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The Past, Present, and Future of Land Use in Malawi: A Background Review

Romita Shah, Richard Ferguson & Makaiko Khonje



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P.O. Box 30883 Capital City, Lilongwe Malawi

Chilanga Drive, Off Blantyre Street, Area 10/44

Shah is a Research Manager, Agricultural and Livelihoods, at The Foundation for a Smoke-Free World (FSFW). Ferguson is the founder of Ferguson Cardo Ltd, a shareholder/director in Sahel Agriculture and advisor to FSFW. Khonje is a Research Fellow at MwAPATA. Any comments or questions may be addressed to info@mwapata.mw. While the authors have been invited to contribute their work to MwAPATA's Working Paper series, any expressed views or opinions are their own and are not necessarily endorsed by MwAPATA, FSFW, or any of their partners.

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Executive Summary

The paper traces the history of land use, ownership, and development in Malawi from the colonial era to the present. One of the most common practices of the colonial era was the usurpation of large swaths of fertile land to create estates — primarily tobacco-producing estates — for European companies. The impact of such practices has been pervasive and far-reaching. As Sarah Berry notes in her piece, “Debating the Land Question,” colonial regimes reshaped land in essentially three ways: through physical displacement, demarcation of territories and social boundaries, and investment in and reinterpretation of rules governing land access, transfer, and use. These practices led to the development of a dual system in which Europeans disproportionately owned large and fertile estates governed by one set of principles, whereas native Malawians disproportionately owned increasingly smaller plots of less fertile land governed by another set of principles.

After Malawi secured independence in 1964, some of these trends — including the transfer of large swaths of fertile lands for tobacco production — have persisted. Analyses of land transfers suggest that more than 2,200 leases for more than 250,000 hectares of land were transferred to estates during the first two decades after independence. The rate of such transfers has dramatically slowed since then, but the sheer scale of transfers before this decrease in frequency is noteworthy — experts such as Deininger and Xia have estimated that roughly 1.3 million hectares (about one-fifth of all agricultural land in the country) have been transferred to estates.

These historical trends have led to several challenges in land use today. For estate holders, these include tenure insecurity, limited land use, and small crop yields. Reviews have revealed nearly 140,000 hectares of overlap between estates. Experts estimate that 20% of estates have overlapping land, and 10% have more than one-fifth of their land overlapping with other estates. Coupled with the fact that nearly three-quarters of estate



leases have expired, and 95% of remaining leases will expire in just a few years, there is a real need for clarity and tenure security. Moreover, our reviews indicate that the intensity of land use and agricultural yield on estates is lower than expected, suggesting a need to improve output.

For smallholders, these challenges include tenure insecurity, land scarcity, and barriers to productive and profitable land use. Surveys of smallholders reveal that a substantial number of them have observed conflicts over land, worry that their land may be subject to conflict and ultimately lost, and are discouraged from investing in their land because of these fears. Such factors have likely had a major impact on productivity. Moreover, our reviews suggest that the average smallholder has a plot of roughly 0.62 hectares. With such modest plot sizes, the economies of scales associated with profitable farming are all but lost. And even for those smallholders who may be able to overcome challenges owing to plot sizes, they often have limited access to inputs (e.g., seeds, fertilizer, pesticides, and agricultural education), credit, financial institutions, and markets.

Juxtaposing the challenges faced by estate holders and smallholders highlights ways in which the two could come together to forge mutually beneficial partnerships. This report suggests that focusing on the following areas would potentially lead to positive outcomes:

- Implementing policies to facilitate clarity and tenure security
- Aggregating continuous land across estates and smallholder plots
- Providing robust agricultural services to smallholders

As the report suggests, creating such a framework may provide the scaffolding needed to bring about agricultural transformation in Malawi. Other countries have attempted to improve current land use; such examples are also included in the report to suggest how Malawi may do the same.

1. Introduction

Agriculture, international development, and market experts frequently make note of the rapid pace of population growth over the past century. During this time, the global population has quadrupled from about 1.8 billion people in 1915 to 7.7 billion people in 2019, with estimates suggesting that it could further grow to about 9.7 billion by 2050 (United Nations, 2019). With growth comes affluence. Better diets have spread more broadly across the world, and areas with historically high rates of food insecurity have experienced a marked increase in the demand for food. Greater affluence will likely increase the global demand for food, ranging from 59% to 98% by 2050 (Elferink and Schierhorn, 2016).

At the same time, productivity of agricultural land especially crop yields are rising far too slowly relative to food demand. Moreover, production shocks related to climate change and water scarcity may further diminish crop yields (Adhikari et al., 2015; Elferink and Schierhorn, 2016; Ray et al., 2019).

In the absence of a technological breakthrough that would rapidly improve crop yields and usher in a second Green Revolution, these observations have led market participants to search for additional land for agricultural production. Considerable attention has fallen upon Africa, where arable land seems plentiful (Tibbo and van der Velden, 2020). Experts estimate that Africa contains more than 50% of the remaining arable land in the world (City Press, 2018).¹ However, most arable land is on fragile soils with a hardy terrain limiting mechanization and an agroecology with high disease burdens for crops (Tadele, 2017). Even so, the overarching implication that Africa may represent at least part of the solution to the world's ever-increasing demand for food remains compelling.

A more granular analysis, however, suggests that realizing this possibility would not be straightforward. Examining the availability of arable land at the level of countries, as opposed to continents, suggests that nearly two-thirds of the remaining arable land in Africa can be

¹ While Africa has suitable arable land and 60% of the continent's population is engaged in agriculture, the produce from this sector cannot feed its people. For example, Africa imported 57% of wheat, maize and soybean to the tune of USD 19 billion in 2013 (Tadele, 2017). Moreover, crop yields have remained low (1.6 t/ha) — largely due to poor soil fertility, moisture stress, infestation of pests, diseases and weeds—compared to other parts of the world, with average global yields of 3.9 t/ha (Fischer et al., 2009; Tittonell and Giller, 2013; Adhikari et al., 2015).

found in only a handful of countries² (Tibbo and van der Velden, 2020; Jayne, Chamberlin and Headey, 2014). Many of these countries are marked by political volatility and conflicts that poses serious concomitant risks to land security, title, and development. Even in countries where such risks are substantially lower, the agriculture sector faces several barriers such as land development.

Most developing countries in sub-Saharan Africa (SSA) including Malawi faces several challenges to land use, ownership, and development. For example, the size of farming land has been shrinking largely due to high population growth and tenure insecurity (Chamberlin and Ricker-Gilbert, 2016). A recent study finds that farm sizes have declined more than six percent between 2010 and 2016, with the proportion of farms operating less than one hectare increasing by more than fifty percent (Muyanga et al., 2020). Overall in SSA, plot size has fallen one-third since the 1960s, with 90% of all agricultural production now held by more than 33 million smallholder farmers (Tibbo and van der Velden, 2020). A vast majority of these smallholders are subsistence farmers and typically prefer to allocate land in their plots to food crops so they can satisfy their own consumption needs. Such barriers often constitute a formidable challenge to land development and agricultural production across the region.

