000 smallholders over the last decade (Bey et al., 2020).

More specifically, the chapter chronologically traces smallholder soybeans' adoption pathways in four phases including how contract farming emerged and declined. It pays particular attention to the role of farmer associations and the international donor community in Gurue district in the province of Zambezia (Figure 1.5). It elaborates on a case study of the smallholders' experience, using data collected during three months of field research in 2015 that included 160 household surveys and interviews with key stakeholders, as well as semi-structured interviews with key local stakeholders in July 2023 (Annexes). The principal question is: What are the characteristics of inclusive production models in the soybean value chain in Gurue, Zambezia Province, and what are the outcomes of participation for smallholder farmers over time?

To answer this, we delve into the factors that have contributed to processes of inclusion and exclusion in the soy sector and how smallholders and supporting organizations shaped sector development trajectories. The analysis is framed within the 'embedded autonomy' discussion.

In the following sections, the chapter first reviews debates on land grabbing and contract farming in recent years to highlight the importance of investigating local populations' agency – that is, their capacity to make a difference or 'to act otherwise' (Giddens, 1984) and to make their own lived-in places by interacting with political processes related to soy expansion at various scales (Pierce et al., 2011). The review is followed by the methodology and then a case study of smallholders who have accumulated experiences in soybean farming in Gurue. This chapter concludes by analyzing how to make current soybean expansion beneficial for the well-being of smallholders and improve social inclusion.

6.2. FLEX CROP EXPANSION, CONTRACT FARMING, AND INCLUSIVE PRODUCTION DEVELOPMENT

The phenomenon that came to be called land grabbing in the late 2000s created a 'hype' among academics and development professionals as well as activists who question the development contributions of the large-scale purchase or lease of farmland in developing countries by foreign investors (Kaag and Zoomers, 2014). Foreign investors, usually in collaboration with national governments, often acquire land through dispossession of smallholders (Schoneveld, 2013). Even if physical displacement does not occur, resultant landscape transformations have been known to create profound adverse impacts to smallholders who make their living in relation to the 'enclosures' that are produced by these large-scale investments in which selective capital inflows and outflows fail to benefit local livelihoods (Ferguson, 2006; Li, 2014).

The rise of flex crops has accelerated landscape transformations and changed smallholders' relationship with the places in which livelihoods are generated (Borras et al., 2015). In combination with the concerns for climate change mitigation, the large-scale land deals came to be justified for alternative fuel production in addition to food production, and production of crops such as soybeans became especially attractive to investors. Large-scale soybean plantations are especially justified, not only for the production of biodiesel, but also for livestock feed and human consumption (Hanlon and Smart, 2012).

In practice, efforts to enhance the potential development impact of large land deals and flex cropping exist. In principle, arguments for the positive impact of land deals include increased employment opportunities, commercialization opportunities, macro-economic growth and enhanced productivity, which are increasingly termed 'inclusive business models' (German et al., 2013). For example, the World Bank has outlined codes of conduct and forms of global governance to ensure the inclusivity of land deals and to prevent local communities from losing their land (De Schutter, 2011). One of these codes emphasizes the need to involve the local population in the business processes. One method to involve local farmers in the process is contract farming.

Contract farming itself is not a new concept. It has been widely practiced throughout the world but in particular in southern Africa since the 1970s (Glover, 1990). During the 1980s and 1990s, it became even more widely practiced to boost agricultural exports of high-value cash crops and accumulate capital in the countryside. This widespread practice led to industrialization of agriculture within contracted spaces and the elimination of what is often considered to be inefficient and low-yield subsistence farming by small-scale farmers (Little and Watts, 1994).

What is new about contract farming in situations such as flex crop expansion is that production of biofuel or chicken feed – which require large tracts of land – may require little manual or only seasonal labor, particularly in the soya sector (Hanlon and Smart, 2012). Consequently, flex crop production in Mozambique has been diverted away from the envisioned smallholder inclusion (Hall, 2011). Nonetheless, contract farming persists as an inclusive production model, which aims to establish "an agricultural production system carried out according to an agreement between a buyer and farmers... and conditions for the production and marketing of a farm product or products" (FAO, 2012: 1). This agreement is ideally understood as a way of sharing the value creation among those who participate in contract farming (Veldwisch, 2015).

At the same time, the concept of inclusiveness attached to contract farming usually focuses on how investors should involve local populations in their investment projects as a starting

point, in the form of 'productive employment' and 'inclusive growth' planning (Szirmai et al. 2013; OECD/WTO 2015). This involvement is supposedly beneficial to the producers who need to increase access to markets and inputs, and to the buyers who need to ensure stable supply sources to generate economies of scale (FAO, 2012). Yet, there are studies raising doubts on whether benefits are being seized by already better-off landowners; and showing that employment conditions remain underpaid and temporary (Hall et al., 2015; Van Westen et al. 2019). Thus, there is an emerging understanding that contract farming and its inclusiveness may endorse the underlying inequality that has produced impoverished smallholders in the first place – although the literature still lacks empirical works to substantiate these claims.

While the inclusiveness of flex crop contract farming is an important topic of enquiry, the agency of the various actors who are involved in this process deserves particular attention, since this strongly shapes the social organization that drives processes of exclusion and inclusion. After all, involvement in a certain production model does not directly translate into long-lasting benefits (Schoneveld, 2020). Moreover, contract farming creates 'nodes of relationships' between transnational and national investors, the government at all levels, and local communities (e.g. Massey, 2004); and leads to open 'rooms for maneuver' as farmers experience these relationships (Clay and Schaffer, 1984). What are the experiences of contracted farmers or those who decide not to enter into contract in the process of crop expansion? What have they done along the way and how have their experiences affected the modalities of contract farming and the 'inclusive' business models?

Previous studies on land governance have shown that any process of official territorialization, including land grabbing, affects and is simultaneously affected by local struggles (Otsuki, 2013). The dialectic interaction between the official demarcation and local struggles potentially rearranges social and power relationships and creates a new space for change in which individuals and groups reflexively claim their rights to be included "in social, economic and political life" (Beall and Piron, 2005: 8). This is not the usual space where investors outline terms of inclusion for poor people; it is a space where people are supposed to freely negotiate their terms of collaboration with investors or where people decide not to collaborate with investors at all.

Subsequently, this chapter traces how contract farming and the experiences of the contract farmers evolved in Gurue. Following a description of the study's methods, it analyzes soya expansion processes in the district and how different business models to commercialize the sector evolved. The boom and bust processes experienced by soy contract farming are examined, including farmers' own interpretations of this process and the need for

alignment of interests between investors and participant smallholders (within inclusive production models) is highlighted.

6.3. METHODOLOGY

To understand the evolution of soya expansion and contract farming, three months of field research were conducted in four areas in Gurue district in 2015, complemented by semi-structured interviews during a follow-up visit in 2023. The district was chosen for its large concentration of soya smallholder producers, including both producers under contract and independent ones. According to TechnoServe, a US-based non-profit organization developing business solutions in Mozambique, Gurue had approximately 4,000 soybean farmers out of a total 10,000 farmers in the province and 19,000 in the country in 2015. By 2020, Zambezia was still the largest producer of soybeans in Mozambique, producing just shy of 30,000 tons on approximately 34,000 ha of small and medium-scale farms (MADER, 2021). Lioma, Tetete and Magige localities (administrative divisions in Mozambique) were chosen for their relevance in Gurue's soya production system. A total of 160 household questionnaires were collected in 2015, using CIFOR's LIFFE project (Large-scale Investments in Food, Fiber and Energy) methodology. This included interviews and focus group discussions (FGDs) with relevant stakeholders, such as smallholders, associations, investors, and governmental officers. Of these questionnaires, 60 provided information on non-participant households, that is, the households who had stopped production for more than two years or have never produced soya. Questions were generally about the inclusion criteria for soya associations (typically not linked to a contract farming scheme), whether the households had produced soya before, and conditions for starting producing, as well as general household and employment characteristics. Questions also referred to the reasons for not producing soya or having stopped production. Additionally, in 2015 and 2023, FGDs and interviews were conducted with more than 25 local and provincial government officials, community authorities, producer forums and associations, civil society and investors to obtain or complement information on the existing policies and institutional constraints (Annex A).

An important limitation to the analysis is that the sample size does not allow for extrapolations for the whole district. It does allow for inferences about the configuration of the local context, especially in terms of access to inputs, reasons for not producing soya, and inclusion criteria in associations under the Federation. Nevertheless, the numerous FGDs and interviews (particularly the ones in 2023) with key stakeholders qualitatively substantiate the results found through sampling.

6.4. SOYA EXPANSION IN GURUE

The cultivation of soybeans began in the 1980s when the country's socialist regime looked to develop state farms throughout the country. The center of soybean production was in the administrative post of Lioma, within the district of Gurue, on the Zambezia plateau (Matavel et al., 2022). The state farm, Agricultural Complex of Lioma (CAPEL), planted, among other crops, between 400 and 500 non-irrigated hectares of soybeans, with technical assistance from Brazilian development agencies. This project failed when the widespread armed clashes of the Civil War reached Lioma. The Civil War ended in 1992, but soybean production in Mozambique would not resume until the early 2000s.

In 1997, Mozambique passed its current Land Law²¹, declaring all land as public land, which should be used for the benefits of local communities. At the same time, failed state farms such as CAPEL were being re-occupied by small and medium sized farmers, and international development NGOs were very actively promoting food and nutrition security²². In the early 2000s, the international NGO, World Vision, introduced soybean production in the region as part of a project to enhance nutrition and food security of children. The project encouraged women in all the districts of the province of Zambezia to learn how to make soya porridge for their children; and helped smallholders to organize themselves into associations and cooperatives. With the incipient and successful dissemination of soya production, other international non-profit organizations (NPO) as well as the government and the private sector began to recognize opportunities to commercialize soybean production in order to contribute to poverty alleviation and to facilitate market access for smallholders in the region. New varieties of soya were bred by the International Institute for Tropical Agriculture (IITA), adapted to the Zambezia plateau's agro-ecological conditions and disseminated with support of non-profit organizations.

In 1995, CLUSA (Cooperative League of the USA), a US-based association of cooperatives commenced operations in Mozambique (CLUSA, 2016a). Their aim was to help small producers by developing markets and undertaking food security activities. In 2006, it supported smallholders' associations to establish local platforms and the Federation of Producers of Gurue (FEPROG). In 2009, CLUSA also opened demonstration plots as a part of its Prosoya project (CLUSA, 2016b) to teach small farmers the benefits and techniques of soya cultivation, and aimed to consolidate the associations and FEPROG. In 2010, the American technical assistance agency TechnoServe (TNS), who had been active in the dissemination of soya in the district since 2008, joined CLUSA to form another two

21 By 2023, the Land Law from 1997 was under review by the government. Public consultations were underway and a revised Land Law was expected to be published by 2024.

22 According to the interviews with farmer associations in 2015.

projects (GateSoja and AgriFuturo), which aimed to upscale the production of soybeans. In these three projects ending between 2012 and 2014, new varieties from Brazil and locally adapted varieties were introduced, and linkages between producers and markets were strengthened.

Through these projects (Prosoya, GateSoja and AgriFuturo), many farmers became convinced of the benefits of soya production, as the NPOs supported them in terms of securing food, land tenure, and nutrition in the impoverished Zambezia plateau. In this way, soybeans disseminated rapidly throughout the region. The expansion attracted large private enterprises that aimed to produce soybeans, mainly for chicken feed. The chicken industry grew considerably in Mozambique over the 2000s and 2010s, increasing the demand for chicken feed to unprecedented proportions. The demand for soya for chicken feed production is still not met by the domestic market. Soya continues to be a crop of commercial interest in 2023. As it will be illustrated in the following sections, new programs led by TechnoServe, Alliance for a Green Revolution in Africa (AGRA), and the government have continued to expand farmers' interest in the production and commercialization of soy (Bey et al., 2020; KIT, 2020).

6.5. EMERGENCE OF CONTRACT FARMING

In 2012, CLUSA concluded the Prosoya project, in which they offered seeds under the condition of receiving double the volume in soybeans in return. In order to receive seeds, producers would pay a symbolic participation fee. Besides seeds, inoculants (paid for after the harvest), and free technical assistance were also offered. For those producers willing to apply biocides (which was not necessarily part of the package), CLUSA could also provide these at a cost-recovery basis, also paid after harvest. In addition to inputs, CLUSA helped the farmers' associations to find buyers for their produce such as Abílio Antunes and Frango King (chicken producers in Manica and Nampula provinces, respectively)²³.

This CLUSA experience set the foundations for the development of contract farming schemes, with CLUSA seeking to improve market relations and develop a commercial farming culture among small farmers. However, this initial experience went by almost unreported in the face of a parallel process of large-scale plantation establishments that made headlines as infamous land grabbing cases. For example, the project HoyoHoyo acquired 10,000 ha from the former state farm of CAPEL, from which 1,650 ha of land were established as a soybean farm (Norfolk and Hanlon, 2012). Families previously occupying

²³ By 2019, Abílio Antunes, Novo Horizontes and Sociedade de Beneficiamento de Sementes (SBS) were the main buyers of soybeans for chicken feed production (KIT, 2020).

that land were relocated to areas allegedly unsuitable for farming and were offered soya inputs as a form of corporate social responsibility (CSR). Such a land grabbing case attracted more media and scholarly attention than the process established by CLUSA where farmers started to engage in management of a soya seed bank, as a part of the widespread technical assistance given to the organized farmers across the district.

The seed bank was the mechanism CLUSA established to sustainably exit from the Prosoya project. It would later prove itself to be a pillar of continuity of this first project. The seed bank was meant to function as a repository from which the association members could withdraw seed before the campaign and repay double the quantity of loan in grains after harvest. The grains would then be sold and the proceeds used to replenish the bank with high quality soya seed. The scheme was essential for the great majority of smallholders, who are typically not able to buy inputs themselves, either because of prohibitive prices, a lack of inputs nearby or not being in a cost-recovery contract farming scheme. FEPROG experienced continuous growth and, in 2014, it hosted 127 smallholders' associations, organized under 11 geographically defined platforms, called Forums – which managed local seed banks. This signifies that more than 5,200 agricultural producers (of which 2,400 were women) could be mobilized to engage in the soybean production. FEPROG has grown to 5,500 members since then and still counts with 127 smallholders' associations, organized in 11 Forums, encompassing 16 *localidades* (communities).

As CLUSA would only identify potential buyers, but would not meddle in negotiations between buyers and the farmers or in the arrangement of transportation to take production to agreed locations, FEPROG became increasingly central to establishing linkages between producers and buyers. In addition, FEPROG catalyzed not only NGOs and NPOs that sought project partnerships, but also the government and private companies. In this way, FEPROG became the center of the soybean mass-dissemination, rivaled only by recent TNS efforts to establish self-sustaining local inputs market and rental markets for machinery by creating a class of small-scale commercial farming producers. The Cooperative of Producers of Alta Zambézia (COPAZA) representing these farmers, already reached 30 percent of the soya producers of Gurue and the neighboring district, Alto Molocue. As Smart and Hanlon (2014, pp. 26) noted, once the scene was set for the commercial soya production in Gurue in the early 2010s, the private sector was easily attracted to the region. As such, contract farming companies began establishing their own schemes at the same time. The NGO-led initiative to establish local capacities to produce soya was thus significant in awakening private sector interest in the region.

6.6. BOOM-AND-BUST CYCLE OF CONTRACT FARMING

In Mozambique, only a few sectors have proven to be viable for contract farming, namely the cotton, tobacco, and sugarcane sectors. In contrast, contract farming in the soya sector in Zambezia proved to be unviable. The main reason for this failure in the areas of soya production was the incompliance with contracts, as a result of an increased prevalence of side-selling, the difficulty of monitoring the marketing behavior of contract farmers, and the influx of informal and formal grain traders. These conclusions are similar to other studies' (Veldwisch and Woodhouse, 2022).

The impossibility to monitor contract farmers also stems from the fact that the soybean sector is not able to establish a monopsony scheme, unlike contract farming cases in the cotton sector, which make use of governmental concession schemes. It is also very difficult to build a monopoly, as happened in the tobacco sector, which makes contract enforcement more straightforward for the buyer. And, there were no mechanisms to control smallholder production through consolidated production, as is commonplace in the sugarcane sector in southern Mozambique, where smallholder production is organized through block farms.

Out of six identified investments that entered the soya sector in the region in the late 2000s and early 2010s, three attempted contract farming. Only one was still active by 2023 – though reportedly unprofitable. It implemented contract farming to supplement production from its nucleus plantation, which formed the basis of its production model. Almost all soya smallholders are thus involved in the sector through open market sourcing, as opposed to the previous contract farming schemes that reached approximately 500 farmers at their peak (according to an interview with TNS)²⁴.

The practice of side-selling by producers was endemic. Side-selling happens for multiple reasons. Firstly, unlike the operations in the tobacco sector, most companies within the soya sector did not assign enough personnel for on-sight monitoring of smallholder activities (the tobacco sector, for example, had a team of 550 extension service officers in 2014)²⁵. Secondly, among local rural communities there are blatant local perceptions that inputs (e.g. seed, inoculants, fertilizers) should be offered for free, or for a symbolic price as the producers had initially experienced with NGOs and the state. Moreover, if a current project that distributes inputs fails, producers assume another one will shortly replace the previous. These two perceptions are rooted in what can be called 'donor culture', which leads to a misalignment of expectations between farmers and contract

²⁴ Interview held with male representative of TNS on 24th September 2015, in Quelimane, Zambézia.

²⁵ According to a presentation held by Mozambique Leaf Tobacco, on 29th May 2014.

farming principles. In other words, since most soya farmers were only familiar with NGO-led technical assistance projects, where consequences of noncompliance are limited, many contract farmers do not understand or do not want to honor contract farming agreements that are less favorable if they operate through market principles. Once soya is harvested, smallholders aim to obtain the highest possible prices in the market, in turn disregarding the costs that the buyer had with the purchase and distribution of inputs. This means that considerable time and resources must be devoted to ensuring soya farmers appreciate the importance of respecting more market-oriented productive relations.

The involvement of a large number of buyers and a relatively large space for the farmers to develop their own production poses yet another issue for private companies. In Gurue, for example, international grain traders, such as Cargill and ETG, middlemen and third party commercial people (typically called *Bangladesh*, as middlemen in the region are mostly with South Asian origins) are easily accessible. Just as it is currently impossible to monitor smallholders' activities when they are highly dispersed, it is impossible to fully regulate the practices of independent buyers. The availability of these alternative buyers facilitated side-selling by farmers who wished to do so despite their contractual commitments.

6.7. AFTER THE BUST

Companies gradually abandoned their contract farming activities in 2014, and the seed bank managed by FEPROG's Forums became the primary source of soya seeds that producers could obtain on a credit basis. Its management however proved dysfunctional when CLUSA's involvement in the seed bank in the region finished in 2014. The seed bank became a peer-controlled self-organized scheme, but without adequate accountability mechanisms resulted in high rates of default. Although the existing social capital within Forum structures could have generated sufficient incentives for smallholders to comply with repayment conditions, those responsible for managing the seed banks set poor precedents by failing to repay themselves. Eventually, most Forums were unable to generate sufficient resources to replenish its seed banks with high quality soya seeds.

By 2012, TNS had already established an alternative to the then flailing seed bank. It engaged small commercial soya farmers (SCF) in the commercial dissemination of soya seeds and inputs, as well as machinery for rental. There were around 30 SCFs in Gurue and Alto Molocue (most in Gurue) during the field research in 2015 and they were large producers in comparison to their smallholder neighbors, with at least 10 ha of land available for use for TNS' project. Whereas the seed bank smallholders would access seeds by credit to be repaid at the end of the agricultural campaign, the TNS scheme required farmers

to pay cash upfront to their local SCF distributor. Although the system reached around 30% of Gurue's and Alto Molocue's soya producers (according to TNS), it did not tackle a relevant issue for most (prospective) producers: accessibility and affordability of inputs.

Currently, the declining availability of quality and affordable inputs still forces many smallholders to reuse past campaign seeds, which decrease in quality and germination capacity annually. Smallholders are currently linked to the soya market through the middlemen and newly established 'sourcing companies' that purchase soybeans at fixed amounts and prices at farm gate. It is estimated that 60% of farmers sell their produce to traders or middlemen, while other outlets include wholesalers, farmer organizations, or direct sales to consumers (KIT, 2020). A few intention statements for sourcing through the Forums under FEPROG were signed in the past few years, but typically no inputs are offered through these arrangements. The statements merely stipulate the quantity of soya to be delivered by associations at a predefined price with the date of collection.

At the same time, a large proportion of smallholders struggle with inaccessibility or unaffordability of inputs (even when subsidized) as well as land loss and crop failures. Nevertheless, the sector is still attractive to smallholder farmers, who are able to improve their housing conditions, pay for secondary school fees for their children, and acquire *inter alia* motorcycles, bicycles and cell phones when prices are high.

6.7.1. The constraints to engage with the soya production

As we have seen so far, various factors forced smallholders to cease their engagement in contract farming, but there is a persistent interest among farmers in continuing to produce soybeans. In order to outline possibilities for these farmers to re-engage in production or even start producing for the first time, we need to specifically investigate the sample of those producers who did not produce soya in 2015.

Unavailability of inputs

According to the survey conducted in 2015 in Gurue, the majority of the smallholders wanted to enter the soya business. Of the 60 non-producers households surveyed in four areas, 87% said they would like to become soya producers, and 8% answered they would not like to produce, but would change their mind if certain conditions, such as better prices for inputs or access to credit, were met. The FGDs with associations not producing soya also substantiate this claim.

Of the sample of non-producers, 65% of the households had never produced soya. However, almost 80% of those were interested, but they were practically unable to do so due to a series of reasons. Lack of inputs nearby was the main cause for 61% of the households,

a constraint that TNS has been trying to solve through the SCF schemes for years. Prices of accessible inputs are another issue, since 16% of the interested households declared them to be prohibitive. Moreover, access to credit with post-harvest repayment options was considered a problem for 25% of the respondents, and the limited access to land was also considered a constraint for 16% of the households²⁶. For the 35% of the households that have produced soya at least once, 66% pointed to input issues as the main reason for having stopped soya production. The main input constraints were related to prohibitive prices of inputs and the lack of inputs nearby. As main reasons for stopping or never starting soya production revolve around inputs access and prices, these results underpin the necessity of cheaper and more readily available soya inputs (such as quality seeds, fertilizers, pesticides and inoculants) to support smallholder production, as TNS is trying to do. Conversely, access to credit with post-harvest repayment options at reasonable rates may serve as an alternative to smallholders to access the needed inputs.

However, it is worth recapitulating that the contract farming schemes and soya seed banks offered this credit solution, but were soon made unfeasible due to the high default and side-selling rates. Nonetheless, since 80% of the non-producers surveyed were not members of any association they might not have experienced the seed bank, nor contract farming-type schemes, which may explain the reason for a great number of interviewed households placing their hopes on a credit-based scheme to access inputs. Indeed, 47% of all the surveyed non-participant households pointed out access to credit with post-harvest repayment options as one important condition to become a soya producer, followed by cheaper prices for inputs (24%).

For the participant households, however, accessing inputs was also a problem. Of 59 households producing soybeans, 73% were reusing seeds from past campaigns. An important difference, nevertheless, was that those still producing had access to seeds from the seed bank managed by the FEPROG Forums.

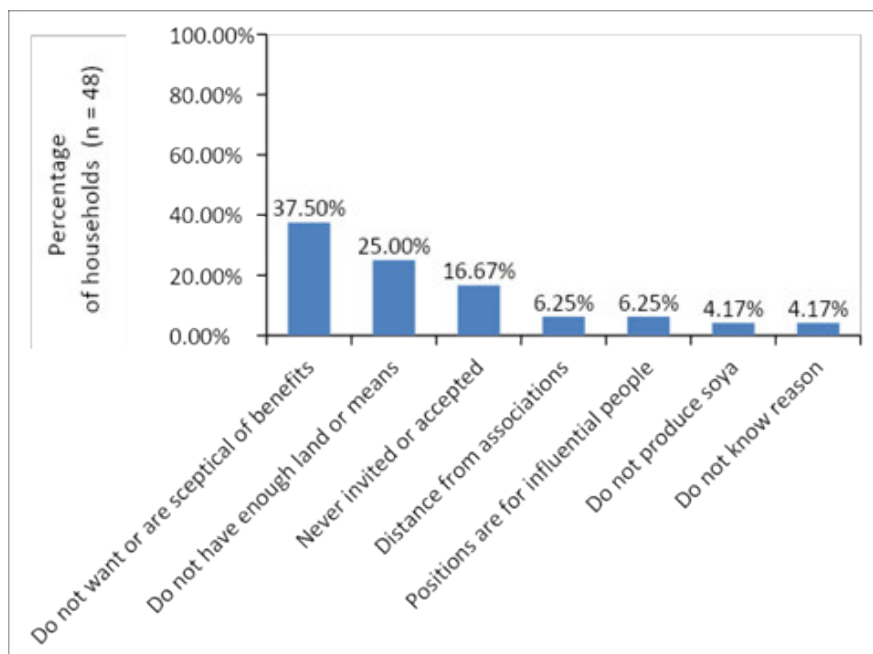
Reluctance to associate under FEPROG

The high prevalence of non-associated households suggests a correlation between having access to the means of soybeans production and being a member of an association – particularly if under the Federation. As previously discussed, the FEPROG was one of the main links between buyers and producers during the heydays of contract farming. It continues to perform a similar role now with the substitution of contract farming for sourcing schemes based on the aforementioned intention agreements. However, membership has barely increased since 2015. In this sense, understanding household

²⁶ Households pointed out one or a combination of two of the presented reasons. Thus, the total percentage is superior to 100 percent.

reasons for not being members of an association (Figure 6.1) is important for understanding the reasons for smallholders not to produce soya.

Figure 6.1: Reasons for not being member of an association



Source: Authors' surveys

Certain exclusion criteria were observed. After asking the households about the reason for not being a member of an association, 6% explained that they were too far from an existing association, and 25% alleged that they did not have enough land or means to be accepted by their local associations. Others (6%) claimed that participation in associations were only for influential people of the communities, and 4% pointed out that they did not produce soya as the main reason for not being accepted in an association. Another 17% were waiting for an invitation or were actually denied by associations for allegedly no specific reason. However, a remarkable 38% of the surveyed households did not want to be part of an association or were skeptical about its organization and benefits. Therefore, although being part of an association under FEPROG is decisively an easier way of acquiring necessary inputs and accessing a market for soya, a considerable group maintained distance from these associations, including disillusioned former members.

Through interviews with head members of FEPROG, it was possible to identify that associations were struggling with the lack of enough soya inputs and sourcing contracts

for all of its members, meaning that even some members were being excluded from soya production. In sum, acquiring inputs for soya production was and still is unequivocally the biggest hurdle for smallholders to engage in the soya sector. The high prices of quality soya seeds, for example, means that often only wealthier commercial producers can acquire them. The agricultural department of the government lacks resources to provide sufficient and constant subsidized soya seeds for all producers – and the SCF scheme was not able to reach the large portion of the population and offer inputs at prices they can afford. Hence, many small producers are not able to engage in the soya sector.

Nonetheless, according to an interview with a representative of the DPAP of Zambezia in July 2023, soybean has not lost its importance in Gurue and it remains one of the main cash crops. The majority of the producers are still waiting for the return of donors or buyers who could make affordable credit schemes available for inputs. However, the growing demand for soybeans for chicken feed and the influx of farm-gate sourcing buyers gives hope to smallholders, particularly for those in associations that secured a statement of sourcing intentions through the Forums. As for those who are reluctant to organize themselves as a Forum-belonging association, the issue of access to credit and quality inputs remains unresolved (KIT, 2020). The issue of developing more accessible input markets in the district is yet to be addressed. As mentioned, TNS is attempting to address this issue by engaging small commercial farmers in the distribution of inputs and machinery rental in their localities. Other organizations are doing similar work trying to increase inputs availability and distribution, such as AGRA under the scope of their Partnership for Inclusion Transformation in Africa (PIATA) program, since 2017. However, while these programs reach many smallholder producers who can afford these inputs, they are still unable to reach the bulk of (prospective) producers.

6.8. EIGHT YEARS ON: WAVERING PRODUCTION AND PERSISTENT CHALLENGES

By the time of fieldwork in Phase IV (2023) of this research, private large-scale investments in the soybean sector were still practically nonexistent in Gurue, except for two large commercial producers. The bulk of soybeans in the district is therefore still produced by smallholder farmers (MADER, 2021). These farmers predominantly cultivate soybeans for commercial purposes but typically in areas no larger than 2 ha and productivity between 0,5-1,0 ton/ha (Janeque et al., 2020).

As there are guaranteed markets in Manica and Nampula, approximately 79% of the soybean produced is sold, while the remaining portion is primarily reserved for seed or

consumed within the household (KIT, 2020). According to an interview in July 2023 with a former Director at MADER, infrastructure prevents competitiveness of commercialization to the Southern regions of the country and according to the DPAP in Zambezia, there is no industry in the province able to absorb the production. Therefore, soybeans are still predominantly sold in the large markets in the Center and North regions. However, the revenue generated from soybean sales are still attractive enough for many smallholder farmers to decide to produce soybeans.

Middlemen and traders continue to be the main farm-gate buyers of soybeans for the great majority of smallholder producers. However, farmer organizations or direct sales to consumers are additional markets for individual producers. Despite the great deal of sourcing and commercialization in the district, formal contracts are still very rare. Only 2% of farmers sell their harvest under a formal contract, and half of these contracted farmers receive inputs on credit as part of the agreement (KIT, 2020).

Unlike sugarcane, soybean production and commercialization is not regulated. Therefore, there is no minimum price guarantee for smallholder sales. As such, farmers are reluctant to specialize in soybean production. Depending on prices, farmers switch the bulk of their production to other crops, typically maize, sesame, pigeon pea, or common beans. However, it is noticeable that, similarly to the observed sugarcane regions in Maputo Province (see Chapter 5), most farmers prefer to expand their farmland rather than to stop producing crops that have the potential to generate the most income depending on the year. This finding is aligned with results from a recent study on land use and cover change in Gurue (Bey et al., 2020). As farmers do not want to depend solely on one crop for their income, they tend to expand their production to forest and shrubland areas, so they can diversify production.

Additional challenges to smallholder production are plenty. For example, production support systems face challenges related to the availability of quality seed, affordable prices for new varieties and fertilizers, information sharing on technology and finance, value chain development, and actor coordination. TNS and AGRA are examples of organizations that are trying to tackle those issues, albeit limitedly. Since 2015, TNS has continually supported SCFs and helped create SBS - a seed company and processing plant - and COPAZA - which is made up of small commercial farmers (TNS, 2019). However, both these support organizations and government officials at the SDAE in Gurue and the Zambebian DPAP agree that to further mitigate risks, it is essential to explore and develop alternative uses for soybean production, beyond its main current purpose as animal feed.