The focus of this report is to understand the history, nature, and extent of these barriers while developing models that may accelerate land development and agricultural production. Moreover, understanding these factors in the context of Malawi — home to an economy deeply dependent on tobacco and desperately in need of alternative sustainable livelihoods for smallholder tobacco farmers — presents a particularly unique opportunity to effect change (Otañez et al., 2009; BACI, 2016; Klein et al., 2016; FSFW, 2019). Malawi has one of the highest population densities in Africa and faces increasing land scarcity, deforestation, and degradation — making it even more vulnerable (Chamberlin and Ricker-Gilbert, 2016; Li et al., 2017; Ngwira and Watanbe, 2019).

The report further reviews the literature on land use patterns and changes over time in Malawi.³ Data on multiple land-related issues are limited or, in some instances, non-existent.

² Most notably, Angola, the Central African Republic, the Congo Republic, the Democratic Republic of the Congo, Madagascar, Mozambique, Sudan and South Sudan, and Zambia.

³ It is important to note that this background review is not intended to be comprehensive or exhaustive.

Where data are available, however, they reveal preliminary insights that may be valuable and serve as an impetus to inform baseline understanding of the Agricultural Transformation Initiative (ATI)'s work.

We begin by summarizing the history of land use in Malawi. This historical account traces the economic, political, and social forces that have shaped land use from the colonial period to the present. The paper then identifies the key challenges currently limiting the productive and sustainable use of land, highlights potential ways forward, and presents several case studies in which companies and smallholders have attempted to take that path in Malawi and neighboring countries. The account closes by reflecting on lessons learned from these case studies and discussing potential next steps for land development in Malawi.

2. The History of Land Ownership in Malawi

The history of land ownership dovetails the political history of Malawi. Land in Malawi has conventionally been held communally, predominantly used for subsistence farming, and passed down through generations in accordance with the prevailing cognatic traditions (Malawi Economic Monitor, 2017; PESA, 2018). These conventions vary between locations — some are governed by matrilineal patterns, others by patrilineal patterns, and still others by more complex cognatic modes of inheritance (Berge et al., 2014).

During the late nineteenth century, present-day Malawi was colonized by the United Kingdom. The territory was initially known as Maravi (reflected light) before it became the British Protectorate of Nysaland in 1891. In 1907, it was renamed Nyasaland (“nyasa” being a local word for “lake”). In 1953, Nyasaland together with Northern Rhodesia (present-day Zambia) and Southern Rhodesia (present-day Zimbabwe) were brought together as a semi-autonomous colonial federation. This Federation of Rhodesia and Nyasaland (or Central African Federation) was dissolved in 1963 in the run up to independence (Somerville, 1963). In January 1964, Zambia became independent followed in July 1964 by Malawi.

During the period of colonialism, African societies in the region were perceived as weak and incapable of preventing European land conquests. As Berry notes, colonial regimes in Africa reshaped land in essentially three ways: through physical displacement, demarcation of territories and social boundaries, and investment in and reinterpretation of rules governing

land access, transfer, and use. During colonization, any land perceived to be “vacant and ownerless” was often considered belonging to the colonial state (Berry, 2002). Such land was effectively usurped, divided into estates, and managed by large European companies. Although this was done in the purported interest of the indigenous population, the resulting system of land governance was characterized by dispossession and exploitation (Pachai, 1973). Usurpation of land, for instance, simultaneously reserved large swaths of fertile land for commercial farming and left indigenous Malawians destitute. Another colonial policy — a “hut tax”⁴ — was introduced by the British in many of their colonies, including in Malawi (Berry, 2002). Under a hut tax, rural dwellers were forced to join the money-based economy as tax-paying laborers. Many became cheap laborers that were tapped by estates to work the very land from which they were dispossessed. In exchange for their labor, indigenous Malawians were typically given a nominal plot of land for subsistence farming (PESA, 2018).

The logic of systematic dispossession was brought into sharp relief by observers who noted that parts of unused European-owned land were still off-limits to indigenous Malawians. As recounted by Malawian Chief Mpama to the Governor of Nyasaland, Sir Donald Mackenzie-Kennedy, *The Nyasaland Times* reported, “On 4 November 1940: there is one complaint I wish Your Excellency to hear and that is that there is so little land in this district for the people. There is a large part of the district owned by Europeans but much of it is not being worked and the people feel they should be granted a part of this land. With so little land, there is a scarcity of money.” The article then quotes the Governor’s reply, which summarily defers addressing the complaint until an unspecified date. Historians note that this complaint was routinely aired — and routinely dismissed — for decades in Malawi under colonial rule (Pachai, 1973).

The consequence was essentially a dual system in which Europeans disproportionately owned large and fertile estates governed by one set of principles, and native Malawians disproportionately owned increasingly smaller plots of less fertile land governed by another set of principles (e.g., customary land traditions; Berry, 2002). During this period, European estates produced the vast majority of cash crops for export such as coffee and then cotton and tobacco.

⁴ A type of tax introduced in Africa per hut — per household.

In the 1940s, the Nyasaland African Congress (NAC) developed a presence throughout the colony and began to agitate for independence. As momentum for self-governance grew, Dr. Hastings Kamuzu Banda returned to the colony in 1958 to assume the leadership of NAC, which subsequently changed its name to the Malawi Congress Party (MCP). MCP won significant victories in 1962, and Malawi secured self-governing status from Britain in 1963. In 1964, the country gained full independence from Britain and declared itself a republic. Despite high hopes for the newly elected Banda administration, it began to fissure, fracture, and falter within months. In the two decades that followed, Banda's rule was characterized by authoritarianism with a keen regard for the ostentatious trappings of power.

As shared by many newly independent African countries, there was a heavy focus during this time on nation building and rapid industrialization. In this era, land policy largely reflected a continuation of colonial policies (Verkerk, 2010; PESA, 2018). President Banda appeared to view the primary aim of the rural economy to export cash crops — especially tobacco — and exhibited little concern for the needs of smallholders and subsistence farmers.

Banda accelerated the promotion of estates focused on large-scale, cash-crop production with a flurry of policies that quickened the transfer of customary land (i.e., land that was held communally under the purview of community leaders such as local chiefs or traditional authorities) to elites with clear title and ownership. In addition, the government provided lower interest rates, reduced taxes, and preferential access to capital and credit for estates. The Banda administration argued that these elite estate owners were “entrepreneurial farmers” who would spur innovation and productivity across the agricultural sector (Anseeuw et al., 2016).

This approach to land governance was encapsulated by the creation of the Agricultural Development and Marketing Corporation (ADMARC) in Malawi. ADMARC worked with the Ministry of Agriculture and commercial banks to ensure that only estate owners were licensed to grow and sell tobacco (under the guise that only they, unlike smallholders, had the technical ability and capacity to cultivate the cash crop), that estate owners received higher prices for their crops, and that estate owners were given preferential access to extension, credit, and marketing services. As noted by experts, ADMARC thus “taxed

smallholder farmers through its pricing policies and used that income to promote estate farming for export” (Anseeuw et al., 2016).

Historians estimate that more than one million hectares of customary land was transferred from local chiefs to elites⁵ for the purposes of estate promotion under the Banda regime. It is unclear whether such large-scale land transfers were a vital reason for the dominance of the tobacco economy, but the dynamic so closely resembled the colonial arrangement that many began colloquially referring to these elite estate owners as “mchikumbe,” which roughly translates to “master farmers” (a term that locals had used to refer to colonial subjugators) (Anseeuw et al., 2016).

Throughout the 1980s and early 1990s, the transfer of customary lands to tobacco-producing estates continued. During this time, however, like all other African countries in the region wishing to continue receiving foreign aid, the Banda regime was eventually forced to sign up to the Structural Adjustment and Market Liberalization Programs (SAPs) (Mhone, 1992; Anseeuw et al., 2016). Many of these reforms sought to undercut corruption, graft, and rent-seeking behavior enabled by the existing system of land governance, as well as to dismantle costly and inefficient parastatals and estate farms. Donors’ pushes for reform came with threats of withholding aid. Public discontent peaked in the early 1990s, fueled in part by the SAPs and a post-Cold War era of democratization that was occurring across the region; this ultimately resulted in the peaceful ouster of then “Life President” Banda in multiparty 1994 elections (Mhone, 1992; Brown, 2004).

SAP changes to the policy environment — including the effective liberalization of the tobacco sector — helped create competition for estate owners. This, coupled with declining tobacco prices, led to a significant decline in estate farming (Holden, Kaarhus and Lunduka, 2006). Scholars have noted that, however, SAPs did not ultimately benefit smallholder farmers (Chilowa, 1998) nor did they make any substantial headway towards their intended goal of reviving the economy through increased manufacturing (Munthali, 2004).

The new government was led by the United Democratic Front (UDF) and again promised to address the structural inequalities. The UDF introduced a series of reforms aimed at crop

⁵ The majority of these elites were members of parliament, government bureaucrats, and well-connected party stalwarts.

diversification, drought mitigation, and the creation of more uniform land rights. Smallholders were, for the first time, permitted to sell cash crops such as tobacco (Hanmer and Lea, 2009). In 2002, the UDF outlined a more comprehensive vision for land governance through the Malawi National Land Policy (Anseeuw et al., 2016). The goal of this land policy was to correct historical land injustices while providing an opportunity for large estate landholders to sell their land to those who were landless or land poor (Holden, Kaarhus and Lunduka, 2006).

Unlike previous regulations, this policy aimed to register customary land, formally recognize the role of local chiefs and authorities over communal land and streamline the regulation of transactions involving customary land (Anseeuw et al., 2016). The policy also emphasized land rights for women, limits on the amount of land acquired by foreigners, and restrictions on foreigners' ability to acquire estates (Holden, Kaarhus and Lunduka, 2006; Anseeuw et al., 2016). Though well intentioned, the land policy proved difficult to implement as the government stressed capacity problems at all levels including planners, surveyors, architects, and lands officers (Holden, Kaarhus and Lunduka, 2006).

The legislative framework to support the 2002 Malawi National Land Policy was passed in 2016, and a variety of challenges became apparent in the interim. Anecdotal evidence suggests that several stakeholders have been particularly vocal about ongoing land grabs. According to land experts in Malawi, the government has made meaningful headway into registering and titling land parcels across the country despite some resistance from local traditional authorities. But many aspects of land reform are still in their nascent stages, from developing land rental markets to strengthening land-based institutions, geo-mapping, and reallocating expired estate leases. Officials and experts involved in land governance have emphasized that their primary focus has been to title land parcels.⁶

A recent study that combined its own primary data with the 2013 Integrated Household Panel Survey finds that nearly one-third of all cultivated land in Malawi is owned by less than one percent of the nation's farmers, and the bulk of this land is concentrated in the hands of those owning 10 or more hectares (Government of Malawi, 2008; Anseeuw et al., 2016). Moreover, its legacy of policies promoting tobacco has made Malawi one of, if not the most,

⁶ Parts of this paragraph are supported by conversations with a gamut of land experts in Malawi in 2019.

tobacco-dependent economies in the world — nearly 60% of its merchandise export earnings came from tobacco in 2016 (FSFW, 2019). Thus, there is an acute need to identify and address key challenges to the productive and sustainable use of land in Malawi.

3. Challenges to the Productive and Sustainable Use of Land

A review of the literature on land utilization in Malawi, secondary analyses of rural household surveys, and conversations with several in-country stakeholders reveal many recurring themes related to the productive and sustainable use of land in Malawi.⁷

Challenges Faced by Estate Holdings

Substantial transfers of customary land to estates in Malawi have taken place over a long period of time. Political independence in the early 1960s did not change this; in fact, many argue that it accelerated such transfers, the majority of which produced tobacco and tea for export. The scale of these transfers merits a closer inspection, given their implications for current and future land use patterns in the country.

Secondary analyses have recorded the rise and fall of land transfers and use levels since independence, beginning with Devereux's 1997 piece. More recently, Deininger and Xia analyzed data from recently completed computerization of all large land leases with satellite imagery and geo-coded farm surveys in Malawi (Mandondo and German, 2015; Deininger and Xia, 2017; Malawi Economic Monitor, 2017). They found that, during the first two decades of the Banda regime from 1965 to 1986, just over 2,200 leases on nearly 250,000 hectares of land — allegedly comprised of unused or underused customary plots — were given to “elite entrepreneurial farmers” (Verkerk, 2010; Anseeuw et al., 2016). This reflected approximately 104 leases a year with an average plot size of 105 hectares, constituting an annual land transfer amount of just under 11,000 hectares. In the Banda regime's final years, between 1987 and 1994, the number and size of these transfers increased dramatically to more than 2,600 leases a year with an average plot size of 25 hectares, representing an annual land transfer of nearly 65,000 hectares (Deininger and Xia, 2017; Malawi Economic Monitor, 2017).

⁷ Challenges are discussed separately since they vary between estate holders and smallholders.

Table 1: Average number and area of agricultural plots leased each year during various periods since independence in Malawi.

Period	Total number of leases	Total area of land leased (ha)	Average number of leases per year	Average area leased per year (ha)
1965–1986	2,277	2,37,322	104	10,790
1987–1994	21,008	518,800	2,626	64,850
1995–2006	460	80,520	230	6,710
2007–2016	1,120	90,800	112	9,080

Source: World Bank and the National Geographical Estates Database (Malawi Economic Monitor, 2017; Deininger K & Xia F, 2017).

In 1994, the new democratically elected, UDF-led coalition government announced a moratorium on transfers of customary land to estates — this led to a dramatic decrease of such transfers (Deininger and Xia, 2017). However, a limited number of transfers did continue, suggesting that the moratorium was likely not a foolproof solution. Between 1995 and 2006, 230 leases were given out with an average plot size of 29 hectares, reflecting an annual land transfer of approximately 6,700 hectares (Table 1).

In the following decade, a World Bank study shows that these transfers declined further, to approximately 1,120 leases a year, but the average plot size increased to 81 hectares, resulting in an annual land transfer of just over 9,000 hectares (Table 1). Ultimately, according to Deininger and Xia, roughly 1.3 million hectares — about one-fifth of all agricultural land in Malawi — have been transferred to estates between 1965 to 2017 (this estimate is largely based on efforts to digitize records related to leases previously documented on paper).