Moreover, there is a general lack of irrigation systems, irregular rainfall, and insufficient public technical assistance. According to the DPAP, more than 90% of the smallholder production depends on rainfall. Therefore, it decreases farmers' abilities to withstand tougher climate conditions, depending on the year (Oppewal et al. 2016). As for technical assistance, the ratio in the Province is one public extension service officer per more than 400 producers, while ideally it should be one per 250, according to the DPAP. This is a legacy of a constrained public sector following the SAP reforms which depends considerably on private sector initiatives to provide services and support to smallholder farmers. This also reiterates that the market system has been failing the smallholders for a long time. This evidence provides nuance to the discussion on the future of inclusive production models, as participation of smallholder farmers as the main objective seems far off given the significant challenges within the system.

Notwithstanding, there have been several significant changes in the soybean market system over the past decade. These should not be overlooked and include increased production support by NGOs, the emergence of large-scale producers, and the expansion of national chicken production (driving demand for soybean as poultry feed). These changes may be seen as positive by actors from the governmental and commercial spheres. However, they also warrant questions about the sustainability of NGO support and the socioeconomic implications that the emergence of large-scale producers can have for equality in the district.

Soybean production grew gradually in Mozambique, peaking in the campaign of 2013/14 and 2017/18 (TNS, 2018; Janeque et al., 2020). Because of climate-related conditions as well as price volatility and smallholder farmers' constant search for commercial crops with higher market value, soybean production has wavered along the years (Oppewal et al. 2016). However, as the Mozambican government has clearly demonstrated intention to promote a self-sufficient chicken industry and to stop imports of soy oil (RBGM, 2018; Hamela and Pimpão, 2021), it is likely that soybean productions will still be an attractive source of income for many farmers, in particular commercial farmers, but also smaller farmers who have developed a technical relationship with the larger commercial farmers.

Growth in the soybean sector was driven by the increase in the numbers of smallholder producers, the establishment of a group of SCFs, establishment of the farmer cooperative (COPAZA), and through the wider system coordinating all these actors, which took more than ten years to consolidate. It is worth noting that this strategy is comparable to the one outlined in the SUSTENTA program for the promotion of various agricultural industries for the 2020s (Hamela and Pimpão, 2021), including in Gurue.

6.9. DISCUSSION

The process of soybean production first expanded through NGO interventions in the mid-2000s. Following this, contract farming became a transient feature of production in the district. Finally, the constraints regarding the input market and limited success of associations in Gurue can be understood as early structural impediments of the soybean sector. More recently, TNS and AGRA's interventions, as well as some of MADER's SUSTENTA activities in the sector, and a growing base of SCFs are addressing market challenges for smallholder farmers in the district. However, many challenges persist.

If we return to the question of 'inclusiveness' for agricultural production models, we can argue that the early experience with contract farming as a form of inclusive model in the district has provided capacity for farmers to undo the system itself and exclusion happened as agribusinesses and farmers' associations did not provide benefits to all. As such, large-scale plantations and outgrower initiatives led by agribusinesses are now almost nonexistent in the district. The bulk of soybeans production is thus undertaken by smallholder farmer households and, to a lesser extent, to a growing class of larger individual commercial farmers. Additionally, the undoing of early contract farming models led to a system of soybean commercialization that overwhelmingly relies on open-market sourcing mechanisms. What do these sectoral features tell us in terms of the consequences for smallholder farmers and inclusive rural development?

Taking into account the evolution of the process described above and analyzing the logic of small farmers' side-selling and exit from the contract farming in depth, it is possible to understand this entire process as one by which farmers exercised their agency to appropriate the development interventions, such as the seed bank and NPOs projects; the large-scale agribusiness investments, through which conflicts have arisen; and the ways that the contracts were enforced. As farmers constantly engage in their local struggles to make ends meet, they try to fit the sector development into their livelihoods strategies, leading to the disrespect for the contract or for the organizational base of this contract i.e. the Federation-belonging associations, which they did not deem fair.

Moreover, since the features of the soybean sector proved different to others and heavily susceptible to local agency, systems of contract farming and sourcing need to consider approaches that are different from the cotton, tobacco, or sugarcane sectors and more nuanced to local context and expectations. As this chapter has demonstrated, the soybean market system had to be restructured entirely and will likely need to consider additional elements that will enable further inclusion of smallholders and their associations. That is, the soybean sector requires alternative ways of thinking about inclusive production systems.

In a context in which the incentives that guaranteed agribusinesses control over cotton, tobacco and sugarcane value chains are lacking, an inclusive approach to the soybeans sector would require more efficient coordination between value chain actors. First, individual farmers' access to input markets needs to be guaranteed, either by introducing initiatives such as affordable seeds, strengthening and scaling up programs that promote the small commercial farming sector, or re-vitalizing the seed bank scheme with affordable credits and accountability enforcement. Alternatively, TNS's initiative of mobilizing a commercial farming class and helping establish COPAZA as pivotal center for inputs dissemination and smallholder inclusion should be further explored, since it seems to offer a more sustainable alternative to the existing practices of FEPROG, which are not attractive to all small producers in the region.

Second, the failure of the seed bank indicates that early models did not respond to smallholders' needs. An alternative model would entail more engagement of technical assistance programs for the farmers and their associations to understand the importance of good governance and self-management of such an initiative. Many non-associates or those who left associations express their distrust of the managing board members of the associations, citing incidents of corruption or misuse of assets. Ideally, in the absence of private sector initiatives, local governments – typically the District Services of Economic Affairs (SDAE) – that deliver rural extension should be more engaged to ensure that the organizational management capacity of the farmers is enhanced. It is challenging, however, when there is roughly one extension officer per locality to address producers' issues with multiple crops. Programs, such as SUSTENTA are trying to address this challenge, albeit with limited resources²⁷.

Thirdly, curbing side-selling requires intervention. The high risk of side-selling is a legacy of NGOs former approaches in the district and other parts of the country that set a precedent by distributing free inputs (instead of incentivizing a commercial mentality among local producers) and incorrectly believing that the private sector would build on their work. When TNS and CLUSA conducted their soybean projects in Gurue which assumed a commercial mentality from beneficiary farmers, the so-called donor culture mentality was already very much part of the local culture. This was a key reason for the failure of the seed bank. Understanding and working on curbing these issues are essential actions to avoid the failure of the commercial system that TNS is currently trying to consolidate with small commercial farmers.

27 Based on an interview in July 2023 with a former staff member of the National Directorate for the Promotion of Commercial Agriculture, at MADER.

Additionally, currently there is no system of safeguarding smallholders from the potential crop failure or the price fluctuations, especially on the international market. This sustains the vulnerability of the soybean or any other crop sectors in Mozambique – except parts of the sugarcane sector (see Chapter 5). Farmers should be able to thrive on diversified plantations and secure their own food and nutrition, and there should be a system of support for this diversification as the literature on ‘food sovereignty’ has argued (Otsuki, 2014). Alternatively, they should also be able to specialize in sustainable manners, in case they decide so (Van Westen et al., 2019).

The failure of contract farming and potentially sustainable self-managed measures (e.g. the seed banks) in the mid-2010s were opportunities to rethink the entire set up of smallholder engagement in areas of crop expansion. Now, with a new cycle of agriculture strategies starting in Mozambique, the soybean sector is an interesting sector to investigate, as it allowed farmers to create their own spaces to maneuver and generated valuable lessons to help avoid the repetition of practices that will potentially be rejected by some of the smallholder farmers across the province. This is a potential lesson in itself, as to why the soybean sector is considered an example of an inclusive production model despite the failure of contract farming schemes. It is not only an inclusive sector simply because it involves thousands of smallholder farmers, but also because it gives smallholder farmers voice and agency. Future attempts to further develop the sector should take these voices into consideration and build on the lessons from the past.

Inclusive production models and flex crops literature should examine the process by which the contracted farmers experience integration into new cash-based production systems and come to exercise their agency to optimize benefits. As such, the factors that contributed to the processes of inclusion (as involvement) and exclusion in the soy sector were explored in this chapter. In the Gurue case, it has been demonstrated the inclusion and exclusion operate in parallel and starkly influenced and were influenced by smallholders’ experiences and agency.

This case study reveals the importance of having policies that focus on building capacity of the state at different levels, based on a deep understanding of local contexts and nuances. Future policies should support initiatives of commercial character, such as CLUSA’s seed bank and TNS’ small commercial farmers scheme. Moreover, they should also build capacities of producers and other value chain actors, to ensure they are able to hold the state accountable for making these initiatives sustainable.

In summary, what we see in this chapter is that participating smallholders are autonomous insofar as they have a place-making agency power that can dismantle intricate contract

farming systems put in place by more powerful private sector actors. However, they are also embedded insofar as smallholder producers were directly affected by the commercial ties that put them in close contact with the dominant players' interests. Once their experience led them to reject the contract farming schemes in the region, the misalignment of interests brought down the very same system that would allow them to access markets and inputs in an easier fashion. This stands in contrast to what was observed in the sugarcane sector (Chapter 5), in which the alignment of interests between private sector and to some extent most of the smallholder associations led to an environment of 'embedded autonomy' which *relatively* benefited both sides.

6.10. CONCLUSIONS

This chapter discussed the process of soybean expansion in Mozambique, often illustrated by land grabbing cases. It positions this study within the debate on the roles of flex crops, such as soybeans, to promote 'inclusive' business in the wider food system. It showed how smallholders accumulate their experience and act upon the evolution of the process. In doing so, the chapter pays particular attention to contract farming, as it is often promoted as an example of an 'inclusive' production model that is also an alternative to land grabbing. By tracing the boom and bust of soya production in Gurue, followed by the reorganization of the sector around small commercial farmers, a key conclusion of this chapter is the relevance of smallholders' agency for inclusion.

This research finds that smallholder producers in Gurue had not meekly gotten their land grabbed, nor had they been subordinated to the contracts issued by the buyers, as often indicated in previous critiques of flex cropping and contract farming. It instead showed that because they had experienced contract farming they were able to reject it and adapt their soybean production to their livelihoods and everyday farm management practices. This autonomy led them to articulate their membership demands to smallholder association groups directly involved in contract farming, and to available markets with whom they directly engage with at farm level. The chapter established that while individual farmers are naturally embedded in multi-scale land and agricultural development policies, they are also exercising their agency.

Rethinking inclusion thus requires rethinking the agency of smallholders. As in most cases of flex crops production, agribusinesses tend to involve smallholder farmers in their production models by use of contract farming. We also need to consider that in contrast with the tobacco, sugarcane and cotton sectors, the soybean sector did not provide agribusiness actors with the same instruments of control and coordination of the value

chain (i.e. monopsony, monopoly, and concessions schemes). As such, contract farming in the region failed, and alternative production models that were centered on farmers' agency and commercial development evolved.

The experience of the soybean farmers in Gurue shows that they are partly deciding how they want to be integrated into different production models, and this decision-making process is something that requires closer investigation. This also has implications for the agricultural policies that often turn out to be unsustainable and create aid dependencies, for lacking a commercial long-term perspective. In the case of Gurue, different factors reveal the failure of the implemented policies: national governments attracted private investors to resource-rich areas while being unable to monitor their operations; local governmental rural extension services were often absent or stretched too thin to accompany farmers' organizational activities such as seeds bank; and, local associations and federations failed to attract non-associates to be involved. As such, smallholders struggled to develop their livelihoods in their everyday places throughout the multi-scale policy failures and incapacities of the state, as well as of non-commercially motivated NGOs and international cooperation.

Therefore, to rethink inclusivity in this case, one needs to discuss the dynamics of the entire value chain and the relationships among value chain actors. The case of Gurue can also translate into meaningful learning for other sectors in Mozambique. The trajectory of the early soybean sector, specifically the lack of consideration of local smallholder agency, translated into failure of otherwise sustainable systems. The attempts to reinvent the soybean sector provides relevant insights for many projects in the country.

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7

Balancing embeddedness and autonomy through smallholder farmer organizations: A case study on the Agribusiness Market Ecosystem Alliance (AMEA)

7.1. INTRODUCTION

In this thesis, we have explored how the experiences of smallholder farmers in large-scale agricultural production serve as rich sources of lessons for stakeholders aspiring to promote beneficial inclusive production models for smallholders. This research reveals how value chain integration of smallholder farmers is generally limited in Mozambique (Chapter 4), but has evolved in both the sugarcane-producing areas in Maputo Province and in the soybean-producing regions of Zambezia Province via contract farming (Chapters 5 and 6, respectively). It has also examined how integration has not necessarily translated into sustainable benefits for the smallholder farmers over time. The evolution of these experiences generates lessons on the inclusion of smallholder farmers in the mentioned value chains.

In exploring the topic, a key question has emerged regarding the participation of smallholder farmer *organizations*, such as cooperatives and associations, in driving inclusion within the studied production models (both sugarcane and soybean cases). The question pertains to the roles these farmer organizations play in guiding smallholders' experiences toward beneficial participation and sustainable livelihoods, as well as whether they are provided with the necessary support to achieve the potential of their role as conductors of inclusion.

For example, in the sugarcane case, smallholder block farming is a model which complements the sugar mills' own production. This model would not have been possible without the organization of farmers in groups of associations and cooperatives. In the soybean cases, on the other hand, farmer organizations were the initial attempt to coordinate smallholder production in the sector. Local and international NGOs invested in the formation of farmer groups (associations, cooperatives, forums, and even a federation of cooperatives) in the attempt to create sustainable commercial linkages to soybean off-takers via contract farming. As seen, this model eventually collapsed and was rethought in a way that still acknowledges the involvement of farmer organizations in the coordination of the sector.

Both cases illustrate the fundamental roles that farmer organizations play for the inclusion of smallholder farmers. In one, they were solving neglected problems for the farmers, such as access to inputs, markets, and technical assistance. In the other, they compounded some of the issues with market and inputs access. However, what those cases did not do was to allow a deeper understanding of these roles and in what contexts farmer organizations thrive and can promote long-term benefits for smallholder farmers. Do farmer organizations have the potential to be a model for locally-led inclusive development? What do they need

to fulfill this potential? Are current practices aligned with what is required to efficiently support smallholder farmers and generate long-term benefits for them?

To answer these questions, we need to examine the role of farmer organizations in the contexts of sugarcane and soybeans, as these organizations are crucial conduits of integration in both value chains. Farmer organizations consistently participate in inclusive production models in Mozambique and across Sub-Saharan Africa. However, the processes of establishing viable farmer organizations are complex (Ndoro, 2019; Jelsma et al., 2024) and efficient systems responsible for doing so have been lacking for decades in many countries (Hitchins et al., 2004; Liang, 2020).

I have been working for the past six years at the Agribusiness Market Ecosystem Alliance (AMEA) in order to find answers towards a more 'efficient support system' for farmer organizations and exploring how to enhance the benefits that smallholder farmers derive from being part of strengthened farmer organizations. AMEA is a Dutch nonprofit foundation that focuses on farmer organizations development. It attempts to defragment stakeholder activities through the work of local networks of organizations in several countries. It aims to address a market failure in the provision of business development services to farmer organizations. These services often do not meet the demand of what farmer organizations need to generate increasing benefits to their base of smallholder farmers. Moreover, there seems to be insufficient incentives to reform these market systems (Ponte, 2001; Poulton et al., 2006). As an efficient system of support and services for smallholder farmer organizations is lacking in many countries, AMEA pulls together the resources and expertise of many organizations to attempt to address the problems facing current market systems. This is what AMEA calls an *ecosystem of actors*²⁸. Hence, building sustainable ecosystems of support and services for farmer organizations is AMEA's niche.

Given the observation that farmer organizations played key roles for smallholder farmers in the case studies in Mozambique, the issue with a lacking ecosystem where these organizations can thrive deserves further analysis to complement the study. Here, the main objective is to rethink the roles of farmer organizations in how they help smallholder

28 In the context of the agricultural sector, an ecosystem can be understood as a network or community of interconnected organizations, stakeholders, and entities involved in agricultural activities. It encompasses not just the various businesses and entities but also governmental bodies, research institutions, farmers, suppliers, distributors, consumers, and the surrounding environment. Agricultural ecosystems involve the interactions and interdependencies among these entities, both living and non-living, within a specific agricultural landscape. This landscape includes farms, processing facilities, markets, regulatory bodies, support services, and the natural resources utilized in agricultural production like soil, water, biodiversity, and climate. Therefore, the definition of an agricultural ecosystem used in this chapter is: "a dynamic network comprising diverse stakeholders, organizations, and resources involved in the production, distribution, and consumption of agricultural products. It encompasses the interplay between farming practices, economic factors, environmental elements, policies, and societal needs within a specific agricultural landscape."

farmers benefit from participation in inclusive production models. As such, I worked with AMEA to answer the following overarching question that guides this chapter:

How can farmer organizations enhance the benefits of smallholder farmers participation in the sugarcane and soybean production models studied?

We begin by describing the methodology for this chapter, which is based on participatory organizational research. Subsequently, this chapter provides an overview in literature about the role farmer organizations play for smallholder farmers in general. Following this, the results generated during the empirical research for this chapter are presented. This leads to a discussion on how farmer organizations can enhance the benefits for smallholder farmers.

7.2. METHODOLOGY

The methodology for this chapter is empirical, drawing lessons from the sugarcane and soybean case studies, as well as from participatory organizational research with my current work at the Agribusiness Market Ecosystem Alliance (AMEA).

Phase III (2014-2016) of this research was about deepening our understanding of Mozambique's inclusive agribusinesses by examining two case studies. It was an important empirical part of the study, as I investigated sugarcane and soybean production for lessons on the long-term impact of inclusive agribusiness for smallholder farmers. It consisted of a mixed-methods research phase, drawing heavily from smallholder household surveys. Phase III yielded relevant observations for the inclusive business debate, including that smallholder farmer organizations, such as associations and cooperatives, played an important role in the inclusion of the smallholder farmers base into the value chains. This observation led to further examination of the roles of farmer organizations, culminating in Phase IV (2017-2023).

Phase IV was executed with a different methodology than Phases I through III. It was no longer part of the CIFOR LIFFE project and used less mixed-methods and more qualitative research methods. A key method I chose to use was Participatory Organizational Research, given its advantages in bringing in local voices and experiences into the generation of knowledge (Burns et al., 2014). Phase IV leveraged my work experience in AMEA, which began in 2017. AMEA is a Dutch Foundation (Stichting). It is a multi-stakeholder platform representing international and local organizations in the development sector. It was founded in 2016 with the objective to advance inclusive business approaches

through the professionalization of smallholder farmer organizations. Over time, AMEA's theory of change has evolved, but the focus has always been on farmer groups, such as cooperatives, associations, and small and medium enterprises (agri-SMEs). AMEA is a network of international and local organizations working closely with farmer organizations. In 2023, there were 35 members and partners. As such, AMEA operates through the work of its members in countries where local networks have been established.

There is currently no local network in Mozambique. However, many of AMEA's members have a decades-long presence in the country or are still active in Mozambique. For example, this is the case for NCBA CLUSA and TechnoServe; key actors in the early development of inclusion in the soybeans value chain in Gurue, Zambezia. Other AMEA members who are also active in Mozambique include AGRA, SOCODEVI, ACIDI/VOCA, SNV and IFC.

Therefore, there was a good opportunity to leverage from this network to 1) observe what has been done in Mozambique over the years to improve the inclusiveness of the agricultural sector for smallholder farmer organizations and 2) learn from these organizations about key challenges in improving inclusivity, and what is needed to improve the conditions and the market system of support and services delivery for farmer organizations. In addition, to complement the participatory organizational research method of Phase IV, I returned to Mozambique in July 2023 to conduct interviews with AMEA members as well as other civil society organizations, such as Centro Terra Viva (CTV), Observatorio do Meio Rural (OMR) and Kulima, government officials (local and national), and conduct focus group discussions with farmer organizations (associations and cooperatives).

In summary, this methodology combines case studies, participatory organizational research, collaborative engagements facilitated by AMEA, and extensive sectoral experience, aligning efforts towards understanding and strengthening the roles of farmer organizations and their evolving needs in fostering inclusive agricultural development.

7.3. AN OVERVIEW OF THE ROLE OF FARMER ORGANIZATIONS

Overall, farmer organizations are a fundamental piece of agricultural development. It is not new knowledge that they provide smallholder farmers with the tools, scale, and resources needed to increase their productivity and profitability (Key and Runsten, 1999). Farmer organizations may exist under different names (cooperatives, associations, agri-SMEs) and legal status (formally registered or not), but in essence they serve to create a platform for farmers to pool their resources, more efficiently aggregate produce, access financing, inputs, and technical assistance, as well as to collectively negotiate better prices for their

products (Manyise and Dentoni, 2021). In turn, this can help improve the economic viability of smallholder farming operations and reduce their reliance on middlemen, who typically take a cut of the profits. This is the reason for a prominent use of cooperatives as a business structure in the agricultural sector (IFC, 2018), with many now world-renowned organizations, such as Credit Agricole, Rabobank, Friesland Campina, Land O'Lakes, among others, with their origins in the cooperative movement (Gordon, 2021).

Both scholarly and policy communities agree that farmer organizations play a crucial role in global development, as they contribute to the social-economic and sustainable development of their local communities. Scholarly discussions center on the socioeconomic benefits for smallholder organizations and their communities (Emery et al., 2017; Moore et al., 2021; Jelsma et al., 2024). For instance, farmer organizations help combat social exclusion through job creation. They also help generate and distribute income among smallholder farmers, contribute to fighting hunger and to reducing poverty by increasing productivity and volumes of commercialized products, and generate social capital (Chissancho and Ussene, 2015; Tregear and Cooper, 2016; Gordon, 2021). International policy actors have a strong belief in the role of farmer organizations in global development and many intergovernmental agencies have provisions on farmer organizations. For example, the International Labour Organization (ILO, 2002), through its Recommendation No. 193 recommends governments to promote cooperatives, and IFAD, FAO, and the World Bank have a long history of co-investment with governments in programs that cater for the development needs of farmer organizations (Balit and Acunzo, 2020; IFAD, 2023; IFC, 2023).

In addition to improving the economic well-being of (smallholder) farmers, farmer organizations are believed to contribute to inclusive development by promoting integration in larger value chains and equitable distribution of resources and wealth (Rondot and Collion, 2001), and by helping smallholders to withstand crises and periods of hardship, such as the COVID-19 pandemic (IFAD, 2022). Furthermore, by providing a platform for farmers to collectively own and manage their resources, farmer organizations can help reduce the concentration of wealth and power in the hands of a few large landowners (Rosset et al., 2006) and can provide the safety net that some smallholder farmers need to further invest resources in their agricultural production. As such, it is possible to conclude that farmer organizations have both economic and social missions. They can help create more inclusive and sustainable rural communities, where many have the opportunity to participate in and benefit from the local economy (Majee and Hoyt, 2011).

Another important role of farmer organizations is their ability to promote (sustainable) agriculture practices. Many smallholder farmers lack the resources and knowledge to implement (sustainable) farming techniques on their own, which can lead to soil

degradation and other negative environmental impacts (Mojo et al., 2015; Snider et al., 2016). By providing or enabling easier access to training and technical assistance, farmer organizations can help their farmers adopt more sustainable practices, which in turn can lead to increased protection of natural resources and improvements in the long-term viability of smallholder farming operations (IFC, 2018; 2023).

In addition to the direct benefits for smallholder farmers, farmer organizations can also have a wider impact on a region's inclusive development. By increasing the productivity and profitability of smallholder farms, farmer organizations help stimulate local economic growth and create jobs in rural areas (Bachke, 2019). In turn, this can reduce poverty and improve the standard of living for members of the smallholder farmers' community writ large.

As such, farmer organizations have the potential to play a vital role in inclusive rural development by empowering smallholder farmers and promoting equitable distribution of resources and wealth generated by the commercialization of products in more lucrative value chains. However, as argued by Guarin et al. (2022, p. 4) "compliance with the standards of modern supply chains is costly and inherently exclusive. 'Inclusion' refers to smallholders' need to overcome these obstacles and the recognition that they need support to do so". In these lines, by directly providing or by facilitating access to credit, technical assistance, and better prices for their products, farmer organizations can indeed help improve the economic viability of smallholder farming operations and contribute to the creation of more inclusive and sustainable rural communities and food systems, but they can also inadvertently hamper these efforts, as there exist gaps between farmer organizations ambitions, expectations, and the reality.

Lacking within the literature is an understanding of how farmer organizations can help their members (smallholder farmers) achieve a balance between embeddedness in existing value chains and autonomy to work in their best interest. This reiterates the need to examine the ecosystem of services and support provision to farmer organizations in Mozambique, understand its constraints, and reflect upon how to make it more conducive for locally-led development that centers the inclusion of smallholder farmers.

7.4. RESULTS

The results of this empirical research illustrate how AMEA works to enhance farmer organizations' potential to benefit smallholder farmers. This section begins by demonstrating

how AMEA members operate in Sub-Saharan Africa (SSA), in general, and in Mozambique specifically. We then examine key lessons for the soybeans and sugarcane case studies.

7.4.1. What do AMEA members do in Sub-Saharan Africa?

AMEA was founded with the intent to address the main challenges that farmer organizations face in a number of countries around the world, particularly in Low and Middle Income Countries. It is well documented that farmer organizations face several challenges worldwide. These vary depending on the context, region, and specific agricultural sector (crops) in question. In SSA, some of the key challenges facing farmer organizations are presented in Table 7.1.

Table 7.1: Key challenges for smallholder farmer organizations in SSA

| Key challenge | Description of challenge |
|---|--|
| Limited access to resources | Farmers often lack access to crucial resources like credit, land, water, and technology, which hampers their productivity and profitability (Ferris et al., 2014) |
| Market Access and Fair Prices | Accessing markets at fair prices is a significant challenge. Farmer organizations may struggle with market linkages, price volatility, and unfair trading practices (FAO et al., 2011) |
| Financial Constraints and Debt | Many smallholder farmers face financial constraints, often resorting to high-interest loans, leading to cycles of debt and financial instability (Reinsch-Sinclair, 2023). |
| Limited Knowledge and Skills | Farmers may lack updated knowledge about modern agricultural practices, technology adoption, and sustainable farming methods, impacting their productivity and resilience (Sumane et al., 2018). |
| Organizational and Capacity Constraints | Farmer organizations may struggle with internal capacity issues, including governance, management, and organizational structure, which affect their ability to effectively represent and serve their members (Gordon, 2021). |
| Conflict and Security Issues | Farmers operating in conflict-affected regions face challenges related to insecurity, displacement, and disruptions in agricultural activities (Adelaja and George, 2019). |
| Social and Gender Inequality | In many regions, there are social and gender disparities, with women and marginalized groups having limited access to resources, land ownership, and decision-making roles within farmer organizations (Behrman et al., 2012). |
| Policy and Governance Issues | Farmer organizations often face challenges due to ineffective policies, inadequate government support, and bureaucratic hurdles that impede their development and growth (Birner and Resnick, 2010). |

Table 7.1: Key challenges for smallholder farmer organizations in SSA (Continued)

| Key challenge | Description of challenge |
|--|--|
| Lack of Infrastructure and Services | Inadequate infrastructure, such as roads, storage facilities, and irrigation systems, hinders the transportation and preservation of agricultural produce (Pinstrup-Andersen and Shimokawa, 2006). |
| Climate Change and Environmental Pressures | Changing climate patterns, extreme weather events, and environmental degradation affect crop yields, leading to uncertainty and increasing risks for farmers (Kotir, 2011; Mall et al, 2017). |

Addressing these challenges often requires a multi-faceted approach, involving policy reforms, investment in infrastructure, improved access to markets, technology, capacity building, finance, and inclusive governance models that empower farmers and their organizations to actively participate in decision-making processes. As individual organizations, AMEA members work across these challenges. As a network, AMEA focuses mainly on organizational and capacity constraints, but through collective action of members AMEA has also contributed to tackling some of the other challenges, such as policy and governance issues, social and gender inequality, market access, and access to finance.

According to AMEA's Theory of Change the focus on the organization and capacity constraints is justified by a need to first create the conditions for a farmer organization to be functional. The premise is that by doing so, farmer organizations become better positioned to tackle the other challenges more effectively, over time. Functional farmer organizations lay a robust foundation, upon which other interventions can be built, ensuring that efforts towards the other challenges are carried out more sustainably (Gordon, 2021; Lin et al., 2021).

As such, the AMEA Theory of Change is a comprehensive strategy aimed at deeply changing the landscape of farmer organizations' capacities development by addressing the historically fragmented efforts in capacity building. AMEA seeks to transform the professionalization of farmer organizations, recognizing that previous isolated attempts, led by various entities acting independently, often fell short of ensuring sustainable inclusion and benefits for smallholder farmers organized in farmer groups (Thorpe et al., 2022).

The core of AMEA's work is based on the recognition that a fragmented approach to building the capacity of farmer organizations fails to deliver enduring results. Moreover, there is the need for local paradigm shifts towards collaboration and cohesive action among stakeholders. AMEA's priorities serve as guiding principles within this theory (Table 7.2).

Table 7.2: AMEA's priorities

| AMEA's priorities | Description |
|--|--|
| Defining Professionalism | AMEA seeks to establish a universal understanding among stakeholders regarding the parameters defining a professional farmer organization. It is currently best represented by the ISO International Workshop Agreement 29 (ISO, 2019) and encompasses topics such as organizational capacity and governance, business and financial management, human resources, and member services. |
| Scaling Proven Approaches | AMEA emphasizes the adoption and institutionalization of strategies that have been proven to scale efforts to promote the development of farmer organizations. |
| Knowledge Management and Dissemination | AMEA aims to foster knowledge sharing and dissemination among stakeholders within the countries where it currently operates, with a target of expanding its reach to 20 countries by 2030. |

The Theory of Change unfolds through a series of collaborative steps among AMEA's members and partners. This begins with efforts to design scalable approaches aligned with an evolving international standard (currently the ISO/IWA 29), serving as a common language for professionalizing farmer organizations. These approaches are honed through on-the-ground testing, evidence-based practices, and dialogue among stakeholders. Subsequently, the collaborative efforts extend to scaling up the proven approaches across various initiatives, including public and private initiatives. The anticipated outcome of this transformative process is a fundamental shift in the market ecosystem, which is expected to manifest in several ways (Table 7.3).

Table 7.3: Market ecosystem shifts

| Outcomes | Shift expected |
|---------------------|--|
| Regulatory Changes | Regulations should encourage the utilization of proven approaches. |
| Data Sharing | Shared data should facilitate targeted and coordinated Business Development Services (BDS) for farmer organizations. |
| Performance Metrics | Performance data should fuel feedback loops, encouraging further investment in cost-effective BDS approaches and reducing transaction costs for securing agri-financing. |
| Market access | Farmer organizations, possessing performance data, should invest in their developmental needs, accessing higher-return markets. |

The envisioned impact of this Theory of Change is expected to be far-reaching. It aspires to foster inclusive growth, attract new investments, establish stronger and fairer market partnerships, distribute risks more equitably, and ultimately secure a living income for farmers.

7.4.2. How is work done through AMEA?

As a network, AMEA gauges in which countries there is substantial member interest to coordinate a common agenda for action. This agenda tends to balance what members are already doing in the country with activities that would be of shared interest in the network. Once this is well established, AMEA starts up a local network. Hence, an AMEA local network is the collective of AMEA members and other partners that have agreed in working collaboratively around a few points of common interest. In other words, AMEA attempts to convene the *ecosystem* of actors in the country.

In many of the countries where there is a local AMEA network, a *roadmap* has been developed over the past few years. A roadmap can be understood as a strategic planning tool that outlines a proposed path to achieve specific goals within a defined timeframe, we can consider it essentially as a (visual) representation or a detailed document that illustrates the steps, milestones, and key activities needed to reach a desired outcome. In this sense, roadmaps can be applied in various contexts, including project management, business strategy, and organizational change. They provide a structured framework that helps organizations stay focused, track progress, anticipate challenges, and adapt to changes while working towards their desired objectives.

In the context of AMEA's Theory of Change and members' work, the local networks' roadmaps focus on the necessary steps to achieve the changes towards more efficient, effective, and sustainable market systems of services and support to farmer organizations. Ultimately, through the Roadmaps initiative AMEA expects to achieve contextualized outcomes in each country that focus on sustainable changes in the way the local market system operates. These outcomes are aligned to AMEA's Theory of Change and include:

Table 7.4: Expected BDS Roadmap outcomes

| Areas of effect | Expected outcomes |
|------------------------|---|
| Demand side | Farmer organizations and other agri-SMEs improve their business capacities and performance, as well as understand the type of support and service they need to accelerate their growth, according to their objectives. |
| Supply side | Local, national, and international service providers improve their business model and understand the path to cost-effectiveness, scalability, and sustainability of service and support provision to farmer organizations. |
| Financiers' side | Organizations that finance farmer organizations targeted projects (e.g. financial service providers, governments, international donors) are aware of best practices of service and support, and are able to use these approaches or partner with providers. |

Table 7.4: Expected BDS Roadmap outcomes (Continued)

| Areas of effect | Expected outcomes |
|-----------------|--|
| Others | National stakeholders have better information to improve the functioning of the market system. |

7.4.3. The work of AMEA members in Mozambique

In 2023, AMEA did not yet have a local network established in Mozambique. Therefore, according to interviewed AMEA members, there is still room for a platform to connect local and international stakeholders through a roadmap towards a more efficient and effective system of support and services for smallholder farmer organizations. However, more than six AMEA members are active in the country. Many work in the sector of farmer organizations' business capacities development (Table 7.5).

Table 7.5: Interviewed AMEA member organizations

| Organization | Work in Mozambique (in relation to farmer organizations) |
|--------------|--|
| ACDI/VOCA | ACDI/VOCA implements the Feed the Future Mozambique RESINA Activity by USAID. In collaboration with partners, it aims to increase the resilience of 50,000 smallholder farmers and rural households in target districts in the Zambezia and Nampula. ACDI/VOCA has experience with implementation of local food systems approach that integrates climate change adaptation capacities, farmer organizations development, and nutrition-sensitive agriculture in Mozambique (ACDI/VOCA, 2023). |
| AGRA | Operating in Mozambique since 2006, AGRA emphasizes initiatives that complement the efforts of other stakeholders. The focus is on significantly increasing smallholder farmers' income and food security. This is attempted by enhancing productivity, strengthening connections between markets and production systems, and supporting the creation of an enabling environment. AGRA has worked in the soybean sector in Zambezia and, presently, is working closely with the Mozambican government to transform the country's agricultural systems and increase the productivity and incomes of smallholder farmers (AGRA, 2023). |
| NCBA CLUSA | NCBA CLUSA has extensive experience in Mozambique, having been part of the early development of inclusive production models for soybeans in Zambezia (Di Matteo et al., 2016). Currently, it has several projects in the country, in the areas of climate-smart agriculture, as well as technical, vocational, education and training (TVET) for smallholder and emerging farmers, and farmer organizations (NCBA CLUSA, 2023). |

Table 7.5: Interviewed AMEA member organizations (Continued)

| Organization | Work in Mozambique (in relation to farmer organizations) |
|--------------|--|
| SNV | Since 1995, SNV has implemented diverse programs, partnerships, overarching strategies, and specialized expertise in Mozambique. Presently, SNV focuses spans across the agri-food, water, and energy sectors. The work is typically done in close collaboration with the government, local development partners, the private sector, knowledge institutes, and low-income communities. Beyond impacting households directly, SNV attempts to contribute to restructuring systems. This involves fostering inclusive development and systemic shifts, endorsing locally-driven approaches, fortifying governance structures, and enhancing markets for individuals grappling with poverty (SNV, 2023). |
| SOCODEVI | SOCODEVI is currently active in Mozambique through the five-year program Rural Women's Economic Empowerment Support Project (PAEF), funded by Global Affairs Canada. SOCODEVI's primary focus is to provide direct assistance to 2,500 women who are members of agricultural associations affiliated with the UNAC in Maputo and Gaza provinces (SOCODEVI, 2023). |
| TechnoServe | TechnoServe began operations in Mozambique in 1998, with the objective of creating a competitive and sustainable commercial agriculture sector, through the generation of opportunities for small-scale rural producers and suppliers. TechnoServe has also been a crucial actor in the early formation of inclusive production model systems in the soybean value chain in Zambezia (Di Matteo et al., 2016; TechnoServe, 2023). |

In interviews with AMEA members in 2023, it was clear that a platform would be welcome in Mozambique to coordinate learnings, exchange of experience, and collaboration for interventions regarding an inclusive farmer organizations' development sector. But how does the scope of AMEA members' work connect to the observations from the sugarcane and soybean case studies? To answer this question, we need to revert to some empirical results of the case studies in the soybean and sugarcane sectors.

7.4.4. Farmer organizations in the soybeans case

In the soybeans case in Gurue district, the formation of the market system was slower and less coordinated than in the sugarcane case (Di Matteo et al, 2016). Soybean production in the district underwent several phases. Initially, there was a surge in production due to NGO interventions in the mid-2000s, followed by the failed experimentation with contract farming schemes. The development of a smallholder sector producing soybeans counted heavily on the support of NCBA CLUSA and TechnoServe, as explored in Chapter 6. More recently, efforts led by AMEA members, such as AGRA and again TechnoServe, as well as public-private interventions such as the governments' SUSTENTA have made strides in fostering a base of small commercial farmers.

This concerted push aims to address the persistent market challenges faced by smallholders in the district. Despite these advancements, numerous structural hurdles endure, notably the constraints in the input market, capture of benefits by middlemen, and the limited attraction of associations in Gurue (KIT, 2020). Chapter 6 concluded that the experience of inclusion in the agricultural production models paradoxically empowered farmers to challenge the system itself. That is, there is too much autonomy in the sector, in contrast to embeddedness of collective interests. Consequently, there is an imbalance that is not conducive for inclusive production models. Hence, large-scale plantation and outgrower initiatives remain nearly absent in the district. The bulk of soybean production rests in the hands of smallholder households - some of which are organized in farmer organizations and supplemented to a lesser extent by a growing cohort of larger individual commercial farmers (MADER, 2021).

Moreover, the breakdown of early contract farming models led to a system of soybean commercialization reliant predominantly on open-market sourcing mechanisms and uneven development among farmers. This shift signifies the low degree of coordination of the local market system. In contrast to the sugarcane sector, the market system in Gurue thus provides less technical assistance, inputs, financing and logistics to smallholders. This departure from previous more structured contract farming schemes highlights the persistent challenges in achieving a more equitable agricultural landscape in the district. It also has an impact on the confidence that smallholders place in the farmer organizations. According to the household surveys conducted in 2015, 38% of the interviewees did not want to be part of a farmer organization as they were skeptical of the benefits.

Therefore, the soybeans case is a relevant illustration of the constraints that farmer organizations face in the absence of a market system that embeds smallholder interests in relation to the interests of other value chain actors. It also illustrates how farmer organizations failed to generate long-term benefits for their smallholder members, which led to discontentment of many towards the farmer organizations.

7.4.5. Farmer organizations in the sugarcane cases

On the other hand, by 2023, a functional market system was in place in the sugarcane sector of Maputo Province. It had been formed with a few key stakeholders: the sugar mills, the farmer organizations (associations and cooperatives), individual sugarcane producers, the government, and commercial financial service providers (typically, commercial banks). These actors' roles had been very well defined over the years and there was a high degree of coordination of the sector, given that the sugar mills controlled a great part of the production (including of some farmer organizations), services, support and inputs provision, infrastructure, and transportation.

In contrast with soybean, this market-based approach had clear leading actors: the sugar mills. Therefore, it depended less on the establishment of local and international nonprofit interventions. Moreover, this system generated tangible benefits for the smallholder farmers over the years of this research. Recapping the results from Chapter 5, firstly, smallholder farmers participating in the sugarcane production model were better off than smallholders that were not producing sugarcane. This was exemplified by the household surveys that demonstrated that, statistically, participants have more access to productive land, present higher socioeconomic indicators, are more food secure, are employed in higher-income-generating jobs, and perceive themselves to be faring better than neighbors who do not produce sugarcane.

Secondly, smallholder farmers tended to be integrated in the production model with less bias towards their technical capacities. Typically, the formation of block farms only required smallholder farmers to have access to land and water resources. These were enough criteria for inclusion. If required by the smallholder farmer organization, the sugar mills coordinated production, provision of inputs, infrastructure establishment and transportation, demanding little to no technical capacity and knowledge from the smallholder farmers. The benefit for the sugar mills derived from accessing large swaths of land and water resources needed for sugarcane production, whilst smallholder farmers benefited from the technical assistance and coordination of production. This provided many farmer organizations with the confidence needed to start operations.

Finally, they had a certain degree of choice in how to participate in sugarcane production. Because of the coordination of production by the sugar mills, many participant smallholder farmers had the possibility to choose how they would participate in the operations, if at all. Some were content with off-farming activities, or farming activities that were not related to sugarcane production. Others were content with management work for the farmer organizations.

The results also suggest that the benefits deriving from participation were only possible because of the formation of the farmer organizations, which are the main link between the sugar mills and smallholders producing sugarcane. The block farming model enabled participation, as it provided the sugar mills with the structure they needed to access productive land and water resources, in exchange for technical assistance, inputs, finance, infrastructure and logistics.

Therefore, the main conclusions of these results are that the inclusive production model enabled smallholder farmers (organized in farmer organizations) to feel confident in participating in the scheme. Through this participation they were able to better pool their

resources to achieve economies of scale. Moreover, due to the benefits that the sugar mills would derive from this newly-developed smallholder economy of scale, smallholders were able to benefit from stronger coordination of the sector. In turn, this served to empower the smallholder farmers to choose (to a certain degree) *how* to use their time and how to participate in sugarcane production. It demonstrates a clearer embeddedness of interests of different actors in the value chain - albeit with limitations of the autonomy that smallholder farmers experience in this context.

The relevance of these points for the role of farmer organizations in an inclusive development in Mozambique will be further expanded in the discussions section of this chapter. However, it is noteworthy that the sugarcane production dynamics in the region were heavily affected by the floods in early 2023. This had detrimental effects on the relationships between sugar mills, government, and smallholder farmer organizations, as discussed in Chapter 5. In addition, the benefits extracted from participation did not preclude smallholders from voicing their evolving desires and concerns since their integration within these models. These include initial discontentment with the financial indebtedness of farmer organizations, conflicts with the sugar mills and other farmer organizations, and more recently the dissatisfaction with the lack of alternative value chains as well as the impact of the 2023 floods on production and livelihoods.

7.5. DISCUSSION

To arrive at a conclusion about how farmer organizations can enhance the benefits of smallholder farmers participation in the sugarcane and soybean production models studied, it is necessary to discuss the results presented.

First, it is necessary to look into examples of the benefits generated from being part of a farmer organization in a functional market system (sugarcane). Then, we will contrast this context with what is often missing in most value chains in the country: the functional market system (example of soybeans). The section focuses on selected benefits from participating in a farmer organization. These are: enabling a 'feeling of confidence', creating a 'pool of resources to create economies of scale', and 'empowerment to choose how to participate and to reject contracts'. These illustrate key elements of inclusivity extracted from the case studies. This section then discusses what is still missing in the Mozambican context to enhance the inclusive potential of farmer organizations. As such, we can also discuss what can be done to make farmer organizations a more efficient conduit of inclusion and how benefits for smallholder farmers can be improved not only in the sugarcane and soybean sectors, but also more broadly.

7.5.1. Increased feeling of confidence

A key role of farmer organizations that was observed in the sugarcane and soybean cases was the feeling of confidence generated to smallholder farmers. The results suggested that, when organized in block farming groups managed by the sugar mills, smallholder farmers with previously little or no sugarcane production knowledge usually felt more equipped to join the production model. Similarly, the brief experience with contract farming for soybeans in Gurue was mostly possible because of the formation of many associations and cooperatives by international NGOs and non-profits at an early stage.

This feeling of confidence derived from tangible benefits obtained by the smallholder farmers from forming a farmer organization. Access to a secure market is an obvious one, but mostly the support through technical assistance, inputs, and in a few cases, credit were crucial to start operations. This was particularly clear in the sugarcane case, in which we established that the farmer organizations were able to embed smallholders interests in larger value chain interests.

Moreover, those who at the start were not confident to join a farmer organization – and thus an agribusiness production model – could observe how their neighbors were faring over time. In those cases, they extended their decision-making timeline until they felt more confident. This was not without challenges. Not all who wanted to join were able to, because of the criteria imposed by the sugar mills and the limitations of investments. The model had a saturation point based on the sugar mills processing capacity and investment targets. However, as shown in the FGDs of Phase III, there is a sense in the communities that joining the contract farming scheme through a farmer organization is generally beneficial and preferable to not joining – thus, many were waiting for their opportunity.

Therefore, joining a farmer organization allowed smallholder farmers to potentially have access to knowledge and resources to invest in the production of (an intensive) cash crop, in which they would not have invested otherwise – except if they already had enough capital to do so alone. We can consider this increased feeling of confidence a key aspect of an inclusive production model because it gives smallholder farmers agency and, through collective action, a certain degree of security and information to make decisions about where to invest their time and resources. It can embed smallholder farmers' interests in a system aligned with other actors' (sugar mills) interests and can generate a certain degree of autonomy in farmers' decision-making.

7.5.2. Pooling resources to create economies of scale

A second aspect that encouraged smallholder farmers particularly in the sugarcane case – was a degree of economic inclusion through economies of scale. Here, inclusion

refers to one of the most common understandings in literature and development practice: economic participation through involvement in a business model. As it has constantly been argued in this thesis, involvement alone is not the best parameter to consider a production model genuinely inclusive. However, it is an important part of inclusiveness and should be acknowledged.

This aspect of inclusion was in great part possible because of the formation of farmer organizations, which allowed farmers to pool their resources (mostly land) to create scale for private sector investment and coordinated production. Doing so can be a crucial strategy for promoting the economic inclusion of farmer organizations in the agricultural sector (Barrett, 2008). The ability to consolidate resources and work together allows farmers to achieve levels of efficiency that would not be possible when working alone (Shiferaw et al., 2011). Moreover, scale of production often attracts buyers (private sector partners) for its ability to reduce costs, share risks, and improve yields, which not only creates benefits for the buyer, but also for the organized farmers through increases in their income (Vermeulen and Cotula, 2010). These claims resonate with other studies about farmer organizations in Mozambique (Bachke, 2019; Mhlanga et al., 2020).

In summary, collaborating with farmer organizations is generally a more cost-efficient way for the private sector and other partner organizations to canalize their resources, in comparison with dispersed smallholder farmers. Private sector partners can be the middlemen or intermediaries, as in the majority of the soybean cases, or larger agribusinesses, as seen in sugarcane. In the sugarcane example, besides providing the sugar mills with access to new reliable sources of supply (Guarin et al., 2022), the ability to pool resources also created economic advantages for the smallholder farmers. They were able to access value chains to which they did not have access previously, in exchange for access to land and water (block farming) for the sugar mills. Farmers also receive technical assistance, credit for inputs, irrigation, logistics, as well as access to a secure market.

The economic advantages created by farmer organizations pooling their resources were clear in the sugarcane case, but less so in the soybean case, in which the middlemen captured a larger share of the benefits. This was due to the way in which the value chains were organized to produce each of the crops studied. However, this element of inclusiveness can be translated into lessons for other value chains.

In general, pooling resources help in the reduction of rural poverty through increasing the value of participation for farmers. It also improves farmers' access to technology and finance, and enhances their attractiveness as suppliers to agribusinesses. This reflects the findings of other studies (Miller and Jones, 2010; Henson et al., 2008; Kherallah et al., 2015;

Reinsch-Sinclair, 2023). Inclusion tends to be associated with economic participation, but as argued here it should also involve technical assistance, including training to build professionalism and entrepreneurship, improvement of yields and quality of produce, reliability of production, management of water and agricultural inputs, and improving post-harvest handling and loss prevention (Bright and Seville, 2010; Swinnen, 2014).

7.5.3. Empowerment of farmers to choose how to participate and to reject contracts

Finally, a third role farmer organizations can provide to improve inclusion within any production model context is one of empowering their smallholder farmer member base. There are myriad ways farmer organizations can do so. For instance, in the two previous sections, we have discussed how farmer organizations empower members to feel confident to participate in a contract farming model, as well as to generate the economies of scale that will encourage an agribusiness partner to invest their resources in working with farmer organizations through, for example, a contract farming model.

Farmer organizations also empower their member base by helping improve their agency and bargaining power, enabling access to finance, inputs, and other business (development) services. To some extent farmer organizations have represented the voice of smallholders too, insofar as they have often been a main point of contact for partnerships with businesses, NGOs, and local government actors (IFAD, 2010; Koh et al., 2017; Jezeer et al., 2019). Moreover, farmer organizations can also empower smallholder farmers as agents, with a certain freedom to decide on how they will participate or if they will reject contracts that are not beneficial for them.

To illustrate how farmer organizations can empower farmers to choose how they will participate in a contract farming model, we refer to the sugarcane case study. In that context, farmers who were members of a sugarcane association could opt to be directly (or not) involved in the production of sugarcane as well as the extent to which they would be involved. This was possible because the production activities were controlled by the associations, with technical assistance from the sugar mills. Smallholder farmers could thus opt for employment in the association or hire workforce instead, as association members (and their families) were significantly more likely to be employed in sugar production than non-members. As such, whereas association members *might* devote time to cultivate their own plots to supply the contract farming model, non-members *must* devote time to cultivate their plots, in the absence of an association to coordinate the production workforce. With the time available, participants could also choose to cultivate additional land, while sugarcane production was managed by the sugar mills and associations, or work off-farm. Therefore, what we observed was that smallholder farmers that are part of

a farmer organization which is well embedded in a certain agribusiness value chain have time as an additional resource in their livelihoods.

These observations suggest that involvement in the sugarcane production model considerably differentiated association members from non-members in terms of livelihood strategies. Members of a farmer organization were thus often in a better position to choose livelihood activities that granted them higher socioeconomic status. They were also often in a better position to invest time and resources in activities of their choice.

To illustrate how farmer organizations empower farmers to reject contracts, we refer to the soybeans case study. The research found that smallholder farmers in Gurue had not meekly gotten their land grabbed, nor had they been subordinated to the contracts issued by the buyers, as often indicated in criticisms of flex cropping or contract farming. Instead, it illustrated how they experienced contract farming and, thereby, were able to reject it and align their soybeans production with their livelihood strategies. It also shows how this experience led them to make different demands in relation to their membership with farmer organizations directly involved in contract farming and managing commercial relations through open market sourcing.

Therefore, the results suggested that farmer organizations can give smallholder farmers the power to act in their best economic interests. In summary, these three examples of benefits that smallholder farmers derive from farmer organizations illustrate a broader role of these organizations, which is one of finding a balance between smallholders' embeddedness in the value chains and autonomy to act in their best interest to improve their livelihoods (i.e. to enhance the benefits gained from these commercial relationships).

7.5.4. Enhancing the inclusiveness potential of farmer organizations in Mozambique

Similarly to other African countries that underwent structural adjustment programs, in Mozambique over the past four decades the provision of services and support for smallholder farmers has transitioned from being primarily led by the government to involving a complex ecosystem of public, private, and national and international nonprofit actors (Shakhovskoy et al., 2021). This ecosystem (or market system) gathers several public and private social and economic interests. Hence, many of these stakeholders are concerned with striking a balance among the various interests, so the system as a whole can work in the benefit of the farmer organizations. For decades, the debate has been around the sort of approaches that work best for these goals.

To illustrate this, there is an assumption by many actors in the development sector that market-based approaches are more effective and better placed to solve agricultural

and rural development challenges than public initiatives (Guarin et al., 2022). However, while researchers do find a strong correlation between private sector investments and productivity increment and faster, sustained growth, they do not find enough evidence to support inclusivity claims (Kroeger and Casey, 2007; Sinha et al. 2013; Humphrey, 2014). Additionally, Guarin et al. (2022)'s review suggests that the impact of economic inclusion (as in participation) on farmers' income tends to be positive but relatively small. The outcomes also tend to be better captured by wealthier farmers, rather than more evenly distributed among all farmers. Moreover, the evidence in literature and practice (i.e. reports) is ambiguous and biased towards positive outcomes, as negative ones are not reported as often.

Evidence from this thesis' case studies suggest similar conclusions. For example, in the sugarcane case studies, we observed that a market system had been formed with a few key stakeholders, well-defined roles, and a high degree of coordination of production. This market-based approach generated tangible benefits for the smallholder farmers throughout the research period. Smallholder farmers are generally happier to be part of the sugarcane production models than not to be. We have also seen how participation in these models led smallholder farmers to voice what they believe needs to change and what can be improved in the agricultural sector of the region. More recently, we have also seen how the market system that seemed to be well established collapsed due to unforeseeable natural calamities.

Therefore, similarly to what has been observed by Guarin et al. (2022), the results of the sugarcane cases demonstrated the effect on farmers' livelihood and wellbeing typically showed a positive trend over the years, yet it remained relatively modest for farmers' aspirations. The benefits were desirable and tangible, but not enough for the smallholder farmers. Moreover, these improvements predominantly benefited more prosperous farmers (in this case those organized in farmer organizations that produced sugarcane and, more importantly, that had not been indebted during formation of the groups), resulting in a disparity in the distribution of the benefits among the local farming communities.

As for the soybean case study, we see a mixed intervention from private and public organizations to attempt to create a more functional market system. The system was markedly less organized than the sugar ones, representing a higher degree of autonomy and less embeddedness for the different actors involved. Also in this case, a key observation was the disparities in interests between the private sector and the smallholder farm organizations (in the case, associations, cooperatives, forums and the federation), as well as the capture of benefits by wealthier farmers. Therefore, a deeper examination of

inclusiveness needs to take into consideration these difference in interests and how these will shape approaches towards development.

Furthermore, the cases' results showed that the private sector is not able to provide inclusion for whole communities on its own. Even if genuinely interested in doing so, agribusinesses only have a limited reach and are still concerned with their own economic sustainability. This was well illustrated by the sugarcane case, in which we saw that the block farming system reached its saturation point in terms of the number of smallholder farmers associations it could continue to integrate in their production model without further expanding the mill processing capacity. A limitation that was compounded recently by the huge investments that will be needed by the mill to rehabilitate the land damaged by the 2023 floods. The soybeans case also showed the limitations in including farmers through contract due to side selling - even for the one company that insisted on working with smallholders for its CSR.

Similarly, fully government-led programs or projects (co-)financed by international agencies and donors have not always worked either (Mainville and Narayan, 2017). Studies have pointed out the serious mismatches that can happen between the type of support required for effective support and what donors are prepared to provide (Joshi and Carter, 2015). Donor funding can be volatile and short-termed – when systems transformation often require steady commitment (Scott, 2011) – as well as short-sighted, focusing more on quick results, outputs and outcomes, over complex, less measurable transformations in the long-term (Eyben, 2013). Moreover, as visible in the soyabean case, donor funding can have unintended consequences, such as the creation of donor dependency and a mentality towards free services and inputs in beneficiary communities. As such, several experts have called for a reassessment of traditional 'donor-recipient' relationships (Unsworth, 2010; Booth, 2012; Tavakoli et al., 2013). This in part explains the more recent shift of donor focus to more localized approaches (USAID, 2023).

The answer to more inclusive approaches towards agricultural development is thus probably somewhere in between fully market-based and public or donor subsidized approaches, building from the proven successes and lessons from failures from each, while complementing one another. This links to the rise of public-private partnerships (PPPs) in recent decades, as PPPs are seen as potentially invaluable instruments to pool human and other resources from different actors and stakeholders, while working to achieve common objectives (Kadzere et al., 2016). Such partnerships help spread the risks of investing in agriculture, as well as bringing often much needed private capital investments and agribusiness service delivery approaches and skills (Reinsch-Sinclair, 2023).

However, to ascertain how balanced approaches towards agricultural development can contribute to inclusion, it is worthwhile unpacking the discussion on inclusion itself. Discussions are often limited to defining inclusion as integration, or participation, of smallholder farmers (Schoneveld, 2020). Inclusiveness cannot simply mean participation in a value chain. It needs to be chiefly concerned with giving actors social and economic opportunities and agency possibilities, i.e. empowering them. Possibilities to have voice, knowledge, decision-making freedom, and opportunity to act upon their best interests whilst embedded in a setting that also contributes to all actors' shared interests. In other words, it is about empowering actors to participate or decide not to – as seen in Zambezia's soybean case – and how to do so, as was the case to some extent in the sugarcane communities in Manhiça and Magude.

In terms of farmer organizations' role as inclusion conduits, a first step is creating the ecosystem where needed, and strengthening it where it already exists. The goal is to make it functional, efficient, and effective in achieving its objectives to benefit smallholders. An ecosystem of interested parties is necessary, because literature and empirical evidence suggest no actor will be able to achieve these goals alone. The results also suggest that inclusion is about providing smallholders with alternatives. The results underscored the importance of inclusive agricultural production initiatives to be accompanied by alternative livelihood possibilities. Participation in inclusive agricultural production models should thus be a choice.

Therefore, to enhance the potential of farmer organizations to improve inclusivity, an alignment of interests is needed within a conducive system which efficiently delivers services and support to smallholder farmers and their organizations. This system must be empowering. This is where the interests of local stakeholders - in this case the farmer organizations, their member base, civil society, the government, and the private sector - engaging in contract farming need to be aligned.

7.5.5. Towards a conducive ecosystem of support and services for farmer organizations
As suggested by the case studies' results, the alignment of interest towards an effective system is key to enhance the inclusive potential of farmer organizations. However, the reality in the Mozambican agricultural sector is one of deep fragmentation of interventions (Pavignani and Hauck, 2002; Vollmer, 2013; Michaud-Letourneau and Pelletier, 2017). Often, international and local nonprofits implement their programs in silos, which can lead to a duplication of work in some regions and value chains.

Also, despite the fact that the Provincial (DPAP) and District Agricultural (SDAE) departments are usually consulted prior to the start of an organization or business' operations, these

departments often find themselves understaffed, underfinanced, and spread thin in vast areas of the countryside (Cabral and Shankland, 2013). This issue is compounded by the 'fragmentation and dispersion of projects in various subsectors and at different levels of implementation (central, provincial, and district level)' and the 'limited sharing of information among various projects' (Gemo, 2011, p.5). Therefore, in Mozambique it is common that agricultural development interventions are not coordinated among actors and within government authority levels and agencies (Michaud-Letourneau and Pelletier, 2017). This reinforces the perception that, despite many efforts, interventions are not necessarily meeting the farmers' (and farmer organizations') needs (Nogueira and Ollinaho, 2013; Guarin et al., 2022).

However, in the few examples where an ecosystem of support and services for farmer organizations was effectively built, farmers did prosper under contract farming. For example, in the sugarcane cases studies, the system is centrally managed by the sugar mills, via the block farming schemes. This allowed, as previously argued, for farmer organizations to access inputs, technical assistance, irrigation, a secure market, and finance. This system has been operational for more than two decades now, and has been a conducive system for farmer organizations development, which in turn, led to many elements of inclusion, despite the challenges.

Comparatively, the soybean regions of Zambezia also had potential to create this ecosystem of support and services delivery to farmer organizations. The groundwork had been laid by international nonprofits, who introduced the soybean production to the region; there were agribusiness companies prepared to work with farmer organizations via contracts; and the governmental extension services were serving communities within their financial and staff-power possibilities. However, the contract farming schemes were short-lived and most failed. Even today the sector remains challenging for smallholder farmers (KIT, 2020). The reasons for this are presented in the soybean chapter, but it reminds us how important the alignment of interests is for successful approaches of delivery of (business development) services and support to farmer organizations. It also reminds us how relevant the empowerment of farmer organizations is in order to reject contracts that are not necessarily working for them – which is a clear expression of agency.

Therefore, evidence from the case studies suggests that for advancing the development of farmer organizations that are able to generate the benefits their member base expect, an entire ecosystem of support and services need to be in place. AMEA's scope of work is an example of how it can potentially be done.

A functional ecosystem needs a clear vision, plans, and objectives spearheaded by actors who have the mandate, legitimacy, authority, and leadership. The leader may be the government, with checks and balances through accountability and efficiency control mechanisms. However, it can be led by other actors too, from civil society, or from agribusiness. For instance, NGOs and nonprofits have been central to facilitating partnerships between agribusinesses, donors, government agencies and officers, and farmer organizations for inclusion. This was examined in depth in the soybean chapter, but echoes in other studies (Guarin et al., 2022). One of the main roles of NGOs and nonprofits has been one of promotion and support for farmers collective action by helping to set up cooperatives or associations that can be linked to agribusinesses (Hellin et al., 2009). The local credibility, contacts, and knowledge of NGOs and nonprofits have often allowed them to fulfill this role as trusted intermediaries to establish new production and business models. They have also played a role in holding agribusinesses and governments accountable to some extent) and in encouraging transparency, sustainability, and replicability of successful approaches (Guarin et al., 2022).

In other words, many NGOs and non-profits work to embed each actor's interests in a specific program, project, region, or value chain. However, an ecosystem vision and the coordination of action to achieve the vision is still lacking. Stakeholders need to refrain from acting in silos, start to rethink the ways in which services and support are delivered, identify required engagement and local action, and mobilize actors to individually and collectively commit, technically and financially, to improve support and services towards common goals for inclusivity.

7.6. CONCLUSIONS

To enhance the benefits of smallholder farmers' participation in sugarcane and soybean production models, farmer organizations must harness their potential to champion the interests of farmers within inclusive production models. It is well documented that farmer organizations have great potential to generate benefits for their members (Key and Runsten, 1999; Gordon, 2021). However, delivering on this potential is challenging, particularly in their involvement in inclusive production models within the dynamic landscape of agricultural development. The role of farmer organizations remains key for locally-led development of smallholder farmers participating in inclusive production models (Vording and Van Der Linden, 2021).

This chapter rethinks the potential of farmer organizations to amplify benefits for smallholders within the sugarcane and soybean production models, based on the results

found in the empirical research. The results suggest that farmer organizations need to be better positioned to defend the interests of their members base at the same time as they serve as a trusted framework that limits harmful action by farmers. This exemplifies the embedded autonomy argument.

Striking a balance between embeddedness within value chains and the autonomy afforded to smallholders in decision-making processes is fundamental. This equilibrium not only enables smallholders to extract benefits from their participation but also safeguards the sustainability of these models by curbing potentially harmful agency. Crucially, for farmer organizations to effectively fulfill this role of embedding interests and enabling autonomy, they require conducive ecosystems of service and support delivery. These ecosystems provide the fertile ground necessary for farmer organizations to advocate for smallholders' interests while fostering their ability to make decisions in a sustainable manner.