In the process of accumulating these data, observers compared them to satellite images and discovered that paper-based leases were riddled with inaccuracies. A study by Deininger and Xia (2017) further found that the documented boundaries of estates on paper often overlapped, and documented land use often differed from actual use. They attribute these discrepancies to three likely causes. First, under the Banda regime, tobacco producers were required to hold at least 12 hectares. Many producers with plots under 12 hectares resorted to establishing “ghost estates,” or non-existent parcels of land, to qualify for tobacco

production. Second, full documentation and titling of an estate is an expensive process, and many estate owners may have forgone these steps. Further, the report notes that 37% of estate owners have only an offer letter, while 42% have a deed (Deininger and Xia, 2017). Third, documentation quality varies significantly: about half of all estate owners have only a sketched map, and nearly all others have a survey-drawn plan. The experts estimate that fewer than 1 in 50 estate owners have a fully completed deed plan.

Public documents reinforce the gap between documentation and practice. Nearly one-third of these documents claim an area that is more than 10% larger than what was recorded, while two-fifths claim an area that is more than 10% smaller than the documented records (Malawi Economic Monitor, 2017). Collectively, the resulting discrepancies suggest that about 140,000 hectares of estate-owned land overlap, with nearly 1 out of every 5 having overlapping land, and 1 out of every 10 having overlapping land that comprises more than 20% of their estate (Deininger and Xia, 2017). The challenges are further compounded by the observation that almost three-quarters of the estate leases have expired, and 95% of the remaining leases are set to expire in fewer than 7 years.

In addition to these challenges, estate-owned land appears to suffer from inefficiencies. Although there is significant variation from estate to estate, the World Bank's national survey data on the estates in Malawi suggest that the intensity of land use on estates is relatively low. Further analysis of data suggests that, for most major crops, estates average lower yields than smallholders (Malawi Economic Monitor, 2017). This finding is even more striking given that estates have historically received preferential access to inputs, credit, capital, technology, and markets (Deininger and Xia, 2017). Moreover, during both colonial times and under the Banda regime, the higher productivity of estates was estimated to have positive spillover or knock-on effects for surrounding smallholders, as has been observed in countries like Ethiopia and Mozambique (Deininger and Xia, 2016). But as the productivity of Malawi estates is often lower than that of smallholders, it is unlikely that the presence and practices of the former bear any positive externalities for the latter (Ali et al., 2015).

There are three summary findings related to the development of land use in Malawi:

- A fair amount of agricultural land in Malawi remains within the large estate sector, whereas most remaining land is held by smallholders with customary land rights.

- Estate land suffers from a high degree of tenure insecurity because of poor documentation, sizeable overlap in documented property, and lease expirations.
- Estates seem relatively less intensive and productive with their land, although they have historically comprised prime plots and received preferential access to resources.

For those interested in land development and investment, these findings suggest that attempts to deploy estate-owned land effectively will require due diligence and a clear plan.

Challenges faced by Smallholder Farmers

The primary challenges smallholder farmers face in Malawi appear three-fold. First, land is increasingly scarce for smallholder farmers. Second, smallholders suffer from higher levels of tenure insecurity than estates, reducing land investment and productivity. Third, smallholders face significant structural barriers to productive and profitable use of their land.

Land for smallholders is increasingly scarce due to the combined effects of rapid population growth and low productivity growth. The tradition of subdividing a plot to the owner's dependents with little gains in productivity, coupled with the systematic, large-scale transfer of land to estates, has left contemporary smallholders with relatively smaller plots or expansion onto more marginal lands. According to analyses of the Integrated Household Survey (IHS) — a nationally representative, household-level survey last conducted in 2016 and 2017 — smallholder households typically report an average plot size of less than a hectare (0.62 hectares on average; Malawi Economic Monitor, 2017; Muyanga et al., 2020). Plot sizes varied slightly by region — with those from the northern, central, and southern areas of Malawi reporting an average plot size of 0.64, 0.76, and 0.50 hectares, respectively. With small sizes, and with most farmers allocating a part of their land for subsistence, there is very little land left for cash crop production.

Tenure insecurity is examined at length drawing from the World Bank study using survey data from both the 2016–2017 IHS and the 2006–2007 National Census on Agriculture and Livestock (NACAL). The IHS data revealed that a significant number of smallholders recognize how tenuous their land rights are, with one-third expressing concern about being deprived of part or all of their land. More recently, the 2016–2017 IHS data painted a clearer picture of the typical smallholder household, including their assets and reported level of land conflicts (see Table 2). According to the analysis, approximately one-third of all smallholder

householders believed that they would “lose land in the next 10 years.” Moreover, nearly as many villages — 27% in the northern and central thirds of Malawi, and 32% in the southern third — reported land disputes by village families; one-fifth reported land disputes with neighboring villages (Malawi Economic Monitor, 2017).

Table 2: Characteristics of smallholder households, their assets, and reported level of land conflict in Malawi

	Northern Malawi	Central Malawi	Southern Malawi	All Malawi
Household characteristics and assets				
Value of durable good (USD)	309	253	211	242
Grass roof (%)	45	66	55	57
	67	80	79	77
Mud floor (%)				
Land size (ha)	0.64	0.76	0.5	0.62
Income from crops (USD)	358	366	135	254
Have ownership documents for land (%), IHS	2.2	2.0	1.9	2.0
Level of land conflicts, IHS				
Land conflicts within the village (%), NACAL	27.6	27.9	31.6	29.3
Land conflicts with neighboring villages (%), NACAL	17.7	20.4	19.4	19.5
Believe they will personally lose land within 10 years (%), NACAL	21.0	34.0	37.0	33.0

Source: Drawn from World Bank’s Malawi Economic Monitor, the Integrated Household Survey 2016/2017, and the National Census on Agricultural and Livestock 2006/2007.

Further, Malawi Economic Monitor (2017) observe that perceptions of tenure insecurity by smallholders were associated with several factors. These included having their land encroached within the past decade, having their land taken away or exploited, having disputes over land with a relative, having a share of their land borrowed or rented out, and having land located outside of the village. At the village level, the study found these included having seen households move out because of land conflict, having unallocated land, and having estates within walking distance.

Anecdotally, smallholders have reported that concerns over losing their land often undercut their desire to invest in their plots. Economists at the World Bank attempted to quantify this phenomenon, and their initial findings suggest that these concerns are not trivial. Their findings indicate that the perception of tenure insecurity in Malawi reduced the

likelihood of building terraces, creating soil bunds, rotating crops, or otherwise investing in soil and water conservation measures by 5.4 percent. This decrease seems to lead to direct and indirect reductions in productivity. Rotating crops and building terraces, for example, are estimated to increase crop output by 9% and 9.4%, respectively (Malawi Economic Monitor, 2017). Experts have also found that similar dynamics deriving from land insecurity result in high levels of soil degradation in Malawi on smallholder plots. This is evidenced in part by the finding that providing smallholders with fertilizer in Malawi does not increase crop yield to the same degree that it does in other parts of Africa (Jayne et al., 2018). The fear of land loss is associated with a 4% reduction in crop output.

The detrimental effect of perceived tenure insecurity on crop output is even more pronounced among women. Fear of land loss on plots operated by women was associated with an 8.4% reduction in crop output, which roughly translates to a 15% loss of annual crop income. Such findings underscore the vulnerability of smallholders, and particularly women, to tenure security. Extrapolating these findings for all smallholders in Malawi, the World Bank conservatively estimates that fear of land loss among smallholders results in a loss of \$14 million annually in crop output alone (Malawi Economic Monitor, 2017).

Even for the subset of smallholders who don't face tenure insecurity, there are significant structural barriers to productive and profitable use of their land. Many of these structural barriers reflect the legacy of disadvantage that originated during the colonial era and the subsequent government. Anecdotally, smallholders report substantial difficulty in gaining access to optimal inputs (e.g., seeds, fertilizer, pesticide, and agricultural education), credit, financial institutions, and markets.⁸ These challenges are further compounded by the fact that most smallholders must transport their product by land and across relatively long distances, compared with similar transport routes in neighboring countries like Mozambique and Tanzania, to ports for export. In a country where the vast majority of roads are unpaved and in poor condition, the resulting cost of transport is substantial.⁹ Further, a study by Lall, Wang and Munthali (2009) suggest that monopolistic market structure also contributes significantly to regional disparities in transport costs. The effect of such barriers is clear in

⁸ Reflections shared by a smallholder farmer at the ATI Land Summit in 2019.

⁹ Learn more at <https://www.mcc.gov/our-impact/constraints-analysis>

the fact that transporting freight from farm to market is often significantly higher in Malawi than in neighboring countries.

There are three summary findings related to land scarcity and smallholder challenges:

- Land cultivated by smallholders is increasingly scarce. The typical household plot size is roughly 0.5 hectares.
- A substantial subset of smallholder farmers experience tenure insecurity. The fear of losing their land makes it unlikely that they will invest in their land and, consequently, has a knock-on effect on their crop output. These effects are even more pronounced for plots operated by women.
- Smallholders report significant barriers accessing agricultural services such as inputs, credit, and pipelines to market.

For those interested in land development and investment, these findings suggest that effective smallholder engagement will need to address land scarcity, tenure insecurity, and the delivery of robust agricultural services.

4. Paths Forward

The key challenges faced by estate owners and smallholders are summarized below (see Figure 1). Given these challenges, future strategies could include the aggregation of contiguous land (either land that is unused or underutilized by estate owners, held by adjacent smallholders, or a combination of both), improvement of land administration and tenure security, and the delivery of robust agricultural services (in the form of inputs, credit, and pipelines to market).

Figure 1. Key Challenges for Estate Owners and Smallholders Regarding Land Development in Malawi.



Source: Authors' illustration

4.1. Land Use, Improving Land Productivity, and Commercialization

The case for aggregating contiguous land is largely intuitive. This practice enables economies of scale that can significantly increase agricultural output at lower unit costs. In a simple illustration, costs associated with tractor use could outweigh the benefits of this technology for a smallholder cultivating a 0.5-hectare plot, whereas such costs would not be limiting factors for an estate owner or a group of smallholders working a contiguous, medium-to-large size landholding. Beyond economies of scale, the aggregation of contiguous land into single plots also helps open investment opportunities and attract different sources of capital.

Recent studies have challenged the viability of smallholder-led growth in Africa (Collier and Dercon, 2014). Muyanga and Jayne revisit the inverse farm size–productivity relationship in the context of Kenya, finding that there is a strong positive relationship between farm size and productivity from 5 to 70 hectares, but productivity is relatively flat from 3 to 5 hectares (Muyanga and Jayne, 2019). This is especially relevant in the context of an evolving farm size distribution and increasing number of medium- and large-scale farms in Africa.

Agricultural value chains are capital-intensive businesses that can require large amounts of land and strong engagement from farmers to ensure robust supply chains. Different links in the agricultural value chain must be closely engaged given that the products of agribusiness — such as tea, palm oil, or certain types of horticulture — spoil quickly and thus necessitate close coordination between harvester, processor, and exporter. Often, the need for such close coordination leads to an operation where a large plot of land is cultivated around or adjacent to a processing facility. More niche areas of the agribusiness sector include companies that make use of specialized seeds. Such companies often require large amounts of land and strong engagement from farmers to prevent cross-pollination, maintain the purity of their seeds, and protect the intellectual property contained therein. A third and similarly niche area of agribusiness includes businesses that require unique infrastructure (e.g., greenhouses and specific irrigation systems) to ensure optimal crop output (Tibbo and van der Velden, 2020).

Tapping into wider investment opportunities that might be available through land aggregation — whether it be underutilized estate land or a cooperative of smallholders — requires reliable land administration and tenure security. As Hazell *et al.* discuss in their 2007 report, this is all the more so for small farms. It is difficult to aggregate land if it is not clear who owns the rights, how those rights can be transferred, and how disputes over those rights can be resolved consistently and efficiently. Moreover, fear of land loss diminishes crop output and productivity and, therefore, could undermine the appeal of land-based investments.

4.2. Land Policies, Administration, and Tenure Security

Given the history of land tenure in Malawi, it can be argued that both land administration and tenure security have remained inadequate for estate owners and smallholders alike. In recent years, however, there has been cause for optimism. In 2016, the Malawian government passed several key acts to promote land and land-related reforms (Namfuko, 2017).¹⁰ The regulations, as elaborated above, aim to harmonize government policies around the ownership of customary land, land administration and management, and land acquisition. The government's efforts have focused on providing smallholders using customary land with

¹⁰ See more at <https://www.lands.gov.mw/index.php/legal-framework.html>

a process to obtain legal title to their land and improving land-related administrative procedures with an eye towards decentralization, efficiency, and standardization (Mlaka, 2018; Matonga, 2020).¹¹

Recently, the President of Malawi, Dr. Lazarus Chakwera ordered a review of all land laws enacted in 2017 in order to address flaws in land scarcity and tenure security (Matonga, 2020). The president noted that three contentious issues on land will need to be addressed: sale of land to foreigners, existence of freehold land, and legislation on customary land. Moving from the current dearth of appropriately registered and titled land — in addition to the inaccuracies of its paper-based format — to the envisioned framework will require sizeable investments in technology (e.g., mapping plots, surveying, and digitizing records), staffing, education, and information campaigns. Conversations with stakeholders with the experience, expertise, and capacity for such investment suggest that Malawi is receiving support to implement its land policies.

Another distinct aspect of any path forward is the consistent delivery of efficient agricultural services. Service delivery in this context refers broadly to mechanisms or structures through which support services — training, inputs, financial services, market pipelines, and other value-added services (e.g., mechanization, processing, handling, and storage) — are funneled through the supply chain to improve output (Hazell et al., 2007; Tibbo and van der Velden, 2020). These services are particularly important for smallholder farmers who have historically been deprived of them and who continue to face structural barriers to sustainable and productive land use. The potential benefits of service delivery for smallholders and investors are intuitive and delivering combined services would lead in turn to synergy. For example, providing training, inputs, and value-added services would facilitate the extension of credit and vice versa. Moreover, the overall effect of these services is improved crop output, in both quantity and quality, so that both smallholder farmers and the agricultural enterprise see improvement.