Through extensive experience, AMEA members are convinced that this conducive ecosystem is only possible through concerted and collaborative action to change the system. While this collective action towards a shared interest is still lacking in Mozambique, AMEA members in the country believe there is space for doing so. Moreover, they are convinced that it could potentially represent a way forward in the development of farmer organizations in the country.

The results presented here suggest that farmer organizations can indeed be conduits of locally-led inclusive development, complementing agribusiness and public sector efforts. To unlock this potential, this chapter argued that ecosystems need to be conducive for farmer organizations' development in the first place. This development is through the creation or reinforcement of farmer organizations' capacities, agency, and knowledge to better manage their organizations and extend services and business activities to their members. The development must also be embedded in a context in which all actors' shared interest is taken into consideration. This is supported by providing training and technical assistance to farmer organizations, the support that help farmers to improve their agricultural practices, adopt new technologies, and enhance their capacity to manage their organizations more effectively.

In summary, to enhance the benefits of smallholder farmers' participation in inclusive production models, farmer organizations need their inherent potential as advocates and facilitators within inclusive production models to be recognized. By fostering embeddedness without compromising autonomy, and by enabling autonomy without compromising embeddedness, within conducive ecosystems, these organizations can empower smallholders to reap the rewards of participation while safeguarding the

sustainability of inclusive production models. Collaborative efforts towards system change, such as AMEA's in other SSA countries offer a promising pathway for farmer organization development in Mozambique.

7.7. REFERENCES

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8

Conclusion

8.1. INTRODUCTION

The objective of this thesis was to evaluate how agro-investments involving smallholder farmers in their production systems improve farmers' livelihoods over time. The research focused on the sugarcane and soybean sectors as tens of thousands of smallholder farmers are integrated into these production models (MADER, 2021). The participation of substantial numbers of smallholder farmers has led these sectors to be considered as examples of inclusion in Mozambique, despite the controversies they have faced in the past. It is therefore valuable to examine the elements that make inclusion beneficial for smallholders over time. By doing so, we can derive lessons to replicate successful practices and avoid pitfalls when considering inclusion and its outcomes for smallholders' livelihoods in other contexts.

The chosen study areas - Maputo Province for sugarcane and Gurue, Zambezia Province for soybean production - offer contrasting narratives. While the sugarcane sector has partly addressed market failures for many smallholders through a highly integrated production model controlled by the sugar mills, soybean production in Gurue experienced boom, bust, and rethinking of smallholder participation in a less controlled value chain. These divergent trajectories provide invaluable lessons once viewed through an 'embedded autonomy' lens.

This research pursued answers to critical questions regarding the integration of smallholder farmers into these value chains. The sub-questions guiding this study were:

1. What are the characteristics of agro-investments in Mozambique and in what ways do they involve smallholder farmers?
2. What are the characteristics of inclusive production models in the sugarcane value chain in Maputo Province, and what are the outcomes of participation for smallholder farmers over time?
3. What are the characteristics of inclusive production models in the soybean value chain in Gurue, Zambezia Province, and what are the outcomes of participation for smallholder farmers over time?
4. How can farmer organizations enhance the benefits of smallholder farmers participation in the sugarcane and soybean production models studied?

We examined the evolution of smallholder farmers' relationships with businesses, the determinants influencing their decisions to participate or abstain, and more crucially, their experiences within these models. Furthermore, I assessed the direct and indirect outcomes of inclusive production models on local livelihoods over time, emphasizing the need to understand how genuine well-being materializes within these frameworks.

Data was collected in four phases, including gathering available background information on investments to select research topics and research cases, sampling as many active investments as possible throughout the country, and conducting interviews with local and national governments, traditional authorities, focus groups, private sector representatives, and smallholder farming households and organizations. More than 80 semi-structured interviews with key informants and organizations, as well as 69 company and 525 household surveys were used to generate lessons about the economic relationships between agribusiness and smallholder farmers, expectations and outcomes of inclusion.

By mapping the features of production models in Mozambique that involved smallholder farmers in a certain value chain, discussing the elements of inclusiveness within the case studies, and evaluating how agribusiness can meet farmers' expectations regarding practices of inclusiveness, this research provided insights into how agro-investments can contribute to inclusion. But what is the future of inclusiveness in Mozambique and what should future research focus on?

The chapter is divided into a brief recap of the findings, leading to this research's contribution to the knowledge on inclusion, followed by the key lessons from this study and a discussion on the implications for the future of inclusiveness in Mozambique and more broadly. This chapter finishes with a section on recommendations for further research and the concluding remarks.

8.2. RECAPPING THE RESULTS: A BRIEF SUMMARY OF KEY FINDINGS AND IMPLICATIONS

This thesis consists of eight chapters: an introduction, an overview of relevant literature for this research, a contextual background on Mozambique, four empirical chapters that aim at answering the research questions above, and finally this conclusion chapter. The empirical chapters were based on results from fieldwork conducted from 2013 to 2016 and in 2023. In the following sections the summary of the key findings and their implications for inclusiveness in Mozambique through agricultural production models are presented.

8.2.1. Characteristics of agribusiness in Mozambique

In Chapter 4, the agribusiness landscape in Mozambique was examined to uncover the dynamics of investments and trends related to land access, use, value chains, production practices, and smallholder farmer participation. Using a sample of 69 agro-investments, the analysis revealed that inclusion is more prevalent than what the existing literature suggests, but is still notably limited in agribusiness, with smallholder farmers facing

various forms of exclusion. Many investments fail to incorporate smallholders into their production models, often displacing them from their land. Even when smallholders are involved, there is a lack of genuine understanding of their needs. While some investments provide inputs and technical support for increased production, few are able to accurately assess farmer profiles, leading to a disconnect between investor intentions and smallholder farmer realities.

The sample also illustrated a pattern of exclusion in a country where smallholder farmers have a dominant presence in the agricultural sector. The relationship between agribusinesses and smallholder farmers primarily exhibits exclusionary practices, with minimal indications of inclusion beyond basic service provision to secure additional produce supply. Chapter 4 emphasizes that, while the private sector has for decades been the government's chosen priority actor to support agricultural modernization in Mozambique, there is an urgent need for a new phase of agricultural policies and strategies that rectify decades of neglect of smallholder farmers. Although the government's intention to foster inclusion in its latest agricultural programs and plans of action (PEDSA II, PNISA II, and the flagship SUSTENTA program) is a positive step forward, the question remains whether past lessons will be heeded and translated into actionable measures.

It is clear that a greater focus on inclusion will be necessary for a new cycle of agricultural policies, strategies, and plans of action starting in Mozambique to be successful in its inclusiveness objectives.

Despite the challenges imposed by limitations of the fieldwork and data availability, the chapter also identified sectors that have been relatively successful in involving smallholder farmers. The sugarcane and soybean sectors are identified as insightful case studies and the study set out to shed light on the factors that contributed to their success and the positive and negative outcomes generated for farmers beyond increased production and income.

This chapter contributes to answering the research question on the characteristics of agribusiness in Mozambique and in what ways they involve smallholder farmers. It highlights the need for greater attention to the needs of smallholder farmers and the importance of involving them in the development of agricultural policies and strategies. Ultimately, the goal should be to create sustainable food systems that genuinely contribute to the wellbeing of smallholders and promote inclusiveness, rather than just involvement.

8.2.2. Sugarcane case study

Chapter 5 delved into the dynamics of smallholder socioeconomic inclusion within sugarcane contract farming models in Maputo Province. By analyzing participation factors,

outcomes, and contrasts between participants and non-participants in these models, the chapter revealed relevant insights for the inclusiveness debate in Mozambique. It identified three key discussion areas namely, the necessity to comprehensively assess the success conditions of contract farming models, the importance of considering different types of contract farming, and the need to balance the benefits of production models with individual and community wellbeing.

The study challenged assumptions about contract farming negatively impacting food security and income diversification. Findings revealed that participants in sugarcane contract farming maintain diversified livelihoods, strengthen food security, and enhance food crop production due to improved access to inputs. The research underscored the significance of production model arrangements in influencing outcomes and the need for future investigations into the effects of different financing methods on outcomes. Furthermore, the chapter emphasized the importance of enabling both entry into and exit from production models, the potential consequences of waiving land rights for exit, and the risks of over-dependence of smallholder farmer communities to one value chain or production model. It is clear that despite the challenges facing smallholder farmers involved in the sugarcane production models of Maputo Province, it is still preferable to be part of such a model compared to not being involved in the production of sugarcane at all. However, smallholder farmers voice that they would appreciate on and off-farm alternatives.

These findings are relevant for agribusinesses, policymakers, and researchers. The chapter emphasized the need for a thoughtful design of production models, access mechanisms, and policies that ensure inclusiveness, while acknowledging the importance of participants' agency and decision-making in their involvement. The nuanced understanding of production models gleaned from this study contributed conceptually and practically to the discourse on inclusive agricultural practices, shedding light on the intricacies between production models, participants' inclusion, and outcomes for their livelihoods.

8.2.3. Soybean case study

Chapter 6 discussed the expansion of soybean farming in Gurue, in Zambezia Province, and the role of smallholders in the process, particularly in relation to contract farming and land grabbing. The chapter explored the factors that have contributed to the inclusion and exclusion of smallholders in the soya sector and how they have shaped sector development trajectories. It also examined the features of the sector in 2023, seven years after initial data collection. The analysis for the chapter was framed within the inclusive production models lens and highlighted the capacity of local populations to make a difference in and

to interact with the processes of soy expansion to steer outcomes towards enhancing their wellbeing.

The chapter concluded that smallholders in Mozambique have accumulated experience in soybean farming and have seized opportunities during the evolution of the production processes based on their best interest, in detriment of agribusiness-led inclusive production models. It demonstrated that smallholders' agency plays a significant role in deciding how they want to be integrated into different production models, which can affect how current soybean expansion genuinely benefits the well-being of smallholders and can contribute to socioeconomic inclusion.

The chapter also explored how the soybean sector did not provide agribusiness actors with the same instruments that allowed the control and coordination of value chains such as sugarcane, making contract farming more challenging to oversee. Many cases of side-selling hampered the success of agribusiness production models that involved smallholders production under contract. Moreover, the study revealed the failures and limits of implemented public and private sectors' strategies, suggesting that to rethink inclusivity, one needs to discuss the value chain dynamics and the relationships among value chain actors. It revealed the importance of having policies that focus on building capacity of the state at different levels, based on a deep understanding of local contexts and nuances. Additionally, future policies should also build capacities of producers and other value chain actors, to ensure they are able to hold the state accountable for making these initiatives sustainable.

Therefore, the chapter contributed to understanding the processes of inclusion and exclusion in the region's soybean production model, whilst discussing the elements of inclusiveness in the sector. It answered the research questions on the main drivers of the process that led soybean agribusinesses to be known as a sector that includes thousands of smallholder farmers in Mozambique as well as the elements that describe the processes of integration of smallholder farmers in the soybeans value chains in Gurue.

8.2.4. Chapter on AMEA and the role of farmer organizations for inclusion

Chapter 7 underscored the significant potential of farmer organizations to support locally-led inclusive development. The chapter was based on participatory organizational research and builds on the results in Chapters 5 and 6.

To maximize the advantages of smallholder farmers' engagement in sugarcane and soybean production models, it is imperative for farmer organizations to harness their potential as advocates for farmers' interests within inclusive production systems. The challenge

lies in optimizing this potential, especially within the context of inclusive production models amid an ever-evolving landscape of local agricultural development. Farmer organizations play a pivotal role in locally-driven development for smallholder farmers engaged in inclusive production models. Therefore, the chapter assesses the capacity of farmer organizations to amplify benefits for smallholders within sugarcane and soybean production models, drawing upon empirical research findings. The outcomes suggest that farmer organizations must position themselves more effectively to advocate for the interests of their smallholder member base while simultaneously acting as a reliable framework that mitigates detrimental actions by farmers. This underscores the notion of embedded autonomy.

Finally, the chapter expanded on how the efficacy of farmer organizations in fostering inclusive development hinges on a conducive ecosystem of services and support. It used the experience of AMEA members to examine this question and conclude that governments, private sectors, NGOs, and development actors must align interests and allocate necessary resources to enable these organizations to thrive. While the 'why' of engaging with farmer organizations for inclusive development has long been clear, the 'how' is not always as clear. Therefore, there is a need to shift attention to the 'how', raising relevant considerations for policy, practice, and future research on inclusive rural development. As such, under favorable conditions, farmer organizations serve as pivotal agents in locally-led inclusive development, presenting a model for inclusive strategies that can complement private sector and government efforts.

8.3. REFLECTIONS ON THE CONTRIBUTION TO THE KNOWLEDGE AND ON THE CONCEPTUAL FRAMEWORK

8.3.1 Contributions to knowledge

As seen in the summary of the chapters above, this research delved into case studies to examine how inclusive production models contribute to smallholder farmers' livelihoods over time. In doing so, this thesis contributes to narrowing the knowledge gap on how production models that involve smallholder farmers (and their organizations) can contribute to locally-led development. These findings shed light on both the advantages and risks inherent in embracing an inclusive production model approach aimed at bolstering the well-being of smallholder farmers. To further explore these contributions, this section highlights the novelty of the study.

First, there is a lack of similar studies about agribusiness practices and smallholder involvement in Mozambique. Most existing studies that touch the subject are about

anecdotal cases (Mangnus, 2019), which results in most *inclusive* business and production models as “little analyzed and understood from a conceptual perspective, (or) scrutinized when implemented in the field” (Chamberlain and Anseeuw, 2019, p. 308). As such, the general overview of agribusiness practices represented by the sample in Chapter 4, coupled with two in-depth cases examining inclusiveness in two sectors (sugarcane in Maputo Province and soybeans in Gurue district) significantly contribute to the knowledge body about Mozambican agricultural production models, their practices, and outcomes for smallholder inclusiveness.

Second, the case studies selected represent sectors that involve thousands of smallholder farmers in Mozambique. As such, they are also viewed as sectors for future investments, such as through the current flagship governmental program, SUSTENTA (Da Costa and Castigo, 2021). As skepticism about the type of approaches that are being promoted by SUSTENTA grows (Mosca, 2023), the study serves as in-depth sources of lessons about smallholder inclusion and the challenges they face within inclusive frameworks, which can contribute to informing current initiatives and scaling up and replicating similar ones in the future.

Finally, this study made use of a conceptual framework which combines an inclusive business lens and the borrowed concept of ‘embedded autonomy’ (Evans, 1995) to make sense of the outcomes observed during field research. The combination of concepts that have both been explored to a small extent in literature (see Ros-Tonen et al., 2019, for discussions on smallholder integration, or embedding, in value chains; and Van der Ploeg and Schneider, 2022, for autonomy discussions) adds a novel lens to the debate. Hence, the study contributes to the literature on international development studies.

In what follows, I present the conclusions on the application of the concept of embedded autonomy within the context of discussions on inclusive production models. Subsequently, these various discussions will be tied together to provide a comprehensive conclusion regarding their combined effect on improving the lives of smallholder farmers.

8.3.2. Reflections on the Embedded Autonomy discussion

In this thesis, an adaptation of the concept of ‘embedded autonomy’ serves as a fundamental lens of analysis. The original concept, which was introduced by Peter Evans in 1995, postulates that embedded autonomy refers to a state’s capacity to maintain a coherent identity while simultaneously engaging in social ties and negotiations with society. Evans’ concept, though originally focused on developmental states, is adapted to assess variations in inclusive production models, the relationships built from these inclusion processes, and their socioeconomic outcomes for smallholder farmers.

The concept allows for an analysis of the role of the state in balancing ‘embeddedness’ and ‘autonomy’, recognizing its significance in shaping the dynamics between inclusive production models and the broader societal context. However, in addition to that, the thesis emphasized that the extent of smallholder farmers’ engagement in a given production model is contingent upon the characteristics of the production models themselves. Models exhibit diverse attributes and relationships with participating farmers, resulting in varying degrees of stakeholders’ capacity to act and subsequent outcomes for participants’ livelihood enhancement. With the concept, I extend Evans’ notion and propose that to comprehensively evaluate private sector involvement in local development, it is imperative to consider not only the extent but also the nature of this involvement, and its effects on the ground.

While conventional debates center on the degree of private sector intervention, such as “inclusive business models” versus “business as usual” (Wach, 2012; German et al., 2018; Schoneveld, 2020), I contend that these discussions fail to address the nuanced practices that evolve within specific contexts. Recognizing that private sector involvement with smallholder farmers is a given reality where profit is attainable or expected, the pertinent inquiry should shift to how this involvement evolves and influences outcomes. Therefore, the concept advocates for an examination of the local intricacies of particular contexts and production models, stressing the relevance of an alignment of stakeholders’ interests.

Specifically, the concept proposes that the achievement of inclusion within a production model depends on the alignment between smallholder farmers’ interests and those of other actors, in particular the agribusinesses. This is aligned with other researchers’ conclusions (See Jelsma, 2019). Moreover, the concept highlights the importance (for inclusiveness) of the degree of autonomy that smallholder farmers are able to attain, within the alignment context, in order to pursue actions that enhance their livelihoods.

Within this logic, the concept of embedded autonomy serves as a lens throughout this study, offering insights into the complexities of agribusiness involvement in Mozambique and its implications for smallholder farmers. In Chapter 4, for example, the findings illustrate a reality that differs from national authorities expectations, where the participation of smallholder farmers in agribusinesses’ production models remains markedly restricted. Even when some degree of inclusion is present, the fundamental needs of these smallholder farmers and their households are often overlooked by the agribusiness, leading to inadequate – or many times inexistent – support for enhancing their technical capacities, productivity, and market positioning within the value chain. The main point for the discussion of embedded autonomy here is that the sample of 69 agribusiness highlighted a prevailing deficiency in the Mozambican agribusiness market system,

marked by limited capacities of both the state and the private sector to truly address the multifaceted needs of rural populations, including of those smallholder farmers who are directly linked to a majority of production models in the country.

Furthermore, the sugarcane cases offered insights into a nuanced balance between embeddedness and autonomy, leaning more towards a strong degree of embeddedness (which comes with challenges). The block farming model emerged as one of many possible means of embedding smallholder farmers within the production framework in a way that many of their needs and interests are met, albeit with a notable lack of autonomy. While the arrangement provided certain benefits such as technical and logistic assistance, production infrastructure development, and provision of inputs, some concerns about diversification and greater self-determination in the choice of value chains persisted among smallholder farmers. This applies even for those farmer organizations that are satisfied with the benefits generated by the contract farming schemes. As such, a delicate equilibrium is observed, where strong embeddedness yields certain advantages but falls short of offering the autonomy required to truly transform livelihoods and promote sustainable rural development. For a while, this model provided stability to meet smallholders' most direct needs with food security and socioeconomic aspirations, but failed to deliver alternatives to enhance prosperity. Eventually, the relative embedded autonomy achieved in the examined cases was not enough to prevent huge losses of livelihood means for smallholder farmers when heavy floods destroyed most of the sugarcane fields in 2023 in one of the regions studied. Therefore, the chapter also highlights the need for alternatives within embedded frameworks of production (i.e. stronger autonomy).

Contrasting this, the examination of the soybean sector revealed a dynamic wherein smallholder farmers exercise their agency with strong levels of autonomy from agribusinesses' production models. They demonstrated power to challenge the established contract farming systems designed by early private sector initiatives in the district of Gurue, in Zambezia Province. Whereas this autonomy is indicative of agency and empowerment, it also highlights the lack of a comprehensive support system for smallholders, particularly within a sourcing-driven value chain. The absence of a conducive ecosystem highlights the limitations of autonomy without an inclusive production model that extends beyond mere value chain access (i.e. without some degree of embeddedness).

Concerning conducive ecosystems of support and service provision to smallholder farmers, Chapter 7 explored the roles of farmer organizations for inclusion. Through this topic, we highlight their potential to enhance both embeddedness and autonomy of smallholder farmers in the sugarcane and soybean sectors. By offering platforms for collective action, resources pooling, and negotiation, farmer organizations can empower and enable

smallholder farmers to navigate the complexities of involvement with agribusiness. These assertions are reflected in the sugarcane and soybean sectors, where participation in farmer organizations presented an advantageous proposition, even amidst the challenges illustrated. Hence, these organizations have great potential to act as conduits for expanding embeddedness while fostering a degree of autonomy for their members.

In summary, the path to contribute to inclusive development through agribusinesses in Mozambique demands a delicate balance between smallholder farmers' embeddedness and autonomy in agribusinesses' value chains. For actors interested in changing the current challenging landscape, it is necessary to nurture a conducive ecosystem that provides comprehensive support and services to smallholder farmers and their farming organizations. Chapter 4 posits that this system is lacking in Mozambique. The state, in its extension services and supporting role capacities, is deflated, spread thin, and lacks resources. Additionally, its prioritized partner in the attempt to modernize agriculture and bring about benefits to rural populations, the private sector, is hardly generating inclusion of local populations. When it does include smallholder farmers, inclusion is not necessarily beneficial enough. However, it ought to be noted that it is not individual examples of private sector actors alone who can address all inclusion challenges. For agribusinesses, for example, there is a saturation point within their business model if profit is their main goal. This dilemma is highlighted by Schoneveld (2022), in which neither scale without impact nor impact without scale have the capacity to change food systems, address rural inclusion challenges, and modernize agriculture.

This research thus highlights the need for not just successful production models but also thriving farmer organizations to serve as intermediaries to amplify embedded autonomy. Future investments must consider the creation of conducive environments for both the private and the smallholder farming sectors and their organizations to thrive.

In essence, the notion of embedded autonomy borrowed from developmental state theory is relevant in this study's examination of inclusive production models and their outcomes for the socioeconomic well-being of smallholder farmers. The premise of the 'embedded autonomy' concept is to highlight the necessity of assessing the interplay between private sector involvement, stakeholder alignment, and the autonomy of smallholder farmers. In doing so, it generates lessons that are key to truly understand and foster locally-led inclusive development.

Based on the results, I am convinced that a more inclusive agribusiness landscape necessitates a collaborative effort involving the state, private sector, civil society, and development actors, with the shared goal of empowering smallholder farmers and fostering

sustainable rural development. Ultimately, the pursuit of locally-led inclusive development demands strategically intertwining embeddedness and autonomy of smallholder farmers within the Mozambican agribusiness context.

8.4. TYING IT ALL TOGETHER: IMPLICATIONS FOR IMPROVING SMALLHOLDER FARMERS' LIVES

We have seen the exploration of the interplay of embeddedness and autonomy. Following this, the insights garnered from the examination of inclusive production models and their impact on smallholder farmers' livelihoods within Mozambique's agribusiness context pave the way for practical implications. Section 8.3 delved into the nuanced dynamics of embedded autonomy and, based on the results of empirical cases, we can conclude it is to strike a balance that works for the actors involved. Building upon these reflections, Section 8.4 delves deeper into the implications extracted from this intricate interplay.

The goal is to use the key takeaways to infer and propose tangible pathways for improving the lives of smallholder farmers more generally, beyond the Mozambican context. By connecting the dots between theoretical insights and practical applications, I contribute to charting a course towards fostering sustainable rural development and empowering smallholder farmers within the agribusiness landscape. This section thus aims to bridge the insights from prior sections and the resulting implications for improving smallholder farmers' lives.

8.4.1. Inclusion as knowledge, voice, and agency

One of the main inferences gained through the analysis of the empirical results (Chapters 4 through 7) is that, in Mozambique, inclusive production models can solve part of the market failures preventing smallholders from enhancing the benefits they derive from agricultural production, but that this participation in the value chains alone is rarely enough.

For example, a large part of sugarcane and soybean production in terms of harvested area and smallholder farmer involvement is done in the provinces of Maputo (sugarcane) and Zambezia (soybeans). Regardless of the production models initially tried, the sugarcane and soybeans sectors addressed some market failures affecting smallholder farmers. Although both cases involved thousands of smallholder farmers in these regions, only the sugarcane production model was able to significantly address often neglected problems for some of these farmers, such as access to finance, reliable access to quality inputs, access to secure markets, transportation, infrastructure, and technical assistance. Moreover, the production of sugarcane allowed integration in value chains without detriment to

smallholder farmers' ability to keep their subsistence food production, which has historically been a challenge in the country (Ferrao et al., 2018). They did not solve all the challenges faced by smallholder farmers, but managed to keep many farmers interested in continuing to participate, because they represented a source of income. To a smaller extent, we also observed smallholder farmers' interest in continuing to produce soybeans, even though the production model was much less favorable for them in comparison with sugarcane. This is because soybeans too provided a source of income that is very welcome, given smallholders income constraints.

Inclusive business literature is rich in instances of involvement of income-constrained groups, such as smallholder farmers, as the objective of inclusion (Schoneveld, 2020). However, I argue that inclusive agricultural production models should not be just about involvement. They should also be about the conditions under which participation takes place and evolves (Paglietti and Sabrie, 2013; Chamberlain, 2018; Jelsma, 2019). In this sense, one should not mistake participation or involvement in a business model for the objective of inclusion. Embedding the smallholders is necessary, but it cannot come at the detriment of agency, knowledge, and voice, because these enhance farmers' autonomy to assess and communicate when benefits are not enough for them.

Viewing inclusion through the lenses of knowledge, voice, and agency illuminates the necessity of empowering smallholder farmers not just to participate but also to actively influence and shape the conditions of their engagement within these production models. To look at inclusion as knowledge, voice, and agency is also to acknowledge the multifaceted nature of empowering smallholder farmers within inclusive agricultural models. Knowledge serves as building blocks, offering smallholders the necessary information and skills to navigate these complex value chains effectively. Voice grants farmers the platform and empowerment to articulate their needs, preferences, and concerns within these models. Agency, however, stands at the forefront, embodying the essence of autonomy. It enables farmers not only to participate passively in top-down models of production, but also to actively shape and influence the terms of their engagement.

The analysis of the two case studies demonstrated that when smallholders possess access to information, technical know-how, and market insights, they become equipped to make informed decisions and they are clearer about their needs to diversify options, enhance their productivity sustainably, reach other markets, and venture into other livelihood pathways. Moreover, fostering an environment where their voices are not only heard but also considered in the decision-making processes of these production models ensures that their unique needs and aspirations as a heterogeneous stakeholder group are taken into account.

Yet, the essence of inclusion lies in the agency. The autonomy to choose, negotiate, and challenge the structures and arrangements within these models. This agency enables them to assess the adequacy of benefits derived from their involvement and to steer their own trajectories toward sustainable livelihoods.

Therefore, by recognizing inclusion as a nexus of participation, knowledge, voice, and agency, we highlight the importance of not merely integrating smallholders but enabling them to actively shape their trajectories within these production models.

I am convinced that these conclusions are also relevant for the organizations that farmers use to coordinate their production and marketing: farmer associations and cooperatives, for example. Drawing from empirical research outcomes, we have seen the potential of farmer organizations in enhancing benefits for smallholder farmers engaged in sugarcane and soybean production models. These findings can be applied in other sectors and highlight the crucial need for farmer organizations to adeptly safeguard the interests of smallholder farmers while serving as a reliable framework to prevent detrimental agency. This reflects the concept of embedded autonomy. Maintaining the delicate balance between integration into value chains and granting autonomy in decision-making is thus key. This equilibrium not only allows smallholders to reap advantages from participation but also ensures the sustainability of these models by mitigating potential harmful actions.

Therefore, achieving a context in which inclusion as knowledge, voice, and agency is extended to smallholder farmers also likely goes through the reinforcement of their farmer organizations' abilities to provide the services and support that the smallholders seek.

8.4.2. The importance of alternative livelihood pathways

In this research, I focused specifically on the challenges farmers face and the benefits they can obtain from participating in inclusive production models over time. However, the findings presented underscore an additional aspect that I am also convinced is crucial for the debate on inclusiveness. This is about an over-reliance on inclusive production models. In this section, I contend that agricultural activities as a livelihood pathway (De Haan and Zoomers, 2005) might not suffice in advancing smallholder farmers' livelihoods comprehensively. This is valid both for the individual smallholder farm and their surrounding communities. This realization prompts a crucial consideration: the need to promote the diversification of pathways for improving smallholder farmers' well-being over time.

Taking the sugarcane cases as an example, the models were able to involve thousands of smallholder farmers, but over-dependence on it manifested in two primary ways: negative effects on livelihood when the model collapsed and exclusion within the community.

First, the negative effects on smallholder livelihoods was clear when the devastating floods in the Manhiça district in 2023 served as a poignant reminder of the vulnerability of smallholders that are dependent on the production model. The floods resulted in production loss for hundreds of smallholder farmer households engaged in sugarcane contract farming. The lack of substantial government and sugar mill support to help rehabilitate the land exemplifies the inherent risks of over-relying on one production model. This reality accentuated the need for alternative livelihood means. It emphasizes that diversifying income sources and livelihood strategies is a strategy of resilience.

Second, exclusion within the community manifested in two observed ways: exclusion from the production model itself and limited employment opportunities. Involvement in the production model, primarily facilitated through farmer associations, progressed slowly, reliant on external financing and sugar mills processing capacity, resulting in the exclusion of many smallholder farmers who voiced their desire to participate in the contract farming schemes. Moreover, employment within these farmer associations tends to favor family members of the smallholder farmers, restricting opportunities for those outside these associations. Consequently, participation in contract farming or employment within the associations predominantly benefited the same households of sugarcane-producing individuals integrated in farmer associations, thereby perpetuating exclusion within the community.

In addition, within the spectrum of inclusive production models, a key consideration is value creation and value capture. Scholars highlight the intricate balance and trade-offs between these aspects within business models (Evans et al., 2017; Howell et al., 2018). Prioritizing one over the other can significantly influence the developmental trajectory of these models, leading to differential categorization of inclusive business models. Van Westen (2021) particularly draws attention to the coexistence of inclusion and exclusion, emphasizing how selective inclusion within supposedly “inclusive” models often favors better-off farmers, thereby perpetuating pre-existing social disparities.

Thus, an additional limitation of inclusive production models lies in their inability to reach entire communities, as seen in the sugarcane and soybean cases. While these models might effectively engage certain segments of the population, they often fall short of integrating the broader community comprehensively (Schoneveld, 2022). The selective inclusion, based on the agribusinesses’ needs and capabilities, perpetuates exclusionary dynamics within these supposedly inclusive frameworks, ultimately leaving substantial sections of the community outside the ambit of the purported benefits (Vorley et al., 2009; German et al., 2020). The focus on specific segments or more accessible groups within a community might inadvertently overlook marginalized or remote populations, resulting

in a fragmented approach that fails to uplift the community as a whole. Consequently, the exclusion of significant portions of the community exacerbates social disparities and hampers holistic development initiatives (Fairbairn, 2013). Therefore, a critical reassessment is essential, shifting the focus from partial inclusion to devising more holistic strategies that genuinely encompass and benefit entire communities.

To address the limitations inherent in exclusive reliance on inclusive agribusiness, policymakers and development actors must delve into the contextual nuances preceding intervention design and implementation (Wangu et al., 2020). This discourse on inclusive production models signals the need for further in-depth studies to expand our understanding of inclusion as a choice; one that not only involves participation and the evolving relationships between smallholder farmers and agribusinesses (as expanded in 8.4.1) but also critically evaluates the dimensions of value creation, value capture, and the inadvertent exclusion within supposedly inclusive frameworks.

Preventing overdependence on a singular approach, such as inclusive agribusiness, is imperative. Recognizing the reality that not every smallholder (in the long-run) nor whole communities can fully benefit from inclusive agribusiness due to resource constraints is essential and alternative livelihood support should be implemented. This includes the implementation of social protection programs and safety net plans to supplement the limitations of exclusive dependence on agribusiness initiatives (Grosh et al., 2008).

In conclusion, while inclusive production models offer promising prospects for smallholder farmers, many are left out. A broader approach integrating alternative livelihoods is imperative. Recognizing this limitation of inclusive production models allows for strategies that seek to ensure more economic resilience, avoid overdependence, and address the inherent limitations of singular model reliance, thereby contributing to more equitable and sustainable livelihoods for smallholder farmers.

8.4.3. Inclusion as freedom

As argued in 8.4.1, assuming that participation in inclusive agribusiness production models are not enough to provide stability and sustainably enhance the livelihoods of smallholder farmers' as a stakeholder group over time, and assuming that alternative livelihood pathways should complement inclusive agricultural production models, as argued in 8.4.2, I can then argue that inclusion needs to be seen as the *freedom and ability to choose*.

The concept of inclusion, in its most genuine sense, should encapsulate the power of choice. It should signify not merely participation dictated by circumstances but a conscious

and empowered decision-making process for smallholder farmers. It should be about the autonomy to choose whether to engage, how to engage, and critically, the freedom not to engage, recognizing that inclusive agribusiness models are not the sole pathway to enhancing livelihoods.

Viewing inclusion as a choice unveils the essence of agency within smallholder communities. It advocates for the active participation or abstention from production models based on informed decisions. This choice is more than a binary involvement. It extends to the nuanced ways through which farmers engage, whether as part of farmer organizations, through inclusive models such as contract farming, or pursuing alternative livelihood strategies. Moreover, acknowledging that inclusive agribusiness is just one among several avenues to improve livelihoods emphasizes the significance of offering diverse pathways. It grants smallholder farmers the liberty to explore and select the most suitable livelihood strategies aligned with their aspirations and capabilities.

Therefore, I propose inclusion as a choice. Choice to participate. Choice on how to participate. Choice not to participate because it is not the only alternative for a better livelihood.

8.5. IMPLICATIONS FOR POLICY AND PRACTICE

The findings in this thesis suggest that the contributions of production models to smallholder livelihoods are appreciated by involved farmers, in particular in those models where there is a stronger smallholder embeddedness in the value chain (e.g. sugarcane through contract farming). However, the findings also demonstrate that these contributions are not sufficient to fully address local inclusive development challenges.

This resonates with findings of other researchers (Schoneveld, 2022; Wangu, 2022) and highlights the need for complementary action to ensure genuine inclusive development. Therefore, policymaking and development practice should prioritize comprehensive approaches that encompass not only smallholders' involvement in value chains, but also broader factors that contribute to their well-being, such as food production, nutrition, income-generating prospects in and beyond agriculture (on and off-farm), and social safety net programs (Likoko and Kini, 2017; Van Westen et al., 2019, Van Westen, 2021). This holistic perspective is crucial in averting marginalization and promoting a more genuinely inclusive and equitable trajectory of development (Wangu, 2022), which provides choices for smallholder farmers as well.

In this sense, to continue advancing inclusiveness goals through agribusiness in Mozambique and elsewhere, these research also identified areas that could be further explored.

First, regarding the policy implications, the Mozambican government can continue to support the development of farmer organizations by ensuring that the policies in the new cycle of agricultural development strategies enable farmer organizations to access financial and technical resources. Inclusion of smallholder farmers as a population group needs to be more than rhetorical or document-based. It ought to be felt on the ground by the main beneficiaries. For example, policies that support the establishment of business development service ecosystems, such as providing tax incentives, access to credit, and subsidies for implementation of capacity development projects and programs, can help unlock the potential of farmer organizations and could be further considered. Initiatives are already being implemented in that sense, for example SUSTENTA. However, as argued in Chapter 7, an alignment of interests of the stakeholders must be in place, particularly those interests of smallholder farmers. SUSTENTA is criticized by academics for its potential to deepen social differentiation, as the program seems to focus (at least at an early stage) on farmers that are already somewhat better off, if compared to the great majority of smallholder farmers in the country (Da Costa and Castigo, 2021; Mosca, 2023).

In this sense, a functional, efficient, and sustainable ecosystem of support and services to smallholder farmers must be further discussed by agricultural development stakeholders in the country. The government has the mandate and legitimacy to spearhead national and local discussions about a roadmap towards sustainable food systems that include “inclusive” crops like sugarcane and soybeans, combined with more diverse agricultural production and livelihoods. However, concerted action will be needed (Hawkins and Van Rij, 2023), as individual actors or stakeholder groups will hardly be able to address all the challenges identified in this research. This is compounded by the governance and decision-making context in Mozambique, which still faces many challenges, as extensively examined by Salomão (2020).

Second, connected to these practice needs, further research can enrich the existing body knowledge about inclusion in Mozambique and help inform practice. Future research could focus on understanding the impact of Mozambican systems of support and service for farmer organizations and their role in locally-led inclusive development. This includes assessing the effectiveness of different strategies of promotion and implementation of these ecosystems in different contexts and regions of the country, exploring the challenges and opportunities for farmer organizations to access and benefit from these services, and

identifying best practices in Mozambique and elsewhere for creating and sustaining the systems.

Moreover, research could focus on the current production models that involve hundreds of thousands of smallholder farmers in the tobacco and cotton sectors, which – if linked to the many studies about the sugarcane sector – can lead to a more comprehensive understanding of the systems of production that are heralded as economically viable for the private sector and smallholder farmers. The research should be accompanied by studies that investigate the social aspects of inclusion in these sectors.

The research should also be accompanied by studies that focus on environmental aspects. Production models both cause and are affected by environment and natural elements (Eriksen and Silva, 2009; Silva and Matyas, 2014; Casado and Hart, 2019). There are studies in Mozambique about the topic (Manuel et al., 2020), and we have seen how the floods dismantled the livelihoods of many hundreds of households in the sugarcane sector. As the climate crisis becomes ever more present in current food systems and inclusion debates (Abegunde et al., 2019; Kalimba and Culas, 2020; Doherty et al., 2023), we must recognize the need for more studies that scrutinize the dialectics between production and environment.

In addition, there are roles that farmer organizations play that deserve further scrutiny, such as preventing inequalities, managing conflicts, tackling social exclusion, promoting community engagement, and promoting gender and youth affirmative practices. These contribute to the inclusivity and equity dimension of food systems pointed out by Bené et al. (2019) and other authors (Gomez y Paloma et al., 2020). Future research could also focus on understanding the role of Mozambican farmer organizations in influencing policy and advocating for their rights and interests – which are beyond the scope of this research.

Perhaps more importantly would be to study the specific outcomes of inclusive production models on gender and youth empowerment, as mentioned above. Given its design, this research included women and young farmers' point of view in the design of the standardized questionnaires, but it did not allow us to go deeper into household dynamics of smallholder farmers that were interviewed. However, I am convinced that a deeper exploration of these dynamics would deliver insightful results both at the household and the farmer organizations levels.

Furthermore, digital inclusion is a topic that deserves more attention in Mozambique. For example, how technologies can foster the improvement in capacity development, agricultural practices and extension services, climate resilience, and access to finance,

are relevant elements for smallholder inclusion through agricultural production models (McC Campbell and Migisha, 2022).

Finally, as rural development is intricately linked to urban development (Tacoli, 2003; Zoomers et al., 2017), future research could also examine the connection between agricultural opportunities and alternative rural and urban livelihood pathways in empowering individuals and communities in Mozambique.

In summary, policies that support the establishment of ecosystems of smallholder support and services, practices that promote collaboration and accountability, and future research that assesses the positive and negative impact of these ecosystems on farmer organizations and their role in locally-led development, including unintended consequences, can help unlock the potential of inclusiveness in Mozambique that generate long-lasting benefits for smallholder farmers. As shown in Chapter 7, under conducive circumstances, smallholder farmers (and their associations or cooperatives) are key actors in locally-led inclusive development and can be a model for inclusive public and private agriculture strategies.

8.6. CONCLUDING REMARKS

The main conclusions of this study are that agricultural production models can enhance smallholder farmers' lives by striking a balance between working towards common interests and goals (embeddedness) and working towards one's self-interests (autonomy). This has relevance as Mozambique enters a new phase of agricultural development investments, in which the government and the private sector are key actors. As such, these actors should not overlook the many lessons from four decades of implementation of agricultural policies and programs, which has strongly relied on the private sector for modernization of the sector.

As various national and international stakeholders venture to develop (economically) inclusive value chains – i.e. value chains that integrate smallholder farmers – these actors should also consider the pressures that the local food systems are under. In the Mozambican context, as elsewhere, inclusion needs to be redefined to mean more than integration in the value chain, higher agricultural productivity, and better incomes. It should also mean understanding of smallholder farmers as an heterogeneous group, resilience, food security, and improved nutrition. In other words, inclusion must provide better lives and empowerment for smallholder farmers, their households, their businesses (cooperatives and associations) and communities.

We can also view inclusion as freedom to trace one's own trajectory, according to one's needs and desires. This means that the contexts in which smallholder farmers are included in production models should be conducive of this freedom. It will require various types of support and services, which warrants future research into systematic and in-depth understanding of the relationships between smallholders and agribusinesses, and on interventions that provide holistic solutions for the challenges farmers recognize and voice out.

This research demonstrates the various challenges that face the sector. However, it also shows the potential for inclusiveness in Mozambique and the need to further develop the body of knowledge on locally-led inclusive development. Ultimately, a more robust body of knowledge that takes into account the aforementioned topics will contribute to better design and implementation of policies and practices, which in turn will demonstrate further how inclusive production models can contribute to the improvement of smallholder farmers' lives in the long-run.

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Annexes

Annex A – List of organizations and key informants contacted per Phase

Annex B – List of agribusinesses contacted for participation in Phase II

Annex C – Standardized Investors Questionnaire

Annex D – Village survey

Annex E – Household surveys (in Portuguese)

ANNEX A – LIST OF ORGANIZATIONS AND KEY INFORMANTS CONTACTED PER PHASE

| Organization | Type of organization | Position of KI | Type of interaction | Date of interaction | Place of interaction |
|------------------------------|----------------------|--|---------------------------------|-------------------------------------|----------------------|
| Phase I | | | | | |
| CPI | Government | Foreign investments officer | Database collection | Several (Nov-13 until Jan/14) | Maputo City |
| CEPAGRI | Government | Foreign investments officer | Database collection | Several (Nov-13 until Jan-14) | Maputo City |
| National Library | Government | N/A | Official documents consultation | Two visits (Jan-14) | Maputo City |
| MICOA | Government | N/A | Official documents consultation | Nov-13 | Maputo City |
| MINAG | Government | Agricultural Officers | Interview | Nov-13 | Maputo City |
| DNIF | Government | Agricultural and Forestry officers | Interview | Two visits (Nov-Dec/13) | Maputo City |
| CENACARTA | Government | Agricultural maps technician | Official documents consultation | Dec-13 | Maputo City |
| DPAs (See Map 1) | Government | Directors | Presentation of research | Several (Nov-Dec/13) | Various |
| SDAEs (See Map 2) | Government | Directors and Extension Officers | Presentation of research | Several (Nov-Dec/13 and Jan-Feb/14) | Various |
| Centro Terra Viva | Civil Society | Land Rights and Gender Rights officers | Interview | Several (Nov/13-Jan/14) | Maputo City |
| IAM - Instituto do Algodão | Government | Agronomist | Interview | Jan-14 | Maputo City |
| Instituto Nacional do Açúcar | Government | Director and technicians | Interview | Jan-14 | Maputo City |
| UNAC | Civil Society | Director | Interview | Nov-13 | Maputo City |
| UNAC - Gaza | Civil Society | N/A | FGD | Nov-13 | Xai-Xai, Gaza |

| Organization | Type of organization | Position of KI | Type of interaction | Date of interaction | Place of interaction |
|--|------------------------|-----------------------------------|--------------------------|----------------------|----------------------|
| Phase I | | | | | |
| Ecofarms | Investors | Partner | Interview | Nov-13 | Maputo City |
| Oil Ultimo Ltd | Investors | Partner | Interview | Nov-13 | Maputo City |
| Resilience Foundation | International NGO | Projects Officer | Interview | Nov-13 | Maputo City |
| GAIN | International NGO | Program and Network Officer | Interview | Nov-13 | Maputo City |
| Banco Terra | Financial Institution | Investments Officer | Interview | Nov-13 | Maputo City |
| Banco de Moçambique | Financial Institution | | Interview | Nov-13 | Maputo City |
| Dutch Embassy | Foreign representation | Agricultural Officers | Interview | Nov-13 | Maputo City |
| Frisian Cooperation | Foreign representation | Consultant | Phone Interview | Nov-13 | Maputo City |
| CIFOR | Research Institution | Consultants | Interview | Nov-13 | Maputo City |
| Conference on Advocacy for Social Responsibility | Conference | N/A | Attendance | Nov-13 | Maputo City |
| University of Minnesota | Academia | Phd Candidate | Informal exchanges | Several (Nov-Dec/13) | Maputo City |
| Phase II | | | | | |
| Agro-investors (See Annex B) | Investors | Various | 69 Surveys | Feb-Apr/14 | Various |
| DPAs (See Map 1) | Government | Agriculture and Fishery Directors | Presentation of research | Feb-Apr/14 | Various |
| SDAEs (See Map 2) | Government | Directors and Extension Officers | Interview | Feb-Apr/14 | Various |

| Organization | Type of organization | Position of KI | Type of interaction | Date of interaction | Place of interaction |
|---|------------------------|-------------------------------------|--------------------------------------|---------------------|----------------------|
| SPGCs (Maputo, Gaza, Nampula, Zambezia, Manica, and Niassa) | Government | Maps technicians | Database collection | Feb-Apr/14 | Various |
| CEPAGRI Nampula | Government | Agricultural investment officers | Field research support | Mar-14 | Nampula Province |
| CEPAGRI Zambezia | Government | Agricultural investment officers | Field research support | Feb-14 | Zambezia Province |
| HICEP | Government | Director and technicians | Interview | Feb-14 | Chokwe, Gaza |
| AgDevCo | Social Impact Investor | Projects Manager | Interview | Mar-14 | Chimoio, Manica |
| Universidade Eduardo Mondlane | Research Institution | Agriculture Department | Presentation of research and support | Apr-14 | Maputo City |
| Centro Terra Viva | Civil Society | Paralegal for Land Rights | Interview | Mar-14 | Chimoio, Manica |
| Phase III | | | | | |
| Association Chinhacanine | Farmer Association | Subsistence farmers - control group | FGD (9 people) | Oct-14 | Manhiça, Maputo |
| Association Cheuca | Farmer Association | Subsistence farmers - control group | FGD (10 people) | Oct-14 | Manhiça, Maputo |
| Association Combate a Pobreza | Farmer Association | Sugarcane farmers | FGD (7 people) | Oct-14 | Manhiça, Maputo |
| Association Massacre da Moeda | Farmer Association | Sugarcane farmers | FGD (12 people) | Oct-14 | Manhiça, Maputo |
| Association Eduardo Mondlane | Farmer Association | Subsistence farmers - control group | FGD (8 people) | Oct-14 | Manhiça, Maputo |
| Association Kanimambo | Farmer Association | Subsistence farmers - control group | FGD (8 people) | Oct-14 | Magude, Maputo |

| Organization | Type of organization | Position of KI | Type of interaction | Date of interaction | Place of interaction |
|-----------------------|-------------------------|-------------------------------------|---------------------|---------------------|----------------------|
| Phase III | | | | | |
| Association Syabango | Farmer Association | Subsistence farmers - control group | FGD (11 people) | Oct-14 | Magude, Maputo |
| Maciana | Community | Various | FGD (6 people) | Oct-14 | Manhiça, Maputo |
| Xinavane | Community | Various | FGD (8 people) | Oct-14 | Manhiça, Maputo |
| Lagoa Pathi | Community | Various - control group | FGD (7 people) | Oct-14 | Manhiça, Maputo |
| N'colo / Coolela | Community | Various | FGD (8 people) | Oct-14 | Magude, Maputo |
| Manhiça-Sede | Community | Various | FGD (6 people) | Oct-14 | Manhiça, Maputo |
| Maguiguana | Community | Various | FGD (9 people) | Oct-14 | Magude, Maputo |
| Nkhavane | Community | Various | FGD (10 people) | Oct-14 | Manhiça, Maputo |
| Motaze | Community | Various | FGD (8 people) | Oct-14 | Magude, Maputo |
| Lioma | Community | Various | FGD (8 people) | Jul-15 | Gurue, Zambesia |
| Tetete | Community | Various | FGD (8 people) | Jul-15 | Gurue, Zambesia |
| Magige | Community | Various | FGD (10 people) | Jul-15 | Gurue, Zambesia |
| Ruace | Community | Various | FGD (9 people) | Jul-15 | Gurue, Zambesia |
| Macuvulane I | Farmer Association | Sugarcane farmers | FGD (15 people) | Oct-14 | Magude, Maputo |
| Macuvulane II | Farmer Association | Sugarcane farmers | FGD (8 people) | Oct-14 | Magude, Maputo |
| Maria da Luz Guebuza | Farmer Association | Sugarcane farmers | FGD (4 people) | Feb-15 | Magude, Maputo |
| Association Coolela | Farmer Association | Sugarcane farmers | FGD (10 people) | Feb-15 | Magude, Maputo |
| Association 6 Janeiro | Farmer Association | Sugarcane farmers | FGD (4 people) | Feb-15 | Magude, Maputo |
| FEPROG | Cooperatives Federation | Soybean farmers | FGD (7 people) | Jul-15 | Gurue, Zambesia |
| Forum Napalame | Cooperatives Forum | Soybean farmers | FGD (6 people) | Jul-15 | Gurue, Zambesia |

| Organization | Type of organization | Position of KI | Type of interaction | Date of interaction | Place of interaction |
|--------------------------------|----------------------|-------------------------------------|---------------------|---------------------|----------------------|
| Phase III | | | | | |
| Forum Acissa-Ruace | Cooperatives Forum | Soybean farmers | FGD (5 people) | Jul-15 | Gurue, Zambezia |
| Forum Namina | Cooperatives Forum | Soybean farmers | FGD (5 people) | Jul-15 | Gurue, Zambezia |
| FOPAL | Cooperatives Forum | Soybean farmers | FGD (6 people) | Jul-15 | Gurue, Zambezia |
| Association Napuage | Farmer Association | Soybean farmers | FGD (4 people) | Jul-15 | Gurue, Zambezia |
| Association Acaba a Pobreza | Farmer Association | Soybean farmers | FGD (4 people) | Jul-15 | Gurue, Zambezia |
| COPAZA | Farmer Association | Soybean farmers | FGD (5 people) | Jul-15 | Gurue, Zambezia |
| ADECOR | Farmer Association | Soybean farmers | FGD (7 people) | Jul-15 | Gurue, Zambezia |
| Association Barragem Economica | Farmer Association | Soybean farmers | FGD (5 people) | Jul-15 | Gurue, Zambezia |
| APAR | Farmer Association | Soybean farmers | FGD (8 people) | Jul-15 | Gurue, Zambezia |
| Association Eduardo Mondlane | Farmer Association | Soybean farmers | FGD (6 people) | Jul-15 | Gurue, Zambezia |
| Association Josina Machel | Farmer Association | Soybean farmers | FGD (6 people) | Jul-15 | Gurue, Zambezia |
| Association Nossara | Farmer Association | Soybean farmers | FGD (8 people) | Jul-15 | Gurue, Zambezia |
| Association Ohawa Omale | Farmer Association | Soybean farmers | FGD (4 people) | Jul-15 | Gurue, Zambezia |
| Association Murimamar | Farmer Association | Soybean farmers | FGD (5 people) | Jul-15 | Gurue, Zambezia |
| Association Sotoma | Farmer Association | Subsistence farmers - control group | FGD (7 people) | Jul-15 | Gurue, Zambezia |
| Association Yacote | Farmer Association | Subsistence farmers - control group | FGD (5 people) | Jul-15 | Gurue, Zambezia |

| Organization | Type of organization | Position of KI | Type of interaction | Date of interaction | Place of interaction |
|-------------------------------|----------------------------|--|--|---------------------|----------------------|
| Phase III | | | | | |
| Association Cruzamento Magtje | Farmer Association | Subsistence farmers - control group | FGD (4 people) | Jul-15 | Gurue, Zambezia |
| Association Luisa Diogo | Farmer Association | Subsistence farmers - control group | FGD (8 people) | Jul-15 | Gurue, Zambezia |
| N/A | N/A | Households | 365 Surveys | Feb-Apr/15 | Maputo Province |
| N/A | N/A | Households | 160 Surveys | Jul-Sep/15 | Zambezia Province |
| Phase IV | | | | | |
| Organization | Type of organization | Position of KI | Type of interaction | Date of interaction | Place of interaction |
| Phase IV | | | | | |
| DPAP Maputo | Government | Agriculture Director and Ag. Department Director | Presentation of research and Interview | Jul-23 | Matola, Maputo |
| DPAP Zambezia | Government | Agriculture Director | Presentation of research and Interview | Jul-23 | Maputo City |
| SDAE Manhiça | Government | Agriculture Director and Extension Officers | Presentation of research and Interview | Jul-23 | Manhiça, Maputo |
| SDAE Magude | Government | Extension Officer | Field research support | Jul-23 | Magude, Maputo |
| SDAE Gurue | Government | Extension Officer | Presentation of research and Interview | Jul-23 | Online |
| MADER | Government | Several Directorates | Interview | Jul-23 | Maputo City |
| INIR | Government | Technician | Interview | Jul-23 | Maputo City |
| DNIF | Government | Director of Land and Spatial Planning | Interview | Jul-23 | Maputo City |
| ACDI/VOCA | International non-profit | Chief of Party and Project Officer | Interview | Jul-23 | Maputo City |
| AGRA | International Organization | Director and Project Officers | Interview | Jul-23 | Maputo City |

| Organization | Type of organization | Position of KI | Type of interaction | Date of interaction | Place of interaction |
|----------------------------|--------------------------|--------------------------|---------------------|---------------------|----------------------|
| Phase IV | | | | | |
| NCBA/CLUSA | International non-profit | Project Manager | Interview | Jul-23 | Online |
| SNV | International non-profit | Project Manager | Interview | Jul-23 | Maputo City |
| TechnoServe | International non-profit | Project Manager | Interview | Jul-23 | Online |
| SOCODEVI | International non-profit | Project Manager | Interview | Jul-23 | Online |
| Observatorio do Meio Rural | Research Institution | Researcher | Interview | Jul-23 | Maputo City |
| Kulima | Civil Society | Director | Interview | Jul-23 | Maputo City |
| Centro Terra Viva | Civil Society | Director and technicians | Interview | Jul-23 | Maputo City |
| Alda Salomão | Civil Society | PhD | Interview | Jul-23 | Maputo City |
| Maragra | Investor | Agronomist | Interview | Jul-23 | Manhiça, Maputo |
| Hlulukane Varime | Cooperative | Various | FGD (5 people) | Jul-23 | Manhiça, Maputo |
| Macuvulane I | Farmer Association | Various | FGD (4 people) | Jul-23 | Magude, Maputo |
| Heróis Moçambicanos | Farmer Association | Various | FGD (4 people) | Jul-23 | Magude, Maputo |
| Eduardo Mondlane | Farmer Association | Various | FGD (3 people) | Jul-23 | Magude, Maputo |
| Maria da Luz Guebuza | Farmer Association | Various | FGD (5 people) | Jul-23 | Magude, Maputo |

ANNEX B – LIST OF AGRIBUSINESSES CONTACTED FOR PARTICIPATION IN PHASE II

| Company | Province | Visited | Interviewed | Position of Interviewee | Date of interview |
|--|----------|---------|-------------|-------------------------|-------------------|
| Abilio Antunes - Frango Nacional | Nampula | Yes | No | N/A | N/A |
| African Century Matama | Niassa | Yes | Yes | Farm Manager | 11/Mar/14 |
| African Food Company | Gaza | Yes | Yes | Finance Manager | 28/Jan/14 |
| AgriSul | Gaza | Yes | Yes | Manager | 10/Feb/14 |
| Agriterra | Manica | Yes | No | N/A | N/A |
| Agriza | Manica | Yes | Yes | Owner | 26/Mar/14 |
| Agro Industrial | Maputo | No | No | N/A | N/A |
| Alfa Agriculture | Nampula | Yes | Yes | Farm Managers (2) | 06/Mar/14 |
| Alif Quimica | Zambezia | Yes | Yes | Owner Family member | 21/Feb/14 |
| Amarula Farms | Maputo | Yes | No | N/A | N/A |
| AP Alfredo Mungomi Timane | Maputo | No | Yes | Owner | 20/Feb/14 |
| AP Armando Mungomi Chauque | Maputo | No | Yes | Owner | 18/Feb/14 |
| AP Carrona Samuel Daya | Maputo | No | Yes | Owner | 20/Feb/14 |
| APJaime João Tavela Sigauque | Maputo | No | Yes | Owner | 18/Feb/14 |
| Associacao Chaua Chaua | Nampula | Yes | Yes | President | 06/Mar/14 |
| ATFC Madeiras e Agricultura | Zambezia | Yes | No | N/A | N/A |
| Bakhresa Grain Milling Moz | Nampula | Yes | No | N/A | N/A |
| Bananalandia | Maputo | Yes | Yes | Manager | 08/Feb/14 |
| Belavista | Maputo | Yes | No | N/A | N/A |
| Beluzi Bananas (Pequena Libombos Macademias) | Maputo | Yes | Yes | General Manager | 08/Feb/14 |
| Bioenergia | Maputo | Yes | No | N/A | N/A |

| Company | Province | Visited | Interviewed | Position of Interviewee | Date of interview |
|------------------------------------|--------------------|----------------|--------------------|---|--------------------------|
| CAFA | Gaza | Yes | Yes | Assistant Manager | 11/Feb/14 |
| CAM | Gaza | Yes | No | N/A | N/A |
| Company | Province | Visited | Interviewed | Position of Interviewee | Date of interview |
| Casas Agrarias | Niassa | Yes | No | N/A | N/A |
| Chikweti Forests | Niassa | Yes | Yes | Public Relations / Forestry Director | 14/Mar/14 |
| China Africa Agriculture | Maputo | Yes | Yes | Agri-technician | 16/Feb/14 |
| Clean Star | Inhambane/Sofala | No | Yes | Business Development and Strategy Manager | 28/Jan/14 |
| Companhia Agricola Murroa | Zambezia | Yes | Yes | Manager | 21/Feb/14 |
| Compania Agricola JFS | Maputo | Yes | Yes | Owner | 05/Feb/14 |
| Compania Agro-social Igo Sammartin | Gaza | Yes | No | N/A | N/A |
| Corredor Agro | Zambezia / Nampula | Yes | Yes | Farm Manager | 03/Mar/14 |
| Croc farm | Maputo | Yes | Yes | Farm Manager | 08/Feb/14 |
| CRV | Niassa | Yes | Yes | Owner | 12/Mar/14 |
| DADTCO | Nampula/Inhambane | Yes | Yes | Supply Chain Manager | 05/Mar/14 |
| Danmoz | Manica | Yes | Yes | General Manager | 24/Mar/14 |
| Deulco Emvest | Gaza/Tete | Yes | Yes | Farm Manager | 10/Feb/14 |
| E.C.A. | Manica | Yes | No | N/A | N/A |
| Eco Energia (Ouro Verde) | Cabo Delgado | No | Yes | General Manager | 18/Feb/14 |
| Ecofarm | Sofala | No | No | N/A | N/A |
| EcoMoz | Inhambane | No | No | N/A | N/A |
| Emvest Limpopo | Maputo | Yes | Yes | Farm Manager | 10/Feb/14 |
| Enerterra | Sofala | No | No | N/A | N/A |

| Company | Province | Visited | Interviewed | Position of Interviewee | Date of interview |
|---------------------------------------|-----------------|----------------|--------------------|--|--------------------------|
| Fabrica do Arroz de Namacura Zambezia | Zambezia | Yes | Yes | Production Supervisor | 24/Feb/14 |
| Farma Luz do Sol | Manica | Yes | Yes | Owner | 25/Mar/14 |
| Flore Verde | Manica | No | No | N/A | N/A |
| Company | Province | Visited | Interviewed | Position of Interviewee | Date of interview |
| Florestas do Niassa | Niassa | Yes | Yes | Head of Forestry | 13/Mar/14 |
| Galovos | Maputo/Zambezia | Yes | Yes | Assistant Manager | 08/Feb/14 |
| GETT | Nampula | Yes | No | N/A | N/A |
| Global Agroinvestimentos | Gaza | Yes | Yes | Manager | 09/Apr/14 |
| Hoyo Hoyo | Zambezia | Yes | Yes | Farm Manager | 28/Feb/14 |
| Huku | Maputo | Yes | No | N/A | N/A |
| IFLOMA | Manica | Yes | Yes | Director | 28/Mar/14 |
| IGO Sammartini | Gaza | Yes | No | N/A | N/A |
| Ikuro | Nampula | Yes | Yes | General Manager | 04/Mar/14 |
| Jacaranda Agricultura Farms | Nampula | Yes | No | N/A | N/A |
| Luambala Jatropa | Niassa | Yes | Yes | Engineer / Manager | 12/Mar/14 |
| Lurio Green Resources | Nampula | Yes | Yes | General Manager / Manager of Community Areas | 04/Mar/14 |
| Machamba Verde | Maputo | No | No | N/A | N/A |
| Macs-in-Moz | Manica | Yes | Yes | Managing Director | 27/Mar/14 |
| Madal | Zambezia | Yes | Yes | Manager | 21/Feb/14 |
| Mafavuka Banana Project | Maputo | Yes | No | N/A | N/A |
| Mandricil | Zambezia | Yes | No | N/A | N/A |

| Company | Province | Visited | Interviewed | Position of Interviewee | Date of interview |
|---------------------------|--------------|---------|-------------|------------------------------|-------------------|
| Maragra | Maputo | Yes | No | N/A | N/A |
| Massingir Agro Industrial | Gaza | No | No | N/A | N/A |
| Matanuska | Nampula | Yes | No | N/A | N/A |
| Matuel Commercial | Zambezia | Yes | Yes | Owner | 24/Feb/14 |
| Mazuri | Nampula | No | No | N/A | N/A |
| Meadow | Maputo | Yes | Yes | Sales Manager | 19/Mar/14 |
| MIA | Cabo Delgado | No | No | N/A | N/A |
| Micaia Foundation | Manica | Yes | Yes | Agriculture Projects Manager | 24/Mar/14 |

| Company | Province | Visited | Interviewed | Position of Interviewee | Date of interview |
|-------------------------------|----------------------|---------|-------------|-------------------------|-------------------|
| Milho de Manica | Manica | Yes | No | N/A | N/A |
| Miranda Agriculture | Nampula | Yes | Yes | General Manager | 06/Mar/14 |
| Mocangalp | Maputo | No | No | N/A | N/A |
| Mocotex | Zambezia | Yes | Yes | Director of Finances | 27/Feb/14 |
| Mozambican Honey Company | Manica | Yes | Yes | Manager | 26/Mar/14 |
| Mozambique Agritech | Maputo | Yes | No | N/A | N/A |
| Mozambique leaf tobacco | Niassa/Tete/Zambezia | Yes | No | N/A | N/A |
| Mozbife | Nampula | Yes | No | N/A | N/A |
| Mozpintos | Maputo | Yes | Yes | Manager | 19/Mar/14 |
| Mozseeds (Mozfoods) Chokwe | Gaza | Yes | No | N/A | N/A |
| Mozseeds (Mozfoods) Nicoadala | Zambezia | Yes | No | N/A | N/A |
| Mr Chicken | Niassa | Yes | Yes | Owner/Manager | 11/Mar/14 |
| Murimo Macademias | Zambezia | Yes | Yes | Farm Manager | 28/Feb/14 |
| New Forest Company | Niassa | Yes | Yes | Plantation Manager | 11/Mar/14 |

| Company | Province | Visited | Interviewed | Position of Interviewee | Date of interview |
|-------------------------|-----------------|----------------|--------------------|--|--------------------------|
| New Horizons | Nampula | Yes | Yes | Chief Operations Officer | 07/Mar/14 |
| Nguluzane Agro-Pecuaria | Maputo/Gaza | Yes | No | N/A | N/A |
| Nirmal Seeds | Maputo | No | No | N/A | N/A |
| Ntacua | Zambezia | Yes | Yes | Forests Technician / Accounts Managers | 27/Feb/14 |
| Nzara Yapera | Manica | Yes | Yes | Owner | 25/Mar/14 |
| Oil Ultimo Lda | Sofala | No | No | N/A | N/A |

| Company | Province | Visited | Interviewed | Position of Interviewee | Date of interview |
|---|-----------------|----------------|--------------------|--------------------------------|--------------------------|
| OLAM | Zambezia | Yes | Yes | Farm Manager | 25/Feb/14 |
| Onca Mozambique | Zambezia | Yes | Yes | Director | 25/Feb/14 |
| Orizicola Matatuine | Maputo | Yes | No | N/A | N/A |
| PiriPiri Elephante | Maputo | Yes | No | N/A | N/A |
| Polopique Mocambique | Maputo | Yes | No | N/A | N/A |
| Portucl | Zambezia | Yes | No | N/A | N/A |
| Primeiro de Maio | Zambezia | Yes | Yes | Secretary of Cooperative | 24/Feb/14 |
| Produsola | Manica | Yes | No | N/A | N/A |
| Projecto Piloto Agro-Industrial De Bio-combustiveis | Maputo | Yes | No | N/A | N/A |
| Pure Diets | Maputo | No | Yes | HR Manager | 03/Apr/14 |
| Quinta Maridza | Maputo | No | No | N/A | N/A |
| RDI | Manica | Yes | Yes | Production Manager | 27/Mar/14 |
| Recipe | Maputo | No | Yes | Owner | 14/Feb/14 |
| Rei do Agro | Zambezia | Yes | Yes | General Manager | 03/Mar/14 |

| Company | Province | Visited | Interviewed | Position of Interviewee | Date of interview |
|----------------------------|----------|---------|-------------|--------------------------------------|-------------------|
| SAB Mozambique | Maputo | No | No | N/A | N/A |
| Sanam | Nampula | Yes | Yes | Agriculture Director | 06/Mar/14 |
| SAPI | Gaza | Yes | No | N/A | N/A |
| Senwes | Manica | Yes | Yes | Operations Manager | 24/Mar/14 |
| Socajul | Gaza | Yes | Yes | Production Manager / General Manager | 03/Feb/14 |
| Sociedade Cha Zambezia Lda | Zambezia | Yes | No | N/A | N/A |
| SooSun | Manica | No | No | N/A | N/A |
| Sunway | Maputo | No | No | N/A | N/A |
| Company | Province | Visited | Interviewed | Position of Interviewee | Date of interview |
| Tectona | Zambezia | No | No | N/A | N/A |
| Tenga | Niassa | Yes | Yes | General Manager / Farm Manager | 12/Mar/14 |
| Tropical Frutos | Gaza | Yes | Yes | Productions Manager | 13/Feb/14 |
| Turquesa | Maputo | Yes | Yes | Farm Manager | 07/Feb/14 |
| Valley of Macs | Manica | No | No | N/A | N/A |
| Vanduzi (Moz foods) | Manica | Yes | No | N/A | N/A |
| Wanbao | Gaza | Yes | Yes | Agronomist | 11/Feb/14 |
| WINNUA | Zambezia | Yes | Yes | Owner | 28/Feb/14 |
| Xinavane | Maputo | Yes | Yes | Agronomist | 19/Feb/14 |
| ZAP | Zambezia | Yes | Yes | Co-Owner (Partner) | 24/Feb/14 |