To base a strategy on land aggregation, tenure security, and the delivery of robust agricultural services appears promising at first glance. However, it is a complex exercise with few well-established predecessors. As a result, local and regional case studies of this

¹¹ Based on conversations with land experts in Malawi in 2019.

strategy — with the acknowledgement that the advancement of land administration and tenure security remain an active work in progress — are critical to developing a more nuanced understanding of what this path may entail. But information about these case studies is limited, often anecdotal, and occasionally inconsistent. Insights drawn from such sources should thus be understood with these caveats in mind.

Ensuring that land markets work is of the utmost importance and is required for land consolidation and for farm productivity growth. Studies show that transferring land facilitates equity, efficiency, and household welfare (Swinnen, 2017). Jin and Jayne’s study of more than 1,400 households in 22 districts in Kenya over a 10-year period shows that rental markets contribute to agricultural productivity, net revenue, and overall incomes for smallholders. Most importantly, rental markets do not necessarily result in transfers from land poor to land rich or relatively large landholders (Jin and Jayne, 2013). There are, however, clear and pressing barriers to land market participation. Land rental market participation, although increased, remains low in Malawi (Chamberlin and Ricker-Gilbert, 2016).

5. Lessons from the Field

5.1. Phata Cooperative

The Phata Cooperative is a farmer-owned cooperative established in southern Malawi’s Lower Shire Valley in 2011. At its inception, it consisted of a cooperative of more than 200 smallholder farmers who owned approximately 370 hectares of customary land with oversight by local chiefs and traditional authorities. The farmers approached Agricane, a farm management company with sugarcane operations in the region, to explore a partnership. In turn, the two parties engaged AgDevCo — a social impact investor and agribusiness project developer based in the United Kingdom — to develop a commercial sugarcane production operation (Tibbo and van der Velden, 2020).

As an initial step, the Phata Cooperative formed a Board of Directors with representation from smallholders, Agricane, and AgDevCo. Reportedly, the Board is entirely elected, appointed by smallholders in the region, and made of an Executive Committee and subcommittees. With assistance from Agricane, the smallholders measured and mapped their land as well as verified that farmers were not being coerced into participating and that

their lands had not already been earmarked for other purposes (Tibbo and van der Velden, 2020). The smallholders then agreed to aggregate their land into a single unit with the goal of obtaining formal titles and deeds and, in turn, leases. Anecdotally, at least, the process required years of trust building with local farmers and traditional chiefs before they were convinced.¹²

Agricane then helped the smallholders install a center pivot irrigation system, build capacity for commercial farming, obtain technical assistance, and secure a guaranteed, long-term agreement with an off taker, Illovo Malawi. In mid-2013, AgDevCo provided a \$500,000 grant to install the irrigation system and provide additional support services. The resulting yield was 106 tonnes per hectare, total revenue was almost \$1.3 million, and profit was more than \$500,000 for the cooperative (Tibbo and van der Velden, 2020). Each smallholder received dividends in proportion to his or her original plot of land, with the average smallholder receiving just over \$500 in income. In 2015, the dividend for the average smallholder was reportedly \$750. Under the guidance of its Board of Directors, the cooperative determines how to strike a balance between dividends and reinvestment into the cooperative (Tibbo and van der Velden, 2020).

Today, the Phata Cooperative seems to have kept up its early momentum. The Cooperative now includes more than 1,000 smallholder farmers with its center pivot irrigation system. It has been consistently profitable, generating more than \$6.5 million in dividends for smallholders over the past six years. Income increased for farmers from an average of \$120 per annum in 2011 to \$641 per annum during the 2016–2017 season (Strong, 2019).

5.2. Value Farms

In 2014, Value Farms was established as an agribusiness near Lake Victoria in Western Kenya through a USAID Feed the Future Kenya Engine initiative grant.¹³ The initiative consisted of a partnership between approximately 200 smallholder farmers and an off taker that sold the produce at the farm gate. The smallholders were predominantly fishers and

¹² Based on reflections of a representative at the ATI Land Summit in 2019. The process itself appears to have occurred relatively smoothly.

¹³ Learn more at <https://ke.usembassy.gov/10500-2/>

primarily engaged in farming maize and beans to complement their fishing catch for subsistence (Tibbo and van der Velden, 2020).

Since many of the landowners did not have title deeds, the Department of Land surveyed each plot to ensure clarity, and the Community Based Organization formed a committee to negotiate with Value Farms. Eventually the aggregated land was leased to Value Farms for 10 years in exchange for a fee and employment opportunities within the operation. With land aggregated and tenure secured, Value Farms then introduced a large-scale, mechanized operation to produce yellow passion fruit, kale, capsicum, beetroot, watermelon, chilies, and cucumbers. Value Farm also employed more than 180 employees — 90% of whom were local women — and began to recoup its daily operational costs within a year. Notably, the operation led to a series of offshoot businesses from the increased income in the local community. The initial success of the model allowed Value Farms to secure additional grants to purchase another 400 acres for expansion (Tibbo and van der Velden, 2020).

Value Farms, however, did face challenges like lease negotiation. Smallholders in the area were not familiar or comfortable with the lease arrangement, as it was a first-of-its-kind proposition to them. Understanding and building trust around how lending their underutilized land to Value Farms would result in additional income, regular employment, and other benefits took time. Attracting finance for expansion also tempered the initial installation of necessary infrastructure and overall progress. (Tibbo and van der Velden, 2020).¹⁴

5.3. Malawi Mangoes

Malawi Mangoes was established as an agribusiness in Salima, central Malawi, in 2010. The initiative consisted of a partnership between smallholder mango farmers and an off taker who processed the fruit into pulp or concentrate for export to major beverage manufacturers. The company reportedly registered roughly 4,800 smallholder farmers. It provided the smallholders with agricultural services — including grafting services, improved plant varieties, supply transport, and technical support — and a guarantee of purchase by Malawi Mangoes (Tibbo and van der Velden, 2020). The initiative also developed pilot programs for a village orchard in which high-performing smallholders were aggregated into groups that supported crop diversification. This diversification included mangoes, soy, and groundnuts

¹⁴ Information on the present state of Value Farms and involved smallholders remains limited.

— as well as a smallholder incubator farm where semi-subsistence farmers received one year of intensive training to transition to small-scale commercial operations.

Complex Case of Malawi Mangoes

The case of Malawi Mangoes highlights the complex nature of land rights in Malawi before the current raft of land laws was enacted in 2016 (based on an interview with the former owner-manager of Malawi Mangoes in February 2020). Originally, Malawi Mangoes drafted a contract for land use with the Ministry of Justice to ensure that the eventual land transaction did not fall *ultra vires*. These transactions were likely the first of their kind, as they allowed the government and owners to act as the legal and beneficial custodian of an estate while the private-sector entity operated or managed it. Thus, the private-sector operator would agree to pay the ground rent, but this was offset against (a) the statutory compensation payments paid by the private-sector entity on the acquisition, (b) any survey work to be done by the Government of Malawi, and (c) an agreed percentage of the ground rent that had to be contributed by the government into a trust for the benefit of local communities.