ANNEX C – STANDARDIZED INVESTORS QUESTIONNAIRE

| | |
|--|--------------------------------|
| Name Surveyor(s): | Date: |
| Survey code: | |
| Name enterprise: | |
| Name respondent(s): | |
| Position respondent(s) within enterprise: | |
| Location main office: | Location(s) processing: |
| Location(s) direct cultivation: | Location(s) sourcing: |

SURVEY OF AGRICULTURAL INVESTMENTS

1. Investment characteristics

| A. Upstream Production | B. Target Market | C. Value Chain Activities |
|---|---|---|
| What crops/tree species does the investment source/produce? Specify: 1. 2. 3. 4. 5. | In which branch of the agro-sector is the investment active (multiple options possible)? <input type="checkbox"/> Livestock <input type="checkbox"/> Food <input type="checkbox"/> Bioenergy <input type="checkbox"/> Forestry <input type="checkbox"/> Textile <input type="checkbox"/> Latex <input type="checkbox"/> Beverage <input type="checkbox"/> Other: | In what value chain activities is the investment involved (multiple options possible)? <input type="checkbox"/> Marketing of inputs* <input type="checkbox"/> Training/extension services* <input type="checkbox"/> Direct cultivation <input type="checkbox"/> Sourcing of crops through contractors <input type="checkbox"/> Sourcing of crops through open market/arm's length <input type="checkbox"/> Research and Development <input type="checkbox"/> Storage <input type="checkbox"/> Processing <input type="checkbox"/> Transportation <input type="checkbox"/> Trading and Exporting <input type="checkbox"/> Retail <input type="checkbox"/> Other: (* excluding those provided to contractors) |
| D. Status | E. Capital investment | |
| What is the legal status of the investment? <input type="checkbox"/> Sole proprietorship <input type="checkbox"/> Joint venture, partnership <input type="checkbox"/> Wholly-owned subsidiary <input type="checkbox"/> Publicly listed corporation <input type="checkbox"/> Cooperative <input type="checkbox"/> Registered non-profit organization <input type="checkbox"/> Other: | How much capital has already been committed towards the investment and how much is planned? Please specify amount and currency already invested: Please specify planned amount, currency, and target year: | |

2. Financial situation

| A. Sources of finance | B. Financial performance |
|--|---|
| What are your different types of sources of finance (detail each source if willing to disclose)? <input type="checkbox"/> Subsidy <input type="checkbox"/> Grant..... <input type="checkbox"/> Project finance from IFI..... <input type="checkbox"/> Project finance from private bank..... <input type="checkbox"/> Investment fund..... <input type="checkbox"/> Raised through share issuance..... <input type="checkbox"/> Internal/parent company..... <input type="checkbox"/> Private capital..... <input type="checkbox"/> Other..... | What is the current status of your investment? <input type="checkbox"/> Active (fully operational) <input type="checkbox"/> Halted <input type="checkbox"/> Starting up <input type="checkbox"/> Closing down What was the annual turnover of the investment in the last year? Specify amount and currency: |

| | |
|--|---|
| <p>Which type of financial source listed above is most significant in value? Please specify source:</p> <p>Please specify proportion total funding:</p> | <p>Did the investment make a profit in the last year? If so, specify amount and currency:</p> <p>If no profit, when is the investment expected to become profitable? Specify year:</p> <p>What is the target return on investment (ROI) (if any)? Specify ROI (%):</p> |
|--|---|

3. Direct cultivation (if relevant – from 1C)

| A. Land access | B. Crop production activities | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|----------|------------------|------------|------------|------------|---|--|--|--|--|---|--|--|--|--|---|--|--|--|--|---|--|--|--|--|---|--|--|--|--|
| <p>How many hectares of land does the investment have access to and how many plots? Total ha..... #plots:.....</p> <p>What was the tenure status of the land prior to investment? <input type="checkbox"/> Freehold ha:..... <input type="checkbox"/> State-owned ha:..... <input type="checkbox"/> Leasehold ha:..... <input type="checkbox"/> Community/customary ha:.....</p> <p>What was the previous land use? Please estimate area under each relevant land use (use % if difficult)? <input type="checkbox"/> Forest ha:..... <input type="checkbox"/> Cultivated (smallholders) ha:..... <input type="checkbox"/> Cultivated (commercial) ha:..... <input type="checkbox"/> Fallow land ha:..... <input type="checkbox"/> Marginal/degraded ha:..... <input type="checkbox"/> Wetland ha:..... <input type="checkbox"/> Shrub/grassland ha:..... <input type="checkbox"/> Other:..... ha:.....</p> <p>What type of title do you have over the land? <input type="checkbox"/> Freehold ha:..... <input type="checkbox"/> Leasehold ha:..... years: <input type="checkbox"/> None ha:..... Specify..... (e.g. management contract, good faith agreement, in progress)</p> <p>On what terms did you gain access to your land (separate by plot, if different)? <input type="checkbox"/> Monetary. Specify (e.g. US\$/yr, X% of profit)..... <input type="checkbox"/> Other terms. Specify (e.g. hospital, school, inputs, preferential hiring)..... </p> | <p>What production processes are mechanized (if any)? Specify nature of mechanization (Mark as partial (P) or full (F)):</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>Land preparation</th> <th>Planting</th> <th>Management</th> <th>Harvesting</th> </tr> </thead> <tbody> <tr><td>1</td><td></td><td></td><td></td><td></td></tr> <tr><td>2</td><td></td><td></td><td></td><td></td></tr> <tr><td>3</td><td></td><td></td><td></td><td></td></tr> <tr><td>4</td><td></td><td></td><td></td><td></td></tr> <tr><td>5</td><td></td><td></td><td></td><td></td></tr> </tbody> </table> <p>Other:.....</p> | | Land preparation | Planting | Management | Harvesting | 1 | | | | | 2 | | | | | 3 | | | | | 4 | | | | | 5 | | | | |
| | Land preparation | Planting | Management | Harvesting | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

4. Crop sourcing activities (if relevant – from 1C)

| A. Nature of sourcing relationship | | | | | | | | | | | | |
|--|----------------------|----|----|---------------|----|----|------------------------|----|----|--------------|----|----|
| Through what type of channels do you source each of your crops ('Crops' from 1A)? Please specify typical number of sources and amount for each category. | | | | | | | | | | | | |
| | Individual outgrower | | | Tenant farmer | | | Contracted cooperative | | | Arm's length | | |
| | No. | MT | ha | No. | MT | ha | No. | MT | ha | No. | MT | Ha |
| 1 | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | |

If contracting, please specify the type and terms of support provided to each contract category (Mark with Free(F), Cost recovery (R), or Commercial (C))

| | Individual outgrower | | | | | Tenant farmer | | | | | Contracted cooperative | | | | |
|---|----------------------|---|---|---|---|---------------|---|---|---|---|------------------------|---|---|---|---|
| | S* | F | P | C | T | S | F | P | C | T | S | F | P | C | T |
| 1 | | | | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | |

*S=Seed(lings); F=Fertilizers; P=Pesticides; C=Credit; T=Technical support

| B. Contract terms | | | |
|--|----------------------|---|------------------------|
| If contracting, how long is the contract valid for (in years)? | | Which stakeholders are involved in determining crop purchase price? Please provide name(s) of relevant actor(s) | |
| | Individual outgrower | Tenant farmer | Contracted cooperative |
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| Which factors influence crop purchase price? Please specify (multiple options possible): | | 0 Government..... | |
| 0 Domestic market prices | | | |
| 0 Global market prices | | 0 Farmer union..... | |
| 0 Logistics/distribution costs | | | |
| 0 Product quality/grade | | 0 Investment-specific farmer representatives..... | |
| 0 Distance to individual contractor | | 0 Consultative forum..... | |
| 0 | | | |
| Other:..... | | 0 Customers..... | |
| | | | |
| | | 0 Other..... | |
| | | | |
| | | 0 None/only investor | |
| | | | |
| | | If a standard pricing formula is applied, please provide specifics (for each crop/contract category if relevant and different): | |
| | | | |
| | | | |
| | | | |

| C. Selection/inclusion criteria | D. Production requirements |
|---|--|
| <p>How are farmers/cooperatives selected for inclusion in your contracting scheme? Please specify thresholds:</p> <p><input type="checkbox"/> Technical capacity</p> <p><input type="checkbox"/> Distance to processing/collection facility.....</p> <p><input type="checkbox"/> Minimum size of farm.....</p> <p><input type="checkbox"/> Maximum size of farm.....</p> <p><input type="checkbox"/> Land quality.....</p> <p><input type="checkbox"/> Land tenure security.....</p> <p><input type="checkbox"/> Household labour profile.....</p> <p><input type="checkbox"/> Other:.....</p> | <p>Do you require your contractors to adopt certain practices in their production? Please specify:</p> <p><input type="checkbox"/> Maintain certain area with subsistence crops.....</p> <p><input type="checkbox"/> Conform to labour standards.....</p> <p><input type="checkbox"/> Adopt certain agronomic practices.....</p> <p><input type="checkbox"/> Ban from converting certain lands.....</p> <p><input type="checkbox"/> Contribute to (group) savings.....</p> <p><input type="checkbox"/> Other.....</p> |

5. Processing (if relevant – from 1C)

| A. Processing activities | B. End-product | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|-----------------------|----------------------------|-----------------------|----------------------------|---|--|--|--|---|--|--|--|---|--|--|--|---|--|--|--|---|--|--|--|
| <p>What processing activities are you involved in?</p> <p><input type="checkbox"/> Sawing</p> <p><input type="checkbox"/> Ginning</p> <p><input type="checkbox"/> Drying</p> <p><input type="checkbox"/> Dehusking</p> <p><input type="checkbox"/> Oil extraction</p> <p><input type="checkbox"/> Milling</p> <p><input type="checkbox"/> Energy (co-)generation</p> <p><input type="checkbox"/> Canning</p> <p><input type="checkbox"/> Packaging</p> <p><input type="checkbox"/> Other.....</p> | <p>What final products do you produce? Specify:</p> <table border="1"> <thead> <tr> <th></th> <th>Product</th> <th>Annual output (MT/yr)</th> <th>Installed capacity (MT/yr)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td></td> <td></td> <td></td> </tr> <tr> <td>3</td> <td></td> <td></td> <td></td> </tr> <tr> <td>4</td> <td></td> <td></td> <td></td> </tr> <tr> <td>5</td> <td></td> <td></td> <td></td> </tr> </tbody> </table> | | Product | Annual output (MT/yr) | Installed capacity (MT/yr) | 1 | | | | 2 | | | | 3 | | | | 4 | | | | 5 | | | |
| | Product | Annual output (MT/yr) | Installed capacity (MT/yr) | | | | | | | | | | | | | | | | | | | | | | |
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | |

6. Labour

| A. Characteristics labour force | B. Employment conditions | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|--------------------|------------------------|--------------------|-------|--------|------|--|--|--|--|----------------|--|--|--|--|----------------|--|--|--|--|---------------------|--|--|--|--|---------|--|--|--|--|-------------------|--|--|--|--|--------------|--|--|--|--|-------------------|--|--|--|--|------------------|--|--|--|--|-----------|--|--|--|--|---------------------|--|--|--|--|---------|--|--|--|--|------------|--|--|--|--|--------------|--|--|--|--|-------------|--|--|--|--|-------|--|--|--|--|-------|--|--|--|--|
| <p>How many employees belong to the following contract categories?</p> <p>Permanent (non-management):</p> <p>Permanent (management):</p> <p>Fixed-term:</p> <p>Casual (range, from # in low season to high season):</p> <p>What proportion of your staff is local? (use count if difficult)</p> <p>Local:</p> <p>Other domestic:</p> <p>Foreign:</p> <p>What proportion of your staff is male and female? (use count if difficult)</p> <p>Male:</p> <p>Female:</p> <p>What is the typical monthly wage range for the following contract categories?</p> <p>Permanent (non-management):</p> <p>Permanent (management):</p> <p>Fixed-term:</p> <p>Casual:</p> | <p>What secondary benefits are the following contract categories eligible for (indicate with X when relevant)?</p> <table border="1"> <thead> <tr> <th>Benefits</th> <th>Permanent (non-manage)</th> <th>Permanent (manage)</th> <th>Fixed</th> <th>Casual</th> </tr> </thead> <tbody> <tr> <td>Food</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Food allowance</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Transportation</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Transport allowance</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Housing</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Housing allowance</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Medical care</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Medical allowance</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Health insurance</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Schooling</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Schooling allowance</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Pension</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Sick leave</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Annual leave</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Other:.....</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>.....</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>.....</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> | Benefits | Permanent (non-manage) | Permanent (manage) | Fixed | Casual | Food | | | | | Food allowance | | | | | Transportation | | | | | Transport allowance | | | | | Housing | | | | | Housing allowance | | | | | Medical care | | | | | Medical allowance | | | | | Health insurance | | | | | Schooling | | | | | Schooling allowance | | | | | Pension | | | | | Sick leave | | | | | Annual leave | | | | | Other:..... | | | | | | | | | | | | | | |
| Benefits | Permanent (non-manage) | Permanent (manage) | Fixed | Casual | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Food | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Food allowance | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Transportation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Transport allowance | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Housing | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Housing allowance | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Medical care | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Medical allowance | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Health insurance | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Schooling | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Schooling allowance | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pension | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sick leave | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Annual leave | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Other:..... | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

7. Marketing

| A. Target market | | | | | | |
|---|---------------------------------|--------------------------------|----------------------------|----------------------------|--------------------------|-----------------------------|
| Do you know where your customers or your retail outlets (if any) market your products, and if so, please specify target markets)? | | | | | | |
| | Name customer/ retail outlet | Know target market (Y/N) | Proportion domestic (%) | Proportion regional (%) | Rest of the world (%) | Major target markets (name) |
| 1 | | | | | | |
| 2 | | | | | | |
| 3 | | | | | | |
| 4 | | | | | | |
| 5 | | | | | | |

8. Shareholdings

| A. Ownership | | | | | |
|---|------|---------------------|----------------------|------------------------------|---|
| Who are the main shareholders of the investment (people/legal entities)?* | | | | | |
| | Name | Equity share (%) | Country of origin | Sectoral focus/ expertise | Year originally established (if company) |
| 1 | | | | | |
| 2 | | | | | |
| 3 | | | | | |

* If a farmer cooperative, specify 'farmers' under 'name', with the number in brackets.

If shareholder is non-domestic, what experience (if any) do the above shareholders have in this country?

| | Year of first operation | Sectoral focus | Geographic focus |
|---|-------------------------|----------------|------------------|
| 1 | | | |
| 2 | | | |
| 3 | | | |

9. Sustainability

| A. Adoption of initiatives | | | | B. Practices | | | |
|---|--------------------|----------------|--------------|--|--------------|------|-------|
| Has the investment adopted/is in the process of adopting/planning to adopt any of the following product quality standards or sustainability initiatives (please mark with X and specify on dotted line)? | | | | Which of the following practices have you to date systematically adopted (Mark with X unless otherwise indicated)? | | | |
| Benefits | Adopted | In the process | Planned | Type of activity | Not relevant | None | Adopt |
| GLOBALGAP | | | | <i>Infrastructure development (Include recipient in 'Adopt': Mark with Community (C), Investment/employees (I), and Both (B)).</i> | | | |
| International Food Standard (IFS) | | | | Hospital(s) | | | |
| National standards (e.g. BRC) | | | | School(s) | | | |
| ISO 22000 | | | | Road(s) | | | |
| Customer-specific standards..... | | | | Boreholes(s) | | | |
| Occupational health & safety plan | | | | Electricity | | | |
| Impact mitigation strategy | | | | <i>Host community development (include recipient in 'Adopt': Mark with Individual Household (H), Community/collective (C))</i> | | | |
| CSR policy | | | | Consultation for land loss | | | |
| UN Global Compact | | | | Sought consent for land loss | | | |
| OECD Guidelines on Multinational Enterprises | | | | Compensation for loss of farmland | | | |
| Global Reporting Initiative | | | | Compensation for loss of access to CPR | | | |
| ISO 14001 | | | | Periodic payment of royalties | | | |
| Ethical Trading Initiative (ETI) | | | | Community development fund | | | |
| Fair Labor Association (FLA) | | | | Community liaison officer | | | |
| Forest Stewardship Council (FSC) | | | | Preferential hiring | | | |
| Rainforest Alliance | | | | Alternative livelihood activities | | | |
| Fairtrade Labelling Organization (FLO) | | | | Access to inputs at concessionary rates | | | |
| Industry Moratorium..... | | | | <i>Environmental management</i> | | | |
| Roundtable initiative..... | | | | Environmental monitoring system | | | |
| National sustainability initiatives..... | | | | Steep terrain and fragile soils avoided | | | |
| Other..... | | | | HCV areas are preserved | | | |
| | | | | Riparian buffer zones maintained | | | |
| | | | | Significant trees preserved | | | |
| | | | | Soil erosion prevention techniques | | | |
| | | | | Integrated pest management techniques | | | |
| | | | | Documented identification of waste/sources of pollution and procedures for action | | | |
| | | | | Wastes are recycled | | | |
| | | | | Records of pesticide use and their ingredients | | | |
| If production is presently certified, please provide information on the magnitude by crop (from 1A)? | | | | | | | |
| | Direct cultivation | | Sourcing | | | | |
| | Area (in ha) | % output | Area (in ha) | % output | | | |
| 1 | | | | | | | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |

10. Drivers

| A. Decision-making | | | | | | |
|---|---------------------------|---------------------|-------------------------------|---------------------|---------------------------|--|
| Which factors have influenced your adherence to a sustainability initiative and adoption of associated practices? (Mark with X or as 'Not Relevant (NR)) | | | | | | |
| Factors | Very negative effect (--) | Negative effect (-) | No effect (0) or not relevant | Positive effect (+) | Very positive effect (++) | |
| Customer demand | | | | | | |
| Supplier demand | | | | | | |
| Target market regulations | | | | | | |
| Host country regulations | | | | | | |
| Country of origin regulations | | | | | | |
| Local civil society organization | | | | | | |
| International civil society org. aniorgorgfororganizations | | | | | | |
| Host community demand | | | | | | |
| Local elites (e.g. chiefs, politicians) | | | | | | |
| Investment license conditionalities | | | | | | |
| Environmental license conditionalities | | | | | | |
| Land (lease) conditionalities | | | | | | |
| Board of directors | | | | | | |
| Shareholders | | | | | | |
| Investment's managers | | | | | | |
| External financiers | | | | | | |
| Other..... | | | | | | |
| | | | | | | |
| | | | | | | |

| In your perception, how does this country compare to other countries in the region on the following indicators? (Mark with X)? Please also rank the top 5 factors influencing your ultimate country selection decision, in order of significance. | | | | | | |
|--|------------|--------------------|--------------|-------------|--------------|--------------------|
| Factors | Rank top 5 | Very negative (--) | Negative (-) | Similar (0) | Positive (+) | Very positive (++) |
| Domestic market opportunities | | | | | | |
| Price of inputs | | | | | | |
| Investment incentives/support | | | | | | |
| Investment protection agreem. | | | | | | |
| Macro-economic stability | | | | | | |
| Political stability | | | | | | |
| Geographic location | | | | | | |
| Physical infrastructure | | | | | | |
| Availability of suitable land | | | | | | |
| Business contacts | | | | | | |
| Legal and institutional framework | | | | | | |
| Availability of skilled labor | | | | | | |
| Relations between origin and host country | | | | | | |
| Linguistic similarities | | | | | | |
| Other..... | | | | | | |
| | | | | | | |
| | | | | | | |

Did you consider other countries for this investment? If so, which, and why were they not selected?
 Country name(s):
 Reason:

In your perception, how does the specific location you are currently investing in compare to others in the country on the following indicators? (Mark with X)? Please also rank the top 5 factors influencing your ultimate site selection decision, in order of significance.

| Factors | Rank top 5 | Very negative (-) | Negative (-) | Similar (0) | Positive (+) | Very positive (++) |
|--|------------|-------------------|--------------|-------------|--------------|--------------------|
| Distance to urban centers | | | | | | |
| Distance to transportation hubs | | | | | | |
| Distance to customers | | | | | | |
| Quality of physical infrastructure | | | | | | |
| Availability of skilled labour | | | | | | |
| Availability of menial labor | | | | | | |
| Accessibility of inputs | | | | | | |
| Receptive host communities | | | | | | |
| Amenable relations with local elites | | | | | | |
| Receptive local administration | | | | | | |
| Soil type/quality | | | | | | |
| Availability of water sources | | | | | | |
| Rainfall intensity/variability | | | | | | |
| Proximity to other investors | | | | | | |
| Proximity to affiliated activities/subsidiaries | | | | | | |
| Does not conflict with forests | | | | | | |
| Does not conflict with smallholders | | | | | | |
| Established on-farm infrastructure | | | | | | |
| Tenure situation is clear | | | | | | |
| Cultural/linguistic affinity | | | | | | |
| Ability to recover establishment costs through resource sale (e.g. timber) | | | | | | |
| Absence of conflicts | | | | | | |
| Opportunities within local markets | | | | | | |
| Other..... | | | | | | |

Who (if any) helped you in your establishment (e.g. in contracting suppliers, identifying willing sellers/leasers of land)?
 Type of actor(s):
 Role:

Did you consider other sites for this investment? If so, which, and why were they not selected?
 Specific location name(s):
 Reason:

B. Sources of information

| In evaluating geographic suitability, which stakeholders provided useful information to you? | What type of information did selected stakeholders provide to help you in your decision making (List stakeholders in the columns and mark with X)? | | |
|--|--|-------|-------|
| 0 Ministry of Environment | Type of info | | |
| 0 Ministry of Agriculture | Economic feasibility study | | |
| 0 Ministry of Lands | Technical feasibility study | | |
| 0 Investment Promotions Agency | Environmental and social impact assessment | | |
| 0 Hired consultants | Remote sensing/satellite imagery | | |
| 0 Business relations/contacts | Agro-ecological zoning maps | | |
| 0 In-house expertise | Land use plans | | |
| 0 Legal counsel | Government land bank | | |
| 0 Host communities | Verbal/qualitative | | |
| 0 Local elite | Other..... | | |
| 0 Other..... | | | |

ANNEX D – VILLAGE SURVEY



Village survey – LIFFE Options Project

A – General information

| | |
|--|--|
| Village Name | |
| GPS coordinates of village center (in degrees) | |
| Person(s) interviewed | |
| Interview date | |

B – Population

| | |
|---|--|
| 1. In what year was the village established? | |
| 2. What is the current population of the village? | |
| 3. How many households currently live in this village? | |
| 4. What was the total population of the village 10 years ago? | |
| 5. How many households lived in the village 10 years ago? | |
| How many persons (approx.) living here now have moved to the village in the past 10 years (in-migration)? | |
| 7. How many persons (approx.) have left the village over the past 10 years (outmigration)? | |
| 8. How many different groups (ethnic groups, tribes or castes) are living in the village? | |
| 9. Is the village part of a larger 'community'? | |
| 10. If yes, what is the name of the community? | |
| 11. How many farmer associations are active in the village? | |
| 12. Does the village have a sugarcane association? If so, specify the name(s). | |
| 13. If no under 12, why is there no sugarcane association? | |

C – Infrastructure

| Infrastructure | Is a [infrastructure] available within the village (Code A) | If no, what is the distance to the nearest [infrastructure] (in km) | If yes, who operates and/or maintains the [infrastructure] in the village? (Code B) | If yes, how did Company X contribute to the [infrastructure] (Code C) |
|----------------------|---|---|---|---|
| 1. Health center | | | | |
| 2. Primary school | | | | |
| 3. Secondary school | | | | |
| 4. Boreholes | | | | |
| 5. Piped water | | | | |
| 6. Electricity | | | | |
| 7. Community center | | | | |
| 8. Food market | | | | |
| 9. All weather roads | | | | |

Codes A

1. Yes

0. No

Codes B

1. Company X

2. Government

3. NGO

4. Community (collective)

5. Other, specify.....

0. None/NR

Codes C

1. Rehabilitation

2. Construction

0. None

D – Land ownership and use

| | |
|---|--|
| 1. How much land does the village own? (in ha) | |
| 2. How much of the village's land is covered by forests (specify % or ha) | |
| 3. How much of the village's land is covered by cropland, including fallow (specify % or ha) | |
| 4. How much of the village's land is covered by pasture (specify % or ha) | |
| 5. Does the village have a DUAT? | |
| 6. If no and part of a larger communities, does the community have a DUAT? | |
| 7. If there is a community/village DUAT, who provide d support in securing the DUAT (e.g. NGO, company, etc.) | |

E – Land used by different stakeholder groups within village area

| Stakeholder group | Approx. number of persons/projects | Total approximate area (in ha) | What do they use the land for? (Code A) | Terms of use (Code B) | When was the land allocated? (specify year, or range) | Who allocated the land? (Code C) |
|--|------------------------------------|--------------------------------|---|-----------------------|---|----------------------------------|
| 1. Old migrants (before or during civil war) | | | | | | |
| 2. New migrants (after the civil war) | | | | | | |
| 3. Sugarcane association | | | | | | |
| 4. Company X | | | | | | |
| 5. Other private investors | | | | | | |
| 6. Government | | | | | | |
| 7. Other, specify..... | | | | | | |

Codes A

1. Subsistence agriculture
2. Commercial agriculture
3. Other, specify.....

Codes B

1. None
2. Fixed land rent
3. Profit share
4. Sharecropping
5. One-off payment
6. Other, specify.....

Codes C

1. Individual community members
2. Community-level authorities
3. Village-level authorities
4. Forcibly acquired by government
5. Forcibly acquired by individual stakeholders

F - Crises and development challenges

14. If any crisis, please provide details (e.g. most serious crises, duration, most affected persons, livelihood impacts etc.)?

.....

.....

15. What are the key development challenges facing the community (e.g. infrastructure, crop productivity, land constraints, participation in company X)?

.....

.....

| Crises | Has the community faced any of the following crises in the past 5 years? (Yes-1, no-0) | If yes, did these crises also take place in the past 12 months? (Yes-1, no-0) |
|------------------------------------|--|---|
| 1. Flood and/or excess rain | | |
| 2. Drought | | |
| 3. Wild fire | | |
| 4. Crop pest or disease | | |
| 5. Animal disease | | |
| 6. Wildlife predation on livestock | | |
| 7. Bridge/road washed out | | |
| 8. Land conflict within community | | |
| 9. Land conflicts with 'outsiders' | | |
| 10. Political/civil conflict | | |
| 11. Human epidemic (disease) | | |
| 12. Economic crisis | | |
| 13. Other, specify..... | | |

ANNEX E – HOUSEHOLD SURVEYS (IN PORTUGUESE)

Data:

Inquéritos para Agregados Familiares – UFFE Options

A – Informação da Entrevista

| |
|--|
| Nome do Entrevistador |
| Nome do Respondente |
| Distrito |
| Bairro |
| Estudo de caso |
| Tipo de ator (1- Somente membro de associação de cana; 2- Somente empregado do setor açucareiro; 3 – Ambos 1 e 2; 4 – Outros membros da comunidade onde há produção de cana; 5- Controle) |
| Número do agregado familiar |

B – Características dos membros do agregado

| Nome do membro do agregado (começar com chefe) | Sexo (Code A) | Estado Civil (Code B) | Idade (anos – Code C) | Relação quanto ao chefe (Code D) | É e escreve? (Code E) | Maior grau educacional completo (Code F) | Atualmente na escola? (Code E) | Razão para não frequentar a escola (Menores de 18 - Code G) | Doente demais para ir a escola/trabalhar nas últimas 4 semanas? (Code E) | Se sim, consultou provedor de saúde? (Code H) |
|--|---------------|-----------------------|-----------------------|----------------------------------|-----------------------|--|--------------------------------|---|--|---|
| 1. | | | | | | | | | | |
| 2. | | | | | | | | | | |
| 3. | | | | | | | | | | |
| 4. | | | | | | | | | | |
| 5. | | | | | | | | | | |
| 6. | | | | | | | | | | |
| 7. | | | | | | | | | | |
| 8. | | | | | | | | | | |
| 9. | | | | | | | | | | |
| 10. | | | | | | | | | | |
| 11. | | | | | | | | | | |
| 12. | | | | | | | | | | |
| 13. | | | | | | | | | | |

Codes A

1. Homem
0. Mulher

Codes B

1. Casado/vivendo com cônjuge
2. Casado, mas cônjuge mora fora
3. Divorçado/Separado
4. Viúvo(a)
5. Nunca casou
6. Outro, especificar....

Codes C

1. Menos de 5 anos
2. De 5 a 18 anos
3. De 18 a 65 anos
4. Mais de 65 anos

Codes D

1. Chefe do agregado
2. Cônjuge
3. Filho(a)
4. Pai/Mãe
5. Genro/Nora
6. Neto(a)
7. Outro parente
8. Empregado
9. Outro, especificar.....

Codes E

1. Sim
0. Não

Codes F

1. Escola Primária (5^ª)
2. Escola Primária Completa (7^ª)
3. Escola Secundária (10^ª)
4. Pré-Universitário (12^ª)
5. Ensino Técnico Básico
6. Ensino Técnico Médio
7. Universidade
8. Nenhum desses acima
9. Outro, especificar.....

Codes G

1. Longe demais
2. Caro demais
3. Tem que trabalhar em casa
4. Tem que ir ao emprego/serviço
5. Não tem interesse
6. Doente/grávida
7. Casou-se
8. Reprovado(a) nos exames
9. Perdeu a matrícula ou matrícula negada
10. Outro, especificar.....

Codes H

1. Sim – hospital público
2. Sim – hospital privado
3. Sim – posto de saúde comunitário
4. Sim – curandeiro
5. Sim – outro, especificar....
6. Não – longe demais
7. Não – caro demais
8. Não – não achou necessário
9. Não – Outro, especificar.....

C – Emprego produtivo (somente perguntar para pessoas com 5 ou mais anos; excluir tarefas domésticas)

| Membro do agregado | Normalmente contribui para a renda ou comida do agregado? (Code A) | Desempenhou algum tipo de trabalho nos últimos 7 dias? (Code A) | Se não, por que? (Code B) | Número de empregos (número) | Trabalha principalmente para quem? (Code C) | Foco do setor do trabalho principal (Code D) | Tipo de pagamento (Code E) | Está pronto(a) para assumir trabalho adicional nas próximas 4 semanas? (Code A) |
|--------------------|--|---|---------------------------|-----------------------------|---|--|----------------------------|---|
| 1. | | | | | | | | |
| 2. | | | | | | | | |
| 3. | | | | | | | | |
| 4. | | | | | | | | |
| 5. | | | | | | | | |
| 6. | | | | | | | | |
| 7. | | | | | | | | |
| 8. | | | | | | | | |
| 9. | | | | | | | | |
| 10. | | | | | | | | |
| 11. | | | | | | | | |
| 12. | | | | | | | | |
| 13. | | | | | | | | |

Codes A

1. Sim
0. Não

Codes B

1. Inatividade sazonal
2. Estudos
3. Deveres domésticos
4. Velho/jovem demais
5. Deficiência permanente
6. Falta de trabalho
7. Doença
8. Outro, especificar...

Codes C

1. Governo
2. Paraestatal
3. Companhia X
4. Associação
5. Outra companhia
6. Agregado/si própria
7. Empregador privado
8. Outro, especificar....

Codes D

1. Agricultura (canas açucaradas)
2. Agricultura (outras culturas)
3. Florestal
4. Mineração
5. Manufatura/processamento
6. Transporte
7. Comércio/vendas
8. Serviços
9. Educação/saúde
10. Administração
11. Outro, especificar

Codes E

1. Salário fixo
2. Casual (por hora/por dia/por tarefa)
3. Em favor ou em produtos
4. Não pago
5. Emprego a si própria
6. Outro, especificar...

D – Importância da atividade para o agregado familiar (ver tabela de códigos anexa)

| Categoria da atividade | Atividade mais importante (atividade/fonte de renda) | Segunda atividade (nomeie a atividade/fonte de renda) | Terceira atividade (nomeie a atividade/fonte de renda) | Ordem de importância (1,2,3...) |
|------------------------|--|---|--|---------------------------------|
| Florestal | | | | |
| Criação de animais | | | | |
| Agricultura | | | | |
| Pesca | | | | |
| Mineração artesanal | | | | |
| Emprego | | | | |
| Pequeno negócio | | | | |
| Remessas | | | | |
| Pensão | | | | |
| Subsídios | | | | |
| Outra, especificar.. | | | | |

E – Terra e atividades

E.1 – Posse do direito ao uso de terra

| Plot ID | Área (número e unidade, ex. 3 ha) | Tipo de posse (Code A) | Modo de aquisição original (Code B) | Termos de uso (Code C) | Ano de aquisição | Uso da terra antes da aquisição (Code D) | Localização do terreno (Code E) | Conflitos por esse terreno nos últimos 5 anos? (Code F) | Sim? Com quem? (Code G) |
|---------|-----------------------------------|------------------------|-------------------------------------|------------------------|------------------|--|---------------------------------|---|-------------------------|
| 1 | | | | | | | | | |
| 2 | | | | | | | | | |
| 3 | | | | | | | | | |
| 4 | | | | | | | | | |
| 5 | | | | | | | | | |
| 6 | | | | | | | | | |
| 7 | | | | | | | | | |

Codes A

1. Título individual
2. Costumeiro (sem documento oficial)
3. Título coletivo (ex. através de associação)
4. Terra comunitária
5. Estatal
6. Terreno da companhia
7. Terreno privado
8. Outro, especificar.....

Code B

1. Herança
2. Comprada
3. Alugada
4. Empréstada de graça
5. Doação/alocação por líderes locais
6. Doada pelo Estado
7. Doada pela Companhia X
8. Tomada
9. Outra, especificar...

Code C

1. Nenhum
2. Renda fixa (não inclui taxas oficiais)
3. Divisão de lucros
4. Divisão de produção
5. Ofertas periódicas
6. Outros, especificar...

Codes D

1. Agricultura de subsistência
2. Agricultura comercial
3. Pousio
4. Floresta
5. Capim
6. Mangais
7. Arbustos
8. Não sabe/muito tempo atrás
9. Outro, especificar.....

Codes E

1. No bairro
2. Fora do bairro, mas ainda na comunidade
3. Fora da comunidade

Codes F

1. Sim
0. Não

Codes G

1. Outra comunidade/membros da associação
2. Migrantes
3. Companhia X
4. Outros investidores privados
5. Estado
6. Outro, especificar.....

E.2 – Atividades na terra (se agregado estiver envolvido com agricultura)

| Plot ID | Área do terreno cultivada na última campanha? (Code A) | Se sim, quem decidiu o que plantar? (Code B) | Quem trabalhou no terreno na última campanha? (3 pessoas, Code C) | Quais foram os principais usos do terreno na última campanha? (nomeie até 3 usos de terra (ex. culturas), em ordem de importância) | Tipo de atividades de produção (Code D) | Como a produção foi usada? (Code E) | Se vendida, para quem? (Code F) |
|---------|--|--|---|--|---|-------------------------------------|---------------------------------|
| 1 | | | | | | | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |
| 7 | | | | | | | |

Codes A

1. Sim
0. Não

Codes B

1. Chefe do agregado
2. Cônjuge
3. Pai/Mãe
4. Filhos/Netos
5. Empregado contratado diretamente pelo agregado
6. Agregado inteiro
7. Associação
8. Companhia X
9. Outro, especificar....

Codes C

1. Membros do agregado
2. Empregados contratados pelo agregado
3. Empregados da associação
4. Empregados da Companhia X
5. Outros, especificar.....

Codes D

1. Cultivo permanente
2. Periódico (rotação de terreno)
3. Periódico (quando necessário)
4. Outro, especificar.....

Codes E

1. Totalmente para consumo próprio
2. Totalmente vendida
3. Maior parte para consumo próprio
4. Maior parte para venda
5. Metade para consumo, metade para venda

Codes F

1. Mercado local
2. Companhia X
3. Governo
4. ONG
5. Intermediário
6. Comerciantes
7. Associação
8. Outro, especificar.....

:3 – Uso de insumos (se envolvido na agricultura e se for aplicado pelo agregado sem participação da associação)

| Insumo | Insumos usados durante a última campanha? (Code A) | Se sim, em quais terrenos (listar número dos terrenos de E.1) | Que quantidade foi usada durante a última campanha? (e especificar unidade) | Proveniência do insumo (Code B) | Tipo de contrato (Code C) | Tipo de pagamento (Code D) |
|---------------------------------------|--|---|---|---------------------------------|---------------------------|----------------------------|
| 1. Semente melhorada | | | | | | |
| 2. Fertilizantes | | | | | | |
| 3. Pesticida, herbicida, ou fungicida | | | | | | |
| 4. Tratores | | | | | | |
| 5. Colheitadeiras | | | | | | |
| 6. Irrigação | | | | | | |
| 7. Crédito | | | | | | |
| 8. Apoio técnico | | | | | | |
| 9. Outro, especificar..... | | | | | | |

Codes A

1. Sim
0. Não

Codes B

1. ONG
2. Governo
3. Companhia X
4. Associação
5. Clube de agricultores
6. Loja/Mercado
7. Outro, especificar.....

Codes C

1. Acordo verbal
2. Acordo escrito
0. Nenhum

Codes D

1. De graça
2. Em dinheiro
3. Pagamento depois da colheita sem juros
4. Pagamento depois da colheita com juros
5. Divisão de lucros depois da colheita
6. Empréstimo de longo prazo com juros
7. Empréstimo de longo prazo sem juros
8. Outro, especificar.....

– Bens do Agregado Familiar

| | | |
|---|--|---|
| <p>1. O agregado ou um de seus membros é dono da habitação?</p> <p><input type="checkbox"/> Habitação própria</p> <p><input type="checkbox"/> Habitação alugada</p> <p><input type="checkbox"/> Uso sem pagamento de renda</p> <p><input type="checkbox"/> Uso nômade or temporário</p> <p>2. Quantas divisões há na habitação? _____</p> <p>3. Comparado há 5 anos, a quantidade de terra à disposição do agregado:</p> <p><input type="checkbox"/> Aumentou</p> <p><input type="checkbox"/> Diminuiu</p> <p><input type="checkbox"/> É igual</p> <p><input type="checkbox"/> Não se aplica, nunca teve acesso à terra</p> <p>4. O agregado perdeu alguma terra para produção de cana?</p> <p><input type="checkbox"/> Não</p> <p><input type="checkbox"/> Sim, para associação de cana (não-membros)</p> <p><input type="checkbox"/> Sim, para a Companhia X</p> <p>Se sim, qual a área perdida?.....</p> <p>5. Comparado há 5 anos, o acesso a áreas florestais:</p> <p><input type="checkbox"/> Aumentou</p> <p><input type="checkbox"/> Diminuiu</p> <p><input type="checkbox"/> É igual</p> | <p>6. Comparado há 5 anos, o acesso a áreas de pastagens:</p> <p><input type="checkbox"/> Aumentou</p> <p><input type="checkbox"/> Diminuiu</p> <p><input type="checkbox"/> É igual</p> <p><input type="checkbox"/> Não se aplica, nunca teve acesso a pastagens</p> <p>7. Quantas cabeças de gado ou outros grandes animais o agregado possui atualmente? <input type="text"/></p> <p>8. Comparado há 5 anos, o número de cabeças de gado:</p> <p><input type="checkbox"/> Aumentou</p> <p><input type="checkbox"/> Diminuiu</p> <p><input type="checkbox"/> É igual</p> <p><input type="checkbox"/> Não se aplica, nunca teve cabeças de gado <input type="text"/></p> <p>9. Quantas ovelhas, cabras ou outros animais de médio porte o agregado possui atualmente?</p> <p>10. Comparado há 5 anos, o número desses animais:</p> <p><input type="checkbox"/> Aumentou</p> <p><input type="checkbox"/> Diminuiu</p> <p><input type="checkbox"/> É igual</p> | <p>11. O agregado possui que seguintes bens em estado funcional?</p> <p><input type="checkbox"/> Ferro de engomar elétrico</p> <p><input type="checkbox"/> Ferro de engomar a carvão</p> <p><input type="checkbox"/> Geleira</p> <p><input type="checkbox"/> Televisão</p> <p><input type="checkbox"/> Telermóvel</p> <p><input type="checkbox"/> Rádio</p> <p><input type="checkbox"/> Colchão ou cama</p> <p><input type="checkbox"/> Fogão moderno</p> <p><input type="checkbox"/> Bicicleta</p> <p><input type="checkbox"/> Motocicleta</p> <p><input type="checkbox"/> Veículo</p> <p><input type="checkbox"/> Ventoinha</p> <p><input type="checkbox"/> Computador pessoal</p> <p><input type="checkbox"/> VCR/DVD player</p> <p><input type="checkbox"/> Sofá</p> <p><input type="checkbox"/> Gerador</p> <p>12. O agregado usa sistematicamente?</p> <p><input type="checkbox"/> Sabão</p> <p><input type="checkbox"/> Pasta de dente</p> <p><input type="checkbox"/> Remédios de farmácia</p> <p><input type="checkbox"/> Açúcar</p> |
|---|--|---|

G- Amenidades do Agregado

| | | |
|--|---|---|
| <p>1. Qual o material a compor o telhado da casa?</p> <input type="checkbox"/> Matope/Lama <input type="checkbox"/> Caniço <input type="checkbox"/> Chapas de metal/zinco <input type="checkbox"/> Cimento/concreto <input type="checkbox"/> Telhas <input type="checkbox"/> Asbesto/Amianto <input type="checkbox"/> Outro..... | <p>4. Qual a principal fonte de água para beber?</p> <input type="checkbox"/> Canalizada dentro da habitação ou complexo <input type="checkbox"/> Torneira pública externa ou furo d'água <input type="checkbox"/> Fonte coberta <input type="checkbox"/> Fonte desprotegida/água de chuva <input type="checkbox"/> Rio, lago, ou afins <input type="checkbox"/> Vendedor ou camião d'água <input type="checkbox"/> Outro..... | <p>6. Qual é o principal combustível para cozinhar?</p> <input type="checkbox"/> Lenha/Madeira <input type="checkbox"/> Carvão <input type="checkbox"/> Querosene/óleo <input type="checkbox"/> Gás <input type="checkbox"/> Eletricidade <input type="checkbox"/> Resíduos de madeira ou de culturas <input type="checkbox"/> Dejetos de animais <input type="checkbox"/> Outro..... |
| <p>2. Qual o material das paredes de sua casa?</p> <input type="checkbox"/> Matope/Lama <input type="checkbox"/> Pedras <input type="checkbox"/> Tijolos queimados <input type="checkbox"/> Madeira/Bambu <input type="checkbox"/> Chapas de metal <input type="checkbox"/> Papelão <input type="checkbox"/> Blocos de cimento <input type="checkbox"/> Outro..... | <p>5. Onde o agregado faz suas necessidades fisiológicas?</p> <input type="checkbox"/> No mato/fora do agregado <input type="checkbox"/> Casa de banho com autoclisma para rede de esgoto <input type="checkbox"/> Casa de banho com autoclisma para fossa séptica <input type="checkbox"/> Balde/Panela <input type="checkbox"/> Latrina coberta <input type="checkbox"/> Latrina aberta <input type="checkbox"/> Latrina com cano para ventilação <input type="checkbox"/> Outro..... | <p>7. Qual o principal combustível usado para iluminação?</p> <input type="checkbox"/> Querosene/parafina <input type="checkbox"/> Gás <input type="checkbox"/> Eletricidade <input type="checkbox"/> Gerador <input type="checkbox"/> Bateria <input type="checkbox"/> Velas <input type="checkbox"/> Lenha/Madeira <input type="checkbox"/> Outro..... |
| <p>3. Qual a principal fonte de eletricidade do agregado?</p> <input type="checkbox"/> Nenhuma <input type="checkbox"/> Rede elétrica <input type="checkbox"/> Gerador privado <input type="checkbox"/> Gerador rural/comunal | | |

H - Insegurança Alimentar do Agregado Familiar

| Perguntas referindo-se às 4 últimas semanas | Resposta 1. Sim 0. Não | Se afirmativo, qual a frequência nas últimas 4 semanas? 1. Raramente (uma ou duas vezes) 2. Às vezes (3-10 vezes) 3. Frequentemente (mais de 10 vezes) |
|--|------------------------------|---|
| 1. Houve preocupação que o agregado não teria alimentos suficientes? | | |
| 2. Você ou alguém do agregado familiar deixou de comer os tipos de comida preferidos por falta de recursos? | | |
| 3. Você ou alguém do agregado familiar teve que comer uma variedade limitada de alimentos por falta de recursos? | | |
| 4. Você ou alguém do agregado familiar teve que comer um tipo de alimento que realmente não queria comer por falta de recursos para obter outros tipos de alimentos? | | |
| 5. Você ou alguém do agregado familiar teve que comer uma porção menor de comida do que imagina que precisava por falta de comida suficiente? | | |
| 6. Você ou alguém do agregado familiar teve que comer menos refeições num dia porque não havia comida suficiente? | | |
| 7. Alguma vez já não houve nenhuma comida de nenhum tipo no seu agregado familiar por falta de recursos para obter comida? | | |
| 8. Você ou alguém do agregado familiar já foi dormir à noite com fome por falta de comida suficiente? | | |
| 9. Você ou alguém do agregado familiar já passou um dia inteiro e uma noite inteira sem comer nada por falta de comida suficiente? | | |

I – Indicadores subjetivos de bem-estar

| | | | | | | | | | | | | | | |
|--|--|---|---|---|--|--|--|---|---|---|---|--|--|--|
| <p>1. Se comparado com 5 anos atrás, como você considera a situação do agregado familiar?</p> <p><input type="checkbox"/> Está melhor</p> <p><input type="checkbox"/> Está pior</p> <p><input type="checkbox"/> Está igual</p> | <p>2. Se melhor, que fatores contribuíram mais para tal?</p> <ol style="list-style-type: none"> 1. Maior renda proveniente de emprego na companhia X 2. Maior renda proveniente de trabalho em outros empregos 3. Maior renda proveniente de contrato de produção para a companhia X 4. Habilidade de reinvestir rendimentos de outras atividades 5. Melhor qualidade de habitação 6. Melhor acesso à educação 7. Melhor acesso a instalações de saúde 8. Melhor acesso à eletricidade 9. Melhor acesso a insumos (excluindo aqueles usados para a produção de produtos para a companhia X) 10. Maior facilidade de vender os produtos (excluindo aqueles para a companhia X) 11. Maior contribuição dos filhos para a renda do agregado 12. Aumento nas remessas de dinheiro 13. Possui mais terra 14. Maior segurança a direitos à terra 15. Outros, especificar..... <table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table> <p>Listar até 3 principais razões (números acima)</p> | 1 | 2 | 3 | | | | <p>3. Se igual ou pior, que fatores reduziram a capacidade do agregado de melhorar de vida?</p> <ol style="list-style-type: none"> 1. Doença/morte de membro do agregado 2. Desastres naturais (ex. cheias, secas, etc.) 3. Perda de terras para agricultura 4. Diminuição das áreas de pastagem 5. Diminuição das áreas florestais 6. Conflitos sociais 7. Queda dos preços dos produtos agrícolas 8. Falta de mercado para os produtos agrícolas 9. Degradação do solo/diminuição da produtividade 10. Preços mais caros de produtos de consumo do agregado 11. Perda de trabalho 12. Renda proveniente da companhia X baixa demais 13. Falta de habilidades/de educação 14. Não pode virar produtor para companhia X 15. Dívidas altas 16. Envelhecimento de membros do agregado 17. Outros motivos, especificar..... <p>Listar até 3 principais razões (números acima)</p> <table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table> | 1 | 2 | 3 | | | |
| 1 | 2 | 3 | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| 1 | 2 | 3 | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |

J – Não-participação (para grupos de atores 1, 2 e 4)

| | | |
|---|---|--|
| <p>1. Alguém do agregado já teve um emprego no setor açucareiro ou já foi produtor de cana?</p> <p><input type="checkbox"/> Não, nunca nenhum dos dois</p> <p><input type="checkbox"/> Sim, já foi empregado</p> <p><input type="checkbox"/> Sim, já foi produtor de cana</p> <p><input type="checkbox"/> Sim, já foi ambos</p> <p>2. Se sim na 1, por que parou?</p> <p><input type="checkbox"/> Contrato não foi renovado</p> <p><input type="checkbox"/> Parou voluntariamente devido aos baixos rendimentos da atividade</p> <p><input type="checkbox"/> Parou voluntariamente por causa de melhores oportunidades</p> <p><input type="checkbox"/> Parou voluntariamente por falta de tempo para essa atividade</p> <p><input type="checkbox"/> Outra razão, especificar.....</p> <p>3. Se nunca tiver sido produtor de cana (questão 1), estariam interessados em se tornar?</p> <p><input type="checkbox"/> Não</p> <p><input type="checkbox"/> Sim</p> | <p>4. Se sim na questão 3, por que não são produtores de cana no momento?</p> <p><input type="checkbox"/> Não podem se tornar produtores individuais</p> <p><input type="checkbox"/> Não podem se tornar membros de uma associação</p> <p><input type="checkbox"/> Porque não há associações de cana na comunidade</p> <p>5. Se não podem se tornar membros na questão 4, por que?</p> <p><input type="checkbox"/> Posições na associação são somente para pessoas de prestígio da comunidade</p> <p><input type="checkbox"/> Não possuem terra suficiente</p> <p><input type="checkbox"/> Não possuem as mesmas afinidades religiosas</p> <p><input type="checkbox"/> Não são membros originais da associação</p> <p><input type="checkbox"/> Não têm familiares na associação</p> <p><input type="checkbox"/> Outra razão, especificar.....</p> <p>6. Se não na questão 3, por que não estariam interessados em se tornar produtores?</p> <p><input type="checkbox"/> Riscos altos demais</p> <p><input type="checkbox"/> Receio de perder o controle sobre a terra ao ceder para a associação</p> <p><input type="checkbox"/> Renda é muito irregular</p> <p><input type="checkbox"/> Não é lucrativo o bastante</p> <p><input type="checkbox"/> Medo de insegurança alimentar</p> <p><input type="checkbox"/> Outro, especificar.....</p> | <p>7. Se nunca tiver sido empregado no setor açucareiro (questão 1), estariam interessados em se tornar?</p> <p><input type="checkbox"/> Não</p> <p><input type="checkbox"/> Sim</p> <p>8. Se sim na questão 7, por que não são empregados atualmente?</p> <p><input type="checkbox"/> Não possuem os contactos/conexões necessários</p> <p><input type="checkbox"/> Emprego é desencorajado pela comunidade</p> <p><input type="checkbox"/> Não consegue o tipo de contrato ou atividade desejado(a)</p> <p><input type="checkbox"/> Companhia X não contrata na comunidade onde residem</p> <p><input type="checkbox"/> Não são membro(s) de uma associação</p> <p><input type="checkbox"/> Outra razão, especificar.....</p> <p>9. Se não na 6, por que não estariam interessados em se tornar empregados do setor?</p> <p><input type="checkbox"/> Distante demais/falta de opções de transportes</p> <p><input type="checkbox"/> Falta de garantias de permanência no emprego</p> <p><input type="checkbox"/> Pagamento é pouco</p> <p><input type="checkbox"/> Riscos de saúde/segurança</p> <p><input type="checkbox"/> Estigma social</p> <p><input type="checkbox"/> Conflita com outras atividades de vida</p> <p><input type="checkbox"/> Outra, especificar.....</p> |
|---|---|--|

Códigos da Parte D

Florestas:

1. Produção de carvão
2. Produção de lenha
3. Caça
4. Produtos florestais não-lenhosos
5. Outros.....

Criação de animais

1. Criação de gado bovino
2. Criação de cabras/ovelhas
3. Criação de galinhas
4. Criação de porcos
5. Criação de patos
6. Outros.....

Pesca

1. Criação de peixes
2. Em rios
3. No mar/oceano

Agricultura

1. Cana através de associação
2. Cana independente
3. Agricultura comercial (não relacionada à cana)
4. Agricultura de subsistência
5. Outra.....

Emprego:

Especificar o tipo de trabalho e quem está empregado (por exemplo, pessoa 6, cortador de cana na Companhia X; motorista de trator na associação; funcionário público; professor público; etc.)

Remessas e pensões:

Especificar **a fonte da pensão e da remessa (ex. filho nos Estados Unidos, pensão do Estate, etc.)**

Summary

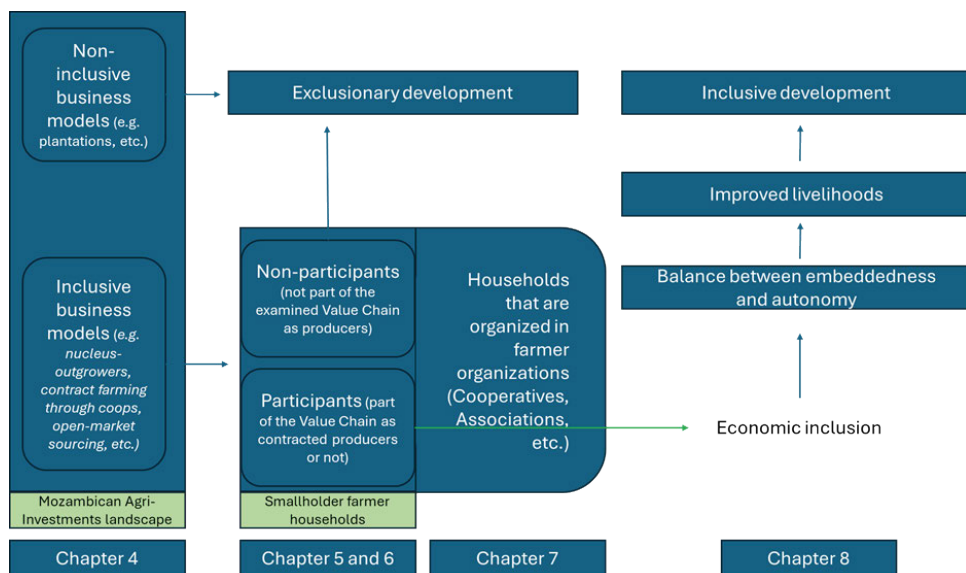
'Inclusive agribusiness models' became very popular in the last few decades as a model of solution to the problems of poverty and food security among smallholders, especially in Africa, where a large number of impoverished and food insecure smallholder farmers live. While there is no singular definition, there are common broadly accepted elements that define inclusive business models, such as the goal of integrating income-constrained groups within value chains and the need to maintain the viability of the business. However, despite the popularization of the concept, there is still debate about the effectiveness and impact of these models.

A major controversy revolves around the inclusive businesses potential versus the real capacity it has to minimize negative impacts and create new opportunities through private sector involvement in development. It is particularly so when addressing challenges for smallholder farmers, such as limited technical knowledge, access to inputs, and participation in competitive value chains. Proponents argue that these models can decrease smallholders' risk perception and enable more farmers to engage in lucrative agricultural trade, fostering inclusiveness across dimensions like asset ownership, decision-making power, risk management, and rewards. However, critics contend that inclusive business models may not effectively reduce poverty and are subject to conflicting interpretations. Smallholder farmers may remain trapped in cycles of low-intensity farming, limited market access, and insufficient profits to cover costs, reinvest, and meet household needs. Additionally, inclusion in these models could lead to exclusion of other community members, exacerbating differentiation and inequality within communities.

To compound the controversy, two decades after the term was coined, inclusive business has become somewhat of a buzzword. It tends to narrowly focus on economic participation without adequately addressing broader social and environmental outcomes for the smallholder farmers and their communities, nor addressing how the farmers experience these process and decide or can act upon outcomes. Accordingly, in this dissertation the focus is on smallholder farmers' experience with inclusive production models to delve into how these models can improve smallholders' livelihoods over time.

Therefore, this dissertation aims to answer the question "How can inclusive production models improve smallholder farmers' livelihoods over time?". To do so, it proposes that one way to address the controversies and the matter of dilution of the term "inclusion" is to thoroughly examine the experiences of those who have been included. One should look into the evolution of the inclusion processes, to understand how the relationship between the smallholder farmers and the agribusinesses evolve over time. This is particularly relevant as the increased focus on the private sector as a key development actor weakened the role of the state to provide support and services to smallholders.

To this end, the thesis proposes the use of a concept called “embedded autonomy”, borrowed from development studies and adapted for this research. Drawing from Peter Evans’ theory, which focused on developmental states, embedded autonomy suggests that a state or entity needs both a sense of coherence and embeddedness in social ties to effectively negotiate goals and policies with society. In this study the concept is applied in assessing the variations and socioeconomic outcomes of inclusive production models, focusing on the ever-evolving relationship between smallholders and agribusinesses. The concept aims to examine how smallholders’ interests align with those of agribusinesses and the degree of autonomy smallholders have within these contexts to improve their livelihoods. Therefore, the concept is adapted to examine the sense of coherence of objectives and embeddedness of smallholder farmers in inclusive models of production as well as the role of the smallholders themselves to take action while embedded in a certain production framework. Consequently, the study suggests applying this concept in empirical case studies, such as the sugarcane and soybean sectors in Mozambique, to analyze the alignment of stakeholders’ interests, the challenges, and the benefits of inclusion in production models.



The figure above shows how key concepts interconnect and how the chapters conceptually fit together. Chapters 1 through 3 set the scene for the empirical chapters, outlining the key problems and dilemmas in the Introduction, as well as the objectives of this dissertation, methodology, and research area. Chapter 2 presents the literature review, while Chapter 3 provides the reader with the contextual background on Mozambique.