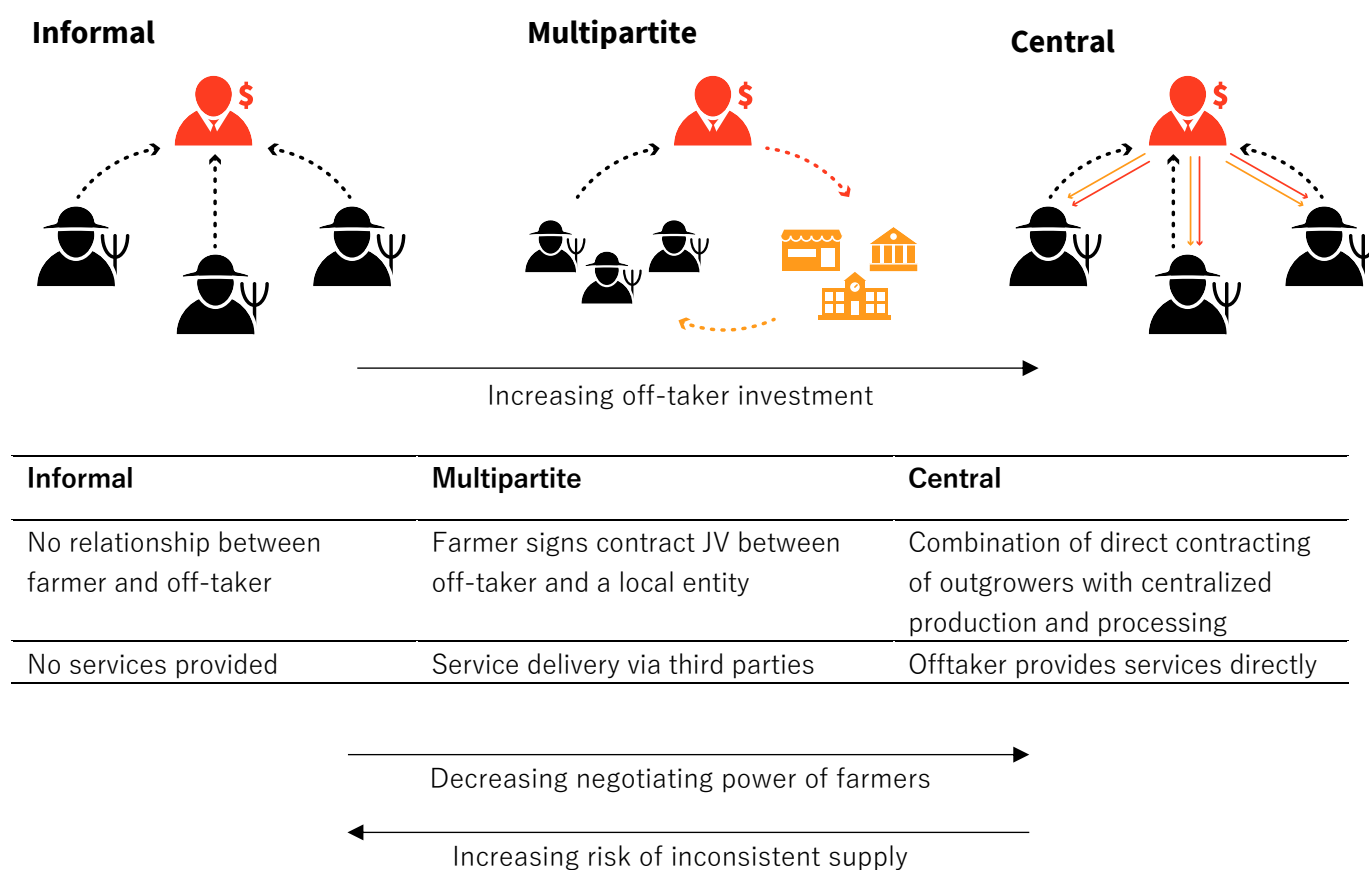
With regards to (a) and (b), these costs are usually met by the government. However, the financial state of the government of Malawi meant that this was difficult and necessitated the enactment of this structure. In terms of actual land use, the private-sector operator was permitted to operate the plot for 50 years, plus an automatic rollover for a further 25 years, provided they complied with the agreed purpose, paid the rent, and complied with the voluntary guidelines of the FAO. Crucially, the Government of Malawi also waived its own sovereign immunity and agreed to international resolution for any future dispute resolution. This should be considered a set of positive factors set in a favorable light for most investors.

Yet when Malawi Mangoes sought to establish its third farm on uninhabited land and paid for a long-term lease, an array of problems surfaced at a lower level. For example, the favorable macro framework did not eradicate the wide system of patronage that accompanies many of these land deals. In fact, the entire land deal unraveled when various constituents of one chief discovered that the transaction would exclude them. As a result of this exclusion, the chief was forced to step down from her position with the land agreement already three years behind schedule. In the aftermath of this event, Malawi Mangoes' management saw the lack of transparency in the land procurement system as so overwhelming that most investors would struggle to overcome the challenges even when best practices were employed.

6. Moving Forward: Establishing Sustainable Relationships and Systems

Although limited, the case studies above contain important lessons for those interested in catalyzing land development in Malawi. First, there is more than one way to aggregate land, improve land administration and tenure security, and deliver robust agricultural services. As illustrated by the case studies and depicted below, the models for doing so occur on a spectrum from informal to multipartite to highly centralized (see Figure 2) (Tibbo and van der Velden, 2020).

Figure 2. Spectrum of Models Under Which Agribusiness and Smallholders Can Work Together to Aggregate Land, Improve Land Tenure Security, and Ensure Robust Agricultural Services



Source: Technoserve and Tibbo and van der Velden, 2020. Note that the level of investment, negotiating power of smallholders, and risk of inconsistent supply vary predictably across the spectrum.

As the relationship between smallholders and off takers shifts from informal to multipartite to highly centralized, predictable trade-offs occur. In Malawi, robust relationships and off takers are few and far between with the exception of a few major crops. As a result, there is no investment or delivery of agricultural services from the off takers to smallholders; the smallholder retains their negotiating power in the absence of a formal contract but runs the risk of variable output in the absence of investment and agricultural services. In contrast, in highly centralized arrangements, the off taker and smallholder have formally contracted with one another and coordinate closely. The former invests heavily in the latter and directly provides agricultural services in anticipation of reliable, high-quality output. The smallholder in this arrangement typically relinquishes a significant amount of his or her negotiating power through the contract with the off taker. The pros and cons, or risks and benefits, of an off taker and a smallholder thus vary in accordance with the type of model pursued (see Figure 3) (Tibbo and van der Velden, 2020).

Figure 3. Additional Risks and Benefits for Both Agribusiness Off Takers and Smallholder Farmers Under Various Models to Aggregate Land, Improve Land Tenure Security, and Ensure Robust Agricultural Services

Informal	Multipartite	Central
Offtaker		
Risks: No control over supply	Risks: Can be difficult to coordinate, different agendas for different stakeholders	Risks: High costs involved, low return on investment due to side-selling
Benefits: No costs involved, fully flexible to make changes around who to source from	Benefits: Specialized service supply	Benefits: Direct control over supply chain
Farmer		
Risks: No agreement or guarantee for off-take of their produce, no access to services	Risks: No clear division of roles on service provision between multiple parties, risk of difference in agendas between multiple parties	Risks: Locked into supply chain of off-taker
Benefits: Free to sell to anyone	Benefits: Specialized service supply (each party can act on its own strengths)	Benefits centrally focused service supply, direct off taker of the produce. Off taker had on-the-ground experience, vested interest in the business since off taker also runs a nucleus farm

Source: Tibbo and van der Velden, 2020.