In Chapter 4, the focus is on the geographies of private agro-investments in relation to smallholder inclusion. It focuses on understanding agribusiness dynamics in Mozambique, particularly in terms of investments, land access, value chains, and smallholder farmer participation. It represents an attempt to conduct a nationwide analysis of (inclusive) business models to paint a background for the rest of the Thesis. Through a sample of investments, it illustrates whether there is a balance between smallholders' inclusion and ensuring that investments heed smallholders' needs. However, the effectiveness of this balance remains uncertain. To what extent are smallholders, their organizations, and broader communities being embedded into inclusive agribusiness models to reap the benefits of participation?

Chapter 5 delves into sugarcane contract farming, shedding light on smallholder inclusion dynamics. It contrasts participating and non-participating smallholder households to generate insights about the effects of long-term participation in contract farming schemes. It looks into indicators from household characteristics and composition, land use and agricultural production, livelihood portfolio, and socioeconomic development to illustrate the benefits of participating or not in such inclusive agribusiness models. It uses the embedded autonomy concept to demonstrate how the farmers are constantly presented with the dilemma of (wanting) to participate versus seeking alternatives to improve their lives. The chapter underscores the importance of thoughtful design of production models and policies to ensure inclusiveness while acknowledging participants' agency in decision-making.

Chapter 6 focuses on soybean farming through mostly open-market sourcing mechanisms, which contrasts with the previous chapter's focus on contract farming. It emphasizes smallholders' agency in shaping sector development. Despite challenges, smallholders have adapted to soybean farming, acting in their best interests amidst attempts of agribusiness-led inclusive production models. The study revealed the importance of understanding value chain dynamics and the limitations of existing public and private sector strategies in promoting inclusivity. It underscores the need for policies that build capacity at various levels and ensure sustainability, as well as the relevance of not overlooking the power of agency in maintaining or dismantling initiatives and production models.

Chapter 7 highlights the crucial role of farmer organizations in promoting inclusive development, drawing upon insights from the previous chapters. It demonstrates how farmer organizations play a pivotal role in advocating for smallholders within inclusive production systems. However, their efficacy hinges on a supportive ecosystem of services and support from governments, private sectors, NGOs, and development actors. The chapter emphasized the need for policies that enable farmer organizations to thrive

and outlines considerations for policy, practice, and future research on inclusive rural development. Ultimately, farmer organizations can serve as pivotal agents in locally-led inclusive development, presenting a model for inclusive strategies and interventions that complement private sector, civil society, and government efforts.

Based on the findings, Chapter 8 concludes that inclusive agricultural production models can improve smallholder farmers' livelihoods. While inclusive business models offer potential benefits for smallholders and their organizations, the effectiveness in reducing poverty and promoting inclusive development remains a subject of debate and scrutiny. Crucial to this debate is the dilemma this dissertation identifies: the degree of smallholder farmers' embeddedness in an inclusive model versus their capacity to act within the framework of the inclusive model. That is, does economic opportunity come at the cost of autonomy as a smallholder farmer? Does participation in an agribusiness model limit, or even hinder, the capacity of smallholders to act in their best interest? And does participation generate the benefits smallholders' expect? Therefore, is it a question of embeddedness versus autonomy? Moreover, how is this dilemma perceived and experienced by the smallholders?

While inclusive agribusiness models is still often buzzword, it is significant to not just look at inclusive business as a narrow economically-oriented concept, but also strive to balance the common interests and goals of agribusinesses and smallholder farmers with individual self-interests. That is, the study suggests that there must be a balance between embeddedness and autonomy. This finding is particularly relevant for countries that embark on new phases of agricultural development investments, with both the government and the private sector playing crucial roles. Lessons from the past decades of agricultural policies, which heavily relied on the private sector for sector modernization, should not be overlooked. As stakeholders aim to develop economically inclusive value chains that integrate smallholder farmers, they must also consider the pressures facing local food systems. Inclusion should extend beyond mere integration into value chains and focus on factors such as understanding smallholder farmer diversity, resilience, agency, and daily struggles for improving their livelihoods. Ultimately, inclusion should lead to improved lives and empowerment.

This study also finds that inclusion should encompass the notion of freedom: the freedom for smallholder farmers and their organizations to pursue their own trajectories according to their needs and desires. This necessitates an ecosystem of support and services, highlighting the importance of further research into the relationships between smallholders (organizations) and agribusinesses and the development of holistic interventions addressing farmers' challenges –beyond on-farm and agricultural value chains. While the study identified various challenges facing the sector, it also revealed

the potential for inclusiveness. This potential warrants further exploration to enhance the understanding of locally-led inclusive development. A more comprehensive body of knowledge, incorporating these aspects, will lead to better policy and practice design, ultimately demonstrating how inclusive production models can contribute to long-term improvements in smallholder farmers' lives.

Resumo

Nas últimas décadas, “modelos de negócio inclusivos” tornaram-se populares em resposta a problemas como a pobreza e a segurança alimentar entre agricultores de pequena escala, especialmente na África, onde vive um grande número desses produtores, empobrecidos e sob considerável insegurança alimentar. No entanto, a popularização do conceito veio acompanhada de controvérsias.

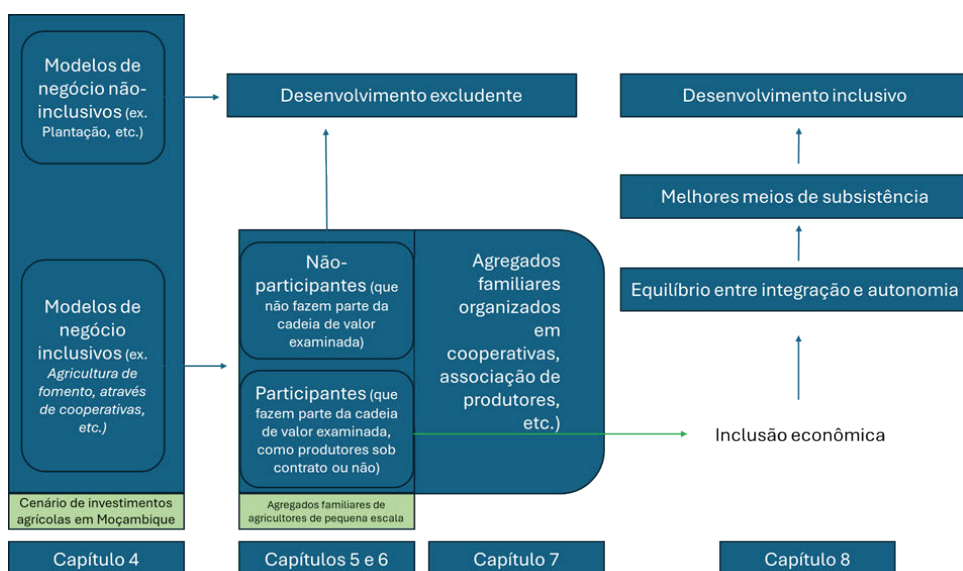
Uma das principais controvérsias gira em torno do potencial dos negócios inclusivos versus a capacidade real destes de minimizar impactos negativos do envolvimento do setor privado no desenvolvimento, bem como de criar novas oportunidades, especialmente no enfrentamento dos desafios que os pequenos agricultores costumam ter, como limitado conhecimento técnico, limitado acesso a insumos (de qualidade) e limitada participação em cadeias de valor mais rentáveis. Os defensores de modelos inclusivos argumentam que estes diminuem a percepção de risco dos pequenos produtores e permitem que mais agricultores participem em mercados lucrativos, promovendo a inclusão em várias dimensões como propriedade, poder de decisão, gerenciamento de riscos e recompensas. Entretanto, os críticos afirmam que os modelos de negócio inclusivos não reduzem efetivamente a pobreza e estão sujeitos a interpretações conflitantes. Os agricultores de pequena escala continuam presos em ciclos de baixa produtividade agrícola. Seu acesso a mercados e lucros continuam limitados e são insuficientes para cobrir os custos de produção, bem como reinvestir na atividade agrícola e atender às necessidades domésticas. Ademais, a inclusão de uns nesses modelos pode levar à exclusão de outros membros da comunidade, exacerbando a desigualdade dentro das comunidades.

Para agravar a controvérsia, duas décadas após a cunhagem do termo, os negócios inclusivos se tornaram uma espécie de modismo. O termo tende a se concentrar estritamente na participação econômica, sem abordar adequadamente os resultados sociais e ambientais da participação dos pequenos produtores e suas comunidades. Tampouco, aborda-se como os agricultores vivenciam esses processos, tomam decisões ou agem sobre os resultados. Desta forma, nesta dissertação, concentro-me na experiência dos pequenos agricultores com modelos de produção inclusiva para entender como esses modelos podem melhorar a qualidade de vida dos pequenos produtores ao longo do tempo.

Esta dissertação tem como objetivo responder à pergunta “Como os modelos de produção inclusiva podem melhorar a qualidade de vida dos agricultores de pequena escala ao longo do tempo?”. Ela propõe que uma maneira de abordar tanto as controvérsias quanto a questão da diluição do termo “inclusão” é examinar minuciosamente as experiências daqueles que foram incluídos. Deve-se analisar a evolução dos processos de inclusão para entender como a relação entre os pequenos agricultores e os agronegócios evoluiu ao longo do tempo. Isso é particularmente relevante, pois o foco cada vez maior no setor

privado como principal agente de desenvolvimento enfraqueceu a função do Estado de fornecer apoio e serviços aos pequenos agricultores.

Para isso, proponho o uso de um conceito chamado “autonomia incorporada”, emprestado dos estudos de desenvolvimento e adaptado para esta dissertação. Com base na teoria de Peter Evans, que se concentrou em estados desenvolvimentistas, a autonomia incorporada sugere que um estado ou entidade precisa tanto de um senso de coerência quanto de incorporação em laços sociais para negociar efetivamente metas e políticas com a sociedade. Neste estudo, o conceito é aplicado na avaliação das variações e dos resultados socioeconômicos dos modelos de produção inclusiva, com foco na relação em constante evolução entre pequenos produtores e agronegócios. O conceito visa examinar como os interesses dos pequenos produtores se alinham com os dos agronegócios e o grau de autonomia que os pequenos produtores têm nesses contextos para melhorar seus meios de vida. Portanto, o conceito é adaptado para examinar o senso de coerência dos objetivos e a inserção dos pequenos agricultores em modelos inclusivos de produção, bem como o papel dos próprios pequenos agricultores de agir enquanto estiverem inseridos em uma determinada estrutura de produção. Conseqüentemente, o estudo sugere a aplicação desse conceito em estudos de casos empíricos, como nos setores de cana-de-açúcar e soja em Moçambique, para analisar o alinhamento dos interesses das partes interessadas, os desafios e os benefícios da inclusão em modelos de produção.



A figura acima mostra como os principais conceitos se interconectam e como os capítulos se encaixam conceitualmente. Os Capítulos 1 a 3 preparam o cenário para os capítulos

empíricos, descrevendo os principais problemas e dilemas na Introdução, bem como os objetivos desta dissertação, a metodologia e a área de pesquisa. O Capítulo 2 apresenta a revisão da literatura, enquanto o Capítulo 3 fornece ao leitor o contexto de Moçambique.

No Capítulo 4, o foco está nas geografias dos agroinvestimentos privados em relação à inclusão dos pequenos produtores. Ele se concentra na compreensão da dinâmica do agronegócio em Moçambique, particularmente em termos de investimentos, acesso à terra, cadeias de valor e participação dos pequenos produtores. O capítulo representa realiza uma análise nacional de modelos de negócios (inclusivos) para traçar um pano de fundo para o restante da tese. Por meio de uma amostra de investimentos, o capítulo ilustra se há um equilíbrio entre a inclusão dos pequenos produtores e a garantia de que os investimentos atendam às necessidades destes.

O Capítulo 5 se aprofunda na agricultura por contrato da cana-de-açúcar, ressaltando a dinâmica de inclusão dos pequenos produtores. O capítulo contrasta os agregadores familiares que participam em esquemas de agricultura sob contrato com os que não participam para compreender os efeitos da participação de longo prazo. O capítulo lança mão de uma análise de indicadores sobre as características e composição dos agregados familiares, uso da terra e produção agrícola, atividades de subsistência e desenvolvimento socioeconômico para ilustrar se há benefícios ou não na participação em tais modelos inclusivos de agronegócio. Usa-se o conceito de autonomia incorporada para demonstrar como os produtores são constantemente confrontados com o dilema de (querer) participar versus buscar alternativas para melhorar suas vidas. O capítulo ressalta a importância de um desenho cuidadoso de modelos e políticas de produção para garantir a inclusão e, ao mesmo tempo, reconhecer a agência dos produtores na tomada de decisões.

O Capítulo 6 se concentra na agricultura de soja por meio de mecanismos de mercado aberto, o que contrasta com o foco da agricultura por contrato do capítulo anterior. Enfatiza-se a agência dos pequenos produtores no desenvolvimento da cadeia de valor e demonstra-se que, apesar dos desafios, os pequenos produtores se adaptaram ao cultivo de soja, agindo em seu melhor interesse em meio a tentativas do agronegócio de se implementar modelos de produção inclusivos. O estudo revela a importância de compreender a dinâmica da cadeia de valor e as limitações das estratégias existentes dos setores público e privado na promoção da inclusão. Por fim, ressalta-se a necessidade de políticas que desenvolvam a capacidade em vários níveis e garantam a sustentabilidade, bem como a relevância de não ignorar o poder de agência na manutenção ou no desmantelamento de iniciativas e modelos de produção.

Com base nos resultados dos capítulos anteriores, o Capítulo 7 destaca o papel crucial das organizações de produtores na promoção do desenvolvimento inclusivo. Demonstra-se como estas organizações desempenham um papel fundamental na defesa dos interesses de pequenos produtores em sistemas de produção inclusivos. Entretanto, sua eficácia depende de um ecossistema de apoio de serviços e suporte de governos, setor privado, ONGs e outros agentes de desenvolvimento. O capítulo enfatiza a necessidade de políticas que permitam que organizações de produtores prosperem e delinea considerações para políticas, práticas e pesquisas futuras sobre desenvolvimento rural inclusivo. Em última análise, as organizações de produtores podem servir como agentes fundamentais no desenvolvimento inclusivo liderado localmente, apresentando um modelo para estratégias e intervenções inclusivas que complementam os esforços do setor privado, da sociedade civil e do governo.

Por fim, o Capítulo 8 conclui que os modelos inclusivos de produção agrícola podem melhorar os meios de vida dos pequenos produtores. Embora os modelos inclusivos ofereçam possíveis benefícios para os pequenos agricultores e suas organizações, a eficácia na redução da pobreza e na promoção do desenvolvimento inclusivo continua sendo objeto de debate e análise. Crucial para esse debate é o dilema que esta dissertação identifica: o grau de inserção dos pequenos produtores em um modelo inclusivo versus sua capacidade de agir dentro das estruturas do modelo inclusivo. Ou seja, será que oportunidades econômicas vêm ao custo da autonomia do pequeno agricultor? E a participação em um modelo de agronegócio limita, ou até mesmo impede, a capacidade dos pequenos agricultores de agir em seu melhor interesse? Participação gera os benefícios que os pequenos produtores esperam? Portanto, trata-se de uma questão de integração versus autonomia ou um equilíbrio entre ambos? Ademais, como esse dilema é percebido e vivenciado pelos pequenos produtores?

Embora “modelos de agronegócios inclusivos” ainda seja uma palavra da moda, é importante não considerar os modelos inclusivos apenas como um conceito restrito de orientação econômica. Estes modelos também devem considerar o equilíbrio entre os objetivos comuns e os interesses próprios do agronegócio e dos pequenos agricultores. Ou seja, o estudo sugere que deve haver um equilíbrio entre integração e autonomia. Essa conclusão é particularmente relevante para países que iniciam novas fases de investimentos em desenvolvimento agrícola, com o governo e o setor privado desempenhando papéis cruciais. As lições das últimas décadas de políticas agrícolas, que dependiam demasiadamente do setor privado para a modernização do setor, não devem ser ignoradas. Ao pretender desenvolver cadeias de valor economicamente inclusivas, aqueles interessados devem também considerar as pressões enfrentadas pelos sistemas alimentares locais. Assim, inclusão deve ir além da mera integração nas cadeias de valor e

se concentrar em fatores como a compreensão da diversidade, da resiliência, da capacidade de ação e das lutas diárias dos pequenos agricultores para melhorar seus meios de vida. Em última análise, a inclusão deve levar à melhoria de vida e ao emponderamento.

Este estudo também conclui que a inclusão deve abranger a noção de liberdade: liberdade para que os pequenos produtores e suas organizações sigam suas próprias trajetórias de acordo com suas necessidades e desejos. Isso requer um ecossistema de apoio e serviços, destacando a importância de mais estudos sobre as relações entre os pequenos agricultores, suas organizações, e os agronegócios. Recomenda-se também mais estudos sobre o desenvolvimento de intervenções holísticas que abordem os desafios dos agricultores par além da queles enfrentados na participação em cadeias de valor agrícola. Embora o estudo tenha identificado vários desafios no setor, ele também revela o potencial de inclusão. Esse potencial merece ser explorado mais profundamente, para aprimorar a compreensão do desenvolvimento inclusivo liderado localmente. Maior abrangência de conhecimento, incorporando tais aspectos, levará a uma melhor elaboração de políticas e práticas, demonstrando como os modelos de produção inclusivos podem contribuir para melhorias de longo prazo na vida dos pequenos agricultores.

Samenvatting

‘Inclusieve agribusinessmodellen’ zijn in de afgelopen decennia erg populair geworden als een oplossing voor de problemen van armoede en voedselzekerheid onder kleinschalige boeren, vooral in Afrika, waar veel arme en voedselonzekere kleine boeren leven. Hoewel er geen eenduidige definitie bestaat, zijn er gemeenschappelijke, algemeen geaccepteerde elementen die inclusieve bedrijfsmodellen kenmerken, zoals de integratie van inkomensbeperkte groepen in waardeketens en het behoud van financiële levensvatbaarheid. Ondanks de groeiende populariteit van inclusieve agribusinessmodellen binnen zowel het bedrijfsleven als de ontwikkelingssamenwerking, blijven er vragen over hun daadwerkelijke effectiviteit en impact.

Een van de belangrijkste discussiepunten is of inclusieve bedrijven echt in staat zijn om negatieve effecten te minimaliseren en nieuwe mogelijkheden te creëren voor kleine boeren. Het is de vraag of deze boeren voldoende nieuwe kansen kunnen benutten vanwege hun beperkte technische kennis en toegang tot inputs. Voorstanders beweren dat deze modellen de risicoperceptie van kleine boeren kunnen verminderen en hen in staat stellen deel te nemen aan lucratievere agrarische handel, waarbij inclusiviteit wordt bevorderd op gebieden zoals eigendom van land en kapitaal, besluitvormingsmacht, risicobeheer en beloningen. Veel critici daarentegen vinden dat inclusieve bedrijfsmodellen onvoldoende armoede verminderen en ongewenste afhankelijkheden kan creëren. Kleine boeren kunnen bijvoorbeeld blijven hangen in een cyclus van lage productiviteit, beperkte markttoegang en onvoldoende winsten om kosten te dekken, opnieuw te investeren en in hun gezinsbehoeften te voorzien. Bovendien kan inclusie in deze modellen leiden tot uitsluiting van andere gemeenschapsleden, waardoor differentiatie en ongelijkheid binnen gemeenschappen kan worden versterkt.

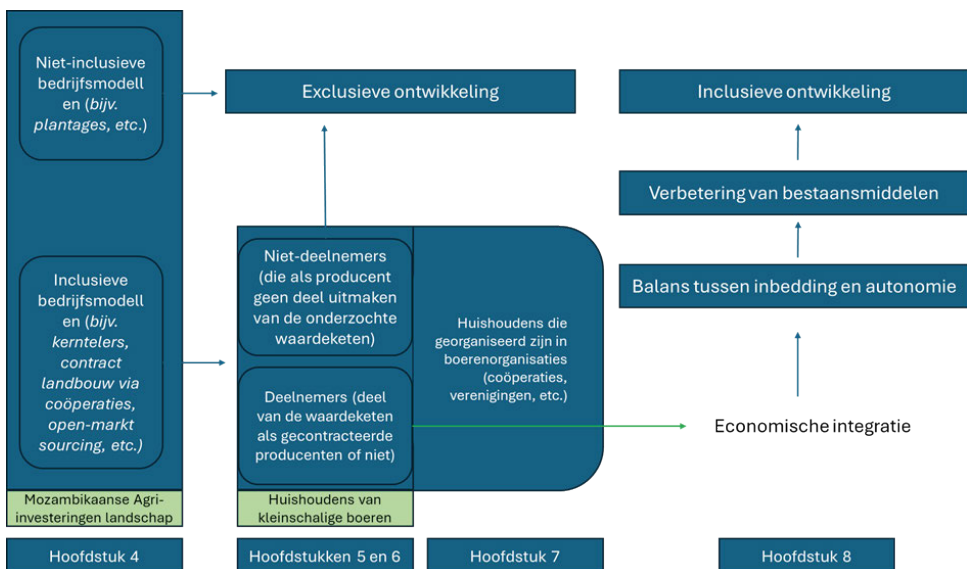
Verder blijft het concept na twee decennia een modewoord. Het richt zich vaak te nauw op economische participatie zonder voldoende aandacht te besteden aan bredere sociale en milieueffecten voor kleine boeren en hun gemeenschappen, noch aan de manier waarop de boeren deze processen ervaren en met de effecten van participatie omgaan. In deze dissertatie ligt daarom de nadruk op de ervaring van kleine boeren met inclusieve agribusinessmodellen en hoe deze modellen in loop der tijd de levensomstandigheden van kleine boeren en hun gemeenschappen kunnen verbeteren.

Deze dissertatie probeert daarom de volgende vraag te beantwoorden: “Hoe kunnen inclusieve agribusinessmodellen de levensomstandigheden van kleine boeren verbeteren?”. Om deze vraag te beantwoorden en de verwatering van de term “inclusie” aan te pakken, zal hier de ervaringen van degenen die zijn opgenomen in deze waardeketens grondig onderzocht worden. Hierbij wordt gekeken naar de evolutie van de inclusieprocessen om beter de relatie tussen de kleine boeren en de agribusinessen en hoe deze zich heeft

ontwikkelt in kaart te brengen. Dit is vooral belangrijk omdat de nadruk op de private sector de rol van de staat in het ondersteunen van kleine boeren heeft vermindert.

Deze dissertatie stelt het gebruik voor van het concept 'ingebedde autonomie', ontleend aan ontwikkelingsstudies en aangepast voor dit onderzoek. Volgens Peter Evans' theorie, die zich richt op ontwikkelingsstaten, heeft een staat of entiteit zowel samenhang als ingebedheid in sociale verbanden nodig om effectief doelen en beleidsmaatregelen met de samenleving te onderhandelen. In deze studie wordt dit concept toegepast om de variaties en sociaaleconomische resultaten van inclusieve productiemodellen te beoordelen, met nadruk op de steeds evoluerende relatie tussen kleine boeren en agribusinessen.

Het concept onderzoekt hoe de belangen van kleine boeren overeenkomen met die van agribusinessen en de mate van autonomie die kleine boeren hebben om hun levensomstandigheden te verbeteren. Het is aangepast om de samenhang van doelstellingen en de ingebedheid van kleine boeren in inclusieve productiemodellen te onderzoeken, evenals hun rol in het ondernemen van actie binnen een bepaald productiekader. Het onderzoek stelt voor om dit concept toe te passen in empirische casestudies, zoals de suikerriet- en sojaboonsectoren in Mozambique, om de afstemming van belangen, de uitdagingen en de voordelen van inclusie in productiemodellen te analyseren.



De bovenstaande figuur toont hoe sleutelconcepten met elkaar verbonden zijn en hoe de hoofdstukken conceptueel samenhangen. Hoofdstukken 1 tot en met 3 schetsen

de context voor de empirische hoofdstukken, waarbij de kernproblemen en dilemma's in de inleiding worden uiteengezet, evenals de doelstellingen van deze dissertatie, de methodologie en het onderzoeksgebied. Hoofdstuk 2 presenteert de literatuurstudie, terwijl Hoofdstuk 3 de lezer voorziet van de contextuele achtergrond van Mozambique.

In Hoofdstuk 4 ligt de focus op de geografische aspecten van particuliere agro-investeringen in relatie tot de inclusie van kleine boeren. Het onderzoekt de dynamiek van agribusiness in Mozambique, met name op het gebied van investeringen, landtoegang, waardeketens en de deelname van kleine boeren. Het probeert een nationale analyse van (inclusieve) bedrijfsmodellen uit te voeren om de achtergrond te schetsen voor de rest van de dissertatie. Door middel van een steekproef van investeringen illustreert het of er een evenwicht is tussen de inclusie van kleine boeren en het waarborgen dat investeringen rekening houden met hun behoeften. De effectiviteit van dit evenwicht blijft echter onzeker. In hoeverre worden kleine boeren, hun organisaties en bredere gemeenschappen ingebed in inclusieve agribusinessmodellen om de vruchten van participatie te plukken?

Hoofdstuk 5 gaat in op de contractteelt van suikerriet en werpt een licht op de dynamiek van deelname van kleine boeren. Het vergelijkt deelnemende en niet-deelnemende kleinschalige boerenhuishoudens om inzichten te genereren over de effecten van langdurige deelname aan contractteeltregelingen. Het onderzoekt indicatoren zoals huishoudkenmerken en -samenstelling, landgebruik en landbouwproductie, levensonderhoudsportefeuille en sociaaleconomische ontwikkeling om de voordelen van deelname aan dergelijke inclusieve agribusinessmodellen te illustreren. Het gebruikt het concept van ingebedde autonomie om aan te tonen hoe boeren constant worden geconfronteerd met het dilemma van deelname (willen) versus het zoeken naar alternatieven om hun leven te verbeteren. Het hoofdstuk benadrukt het belang van doordachte ontwerpen van productiemodellen en beleidsmaatregelen om inclusiviteit te waarborgen, terwijl de besluitvaardigheid van de deelnemers in het besluitvormingsproces wordt erkend.

Hoofdstuk 6 richt zich op sojateelt via grotendeels open-markt inkoopmechanismen, wat contrasteert met de focus op contractteelt in het vorige hoofdstuk. Het benadrukt de rol van kleinschalige boeren in het vormgeven van de sectorontwikkeling. Ondanks de uitdagingen hebben kleinschalige boeren zich aangepast aan de sojateelt, waarbij ze in hun eigen belang handelen te midden van pogingen tot door agribusiness geleide inclusieve productiemodellen. De studie onthulde het belang van inzicht in de dynamiek van waardeketens en de beperkingen van bestaande strategieën van de publieke en private sector bij het bevorderen van inclusiviteit. Het benadrukt de noodzaak van beleid dat op verschillende niveaus capaciteit opbouwt en duurzaamheid waarborgt, evenals

het belang van het niet over het hoofd zien van de macht van zeggenschap (agency) bij het in stand houden of ontmantelen van initiatieven en productiemodellen.

Hoofdstuk 7 benadrukt de cruciale rol van boerenorganisaties bij het bevorderen van inclusieve ontwikkeling, voortbouwend op inzichten uit de voorgaande hoofdstukken. Het toont aan hoe boerenorganisaties een sleutelrol spelen bij het verdedigen van de belangen van kleinschalige boeren binnen inclusieve productiesystemen. Hun effectiviteit hangt echter af van een ondersteunend ecosysteem van diensten en steun van overheden, de particuliere sector, NGO's en ontwikkelingsactoren. Het hoofdstuk benadrukt de noodzaak van beleid dat boerenorganisaties in staat stelt te gedijen en schetst overwegingen voor beleid, praktijk en toekomstig onderzoek naar inclusieve plattelandsontwikkeling. Uiteindelijk kunnen boerenorganisaties dienen als cruciale actoren in lokaal geleide inclusieve ontwikkeling en een model presenteren voor inclusieve strategieën en interventies die de inspanningen van de particuliere sector, het maatschappelijk middenveld en de overheid aanvullen.

Op basis van de bevindingen concludeert Hoofdstuk 8 dat inclusieve agrarische productiemodellen de levensomstandigheden van kleinschalige boeren kunnen verbeteren. Hoewel inclusieve bedrijfsmodellen potentiële voordelen bieden voor kleinschalige boeren en hun organisaties, blijft de effectiviteit bij het verminderen van armoede en het bevorderen van inclusieve ontwikkeling een onderwerp van debat en onderzoek. Cruciaal in dit debat is het dilemma dat deze dissertatie identificeert: de mate waarin kleinschalige boeren ingebed zijn in een inclusief model versus hun vermogen om te handelen binnen het kader van dat inclusieve model. Met andere woorden, komt economische kans ten koste van autonomie voor kleinschalige boeren? Beperkt of belemmert deelname aan een agribusinessmodel de capaciteit van kleinschalige boeren om in hun eigen belang te handelen? En genereert deelname de verwachte voordelen voor de boeren? Dus, is het een kwestie van ingebedheid versus autonomie? Bovendien, hoe wordt dit dilemma ervaren door de kleinschalige boeren?

Hoewel inclusieve agribusinessmodellen vaak als een modewoord worden beschouwd, is het belangrijk om niet alleen te kijken naar inclusieve business als een beperkt economisch-georiënteerd concept, maar ook te streven naar een balans tussen de gemeenschappelijke belangen en doelen van agribusinessen en kleinschalige boeren, in combinatie met individuele eigenbelangen. De studie suggereert dat er een evenwicht moet zijn tussen ingebedheid en autonomie. Deze bevinding is vooral relevant voor landen die nieuwe fasen van landbouwontwikkelingsinvesteringen ingaan, waarbij zowel de overheid als de particuliere sector een cruciale rol spelen. De lessen van de afgelopen decennia van landbouwbeleid, die sterk afhankelijk waren van de particuliere

sector voor de modernisering van de sector, mogen niet worden genegeerd. Terwijl belanghebbenden streven naar het ontwikkelen van economisch inclusieve waardeketens die kleinschalige boeren integreren, moeten zij ook rekening houden met de druk waarmee lokale voedselsystemen worden geconfronteerd. Inclusie zou verder moeten gaan dan louter integratie in waardeketens en zich moeten richten op factoren zoals het begrijpen van de diversiteit, veerkracht, zeggenschap en dagelijkse strijd van kleinschalige boeren om hun levensonderhoud te verbeteren. Uiteindelijk zou inclusie leiden tot verbeterde levensomstandigheden en empowerment.

eze studie stelt ook dat inclusie het begrip vrijheid moet omvatten: de vrijheid voor kleine boeren en hun organisaties om hun eigen traject te volgen volgens hun behoeften en wensen. Dit vereist een ecosysteem van ondersteuning en diensten, wat het belang onderstreept van verder onderzoek naar de relaties tussen kleine boeren(organisaties) en de agro-industrie, en de ontwikkeling van holistische interventies die de uitdagingen van boeren aanpakken - buiten de landbouwbedrijven en agrarische waardeketens. Terwijl het onderzoek verschillende uitdagingen voor de sector identificeerde, onthulde het ook het potentieel voor inclusiviteit. Dit potentieel moet verder onderzocht worden om meer inzicht te krijgen in lokaal geleide inclusieve ontwikkeling. Een uitgebreidere verzameling kennis, waarin deze aspecten zijn opgenomen, zal leiden tot een beter ontwerp van beleid en praktijk, en uiteindelijk aantonen hoe inclusieve productiemodellen kunnen bijdragen aan verbeteringen op de lange termijn in het leven van kleine boeren.