Second, it is critical to establish a model that is fair and equitable for all parties. Whether the model is multipartite, as in the case of Malawi Mangoes, or highly centralized, as in the case of Value Farms and the Phata Cooperative, the asymmetry of power between the off taker and a group of smallholders can potentially result in the shortchanging of the latter. When this happens, negative incentives arise for smallholders. They may, for instance, divert inputs from commercial plots to their own subsistence plots (since the latter naturally take priority over the former if a farmer is forced to choose) or engage in side selling (e.g., selling commercial crops to parties other than the contracted off taker in hopes of making greater profit). As demonstrated by the success of the Phata Cooperative, even highly centralized models can be structured to prevent asymmetries of power from undermining the potential of the partnership, but they must be designed thoughtfully and deliberately with the well-being of all parties in mind.

Third, regardless of which model is chosen, aggregating land requires a high degree of trust and a respected third party — such as the government’s nodal unit responsible for land, local leaders, or a farm management company — to help facilitate disputes. This insight is not surprising given the history of land in Malawi and the centrality of land to the livelihoods of smallholders. Value Farms reported that persuading smallholders to aggregate, consolidate, and lease land was one of its greatest obstacles. Although it took time, this process unfolded relatively smoothly for the Phata Cooperative. This suggests that if the idea to band together originates from smallholders themselves, as it did in the case of the Phata Cooperative, then the chances of success are far higher.

These insights are preliminary, given the limited amount of both quantitative and qualitative data available on land and land-based assets in Malawi. Moreover, the case studies available are limited and in need of third-party, on-the-ground verification. Nonetheless, these insights can provide guidance regarding next steps for productive and sustainable use of land in sub-Saharan Africa generally, and in Malawi specifically.

In the case of Malawi, these findings suggest that a substantial amount of customary land has been transferred to estates. These estates suffer from a high degree of tenure insecurity and many appear to be underutilized. They also suggest that smallholders suffer from a scarcity of land, tenure insecurity, and barriers to accessing critical agricultural services.

Potential paths forward may thus be predicated on attracting agribusiness opportunities by aggregating contiguous land (either land that is unutilized or underutilized by estates, held by adjacent smallholders, or a combination thereof), improving land administration and tenure security, and delivering robust agricultural services. The case studies noted in this paper provide early insights into how this may be accomplished. Coupled with the implementation of land reforms and investments in land administration by development agencies, these case studies suggest that creating opportunities to use land productively and sustainably in Malawi is entirely possible.

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References

- Adhikari U., Nejadhashemi A.P. and Woznicki, S.A., 2015. Climate change and eastern Africa: A review of impact on major crops. *Food Energy Security* 4, pp. 110-132.
- Ali, D.A., Deininger, K., Goldstein, M. and La Ferrara, E., 2015. Investment and Market Impacts of Land Tenure Regularization in Rwanda. *World Bank Policy Research Paper, Washington, DC*.
- Anseeuw, W., Jayne, T., Kachule, R. and Kotsopoulos, J., 2016. The quiet rise of medium-scale farms in Malawi. *Land*, 5(3), p.19.
- BACI.2016. World Trade Database by CEPII. 2016. Accessed November 1, 2018.
- Berge, E., Kambewa, D., Munthali, A. and Wiig, H., 2014. Lineage and land reforms in Malawi: Do matrilineal and patrilineal landholding systems represent a problem for land reforms in Malawi? *Land Use Policy*, 41, pp.61-69.
- Berry, S., 2002. Debating the land question in Africa. *Comparative Studies in Society and History*, 44(4), pp.638-668.

- Brown, S., 2004. "Born-Again Politicians Hijacked our Revolution!": Reassessing Malawi's Transition to Democracy. *Canadian Journal of African Studies/La Revue canadienne des études africaines*, 38(3), pp.705-722.
- Chamberlin, J. and Ricker-Gilbert, J., 2016. Participation in rural land rental markets in sub-Saharan Africa: Who benefits and by how much? Evidence from Malawi and Zambia. *American Journal of Agricultural Economics*, 98(5), pp. 1507-1528.
- Chilowa, W., 1998. The impact of agricultural liberalisation on food security in Malawi. *Food Policy*, 23(6), pp.553-569.
- City Press 2018. *60% of arable land is in Africa and it has billions in investment potential*. [online] City Press. Available at: <https://www.news24.com/citypress/business/60-of-arable-land-is-in-africa-and-it-has-billions-in-investment-potential-20181109>.
- Collier, P. and Dercon, S., 2014. African agriculture in 50 years: smallholders in a rapidly changing world? *World development*, 63, pp.92-101.
- Deininger, K.W. and Xia, F., 2016. Quantifying Spillover Effects from Large Land-based Investment.
- Deininger, K.W. and Xia, F., 2017. Assessing impacts of large scale land transfers: Challenges and opportunities in Malawi's Estate Sector.
- Devereux, S., 1997. *Household food security in Malawi*. Institute of Development Studies.
- Elferink, M. and Schierhorn, F., 2016. Global Demand for Food is Rising. Can we meet it. *Harvard Business Review*, 7(04), p.2016.
- Fischer, R.A., Byerlee, D. and Edmeades, G.O., 2009. Can technology deliver on the yield challenge to 2050? *Paper prepared for expert meeting on "How to Feed the World in 2050."* 24–26 June 2009. FAO, Rome.
- FSFW 2019. *Malawi Country Overview*. Foundation for a Smoke-Free World. [online] Available at: <https://www.smokefreeworld.org/sites/default/files/uploads/documents/fsfw-malawi-country-overview-040819-v1.pdf> [Accessed 9 Jun. 2020].

- Government of Malawi. 2008. 2008 Population and Housing Census, National Statistical Office. Lilongwe, Malawi.
- Hanmer, L. and Lea, N., 2009. Constraints to growth in Malawi. Policy Research working paper.
- Hazell, P.B., Poulton, C., Wiggins, S. and Dorward, A., 2007. *The future of small farms for poverty reduction and growth* (Vol. 42). Intl Food Policy Res Inst.
- Holden, S., Kaarhus, R. and Lunduka, R., 2006. *Land policy reform: The role of land markets and women's land rights in Malawi*. Noragric.
- Jayne, T.S., Chamberlin, J. and Headey, D.D., 2014. Land pressures, the evolution of farming systems, and development strategies in Africa: A synthesis. *Food policy*, 48, pp.1-17.
- Jayne, T.S., Mason, N.M., Burke, W.J. and Ariga, J., 2018. Taking stock of Africa's second-generation agricultural input subsidy programs. *Food Policy*, 75, pp.1-14.
- Jin, S. and Jayne, T.S., 2013. Land rental markets in Kenya: implications for efficiency, equity, household income, and poverty. *Land Economics*, 89(2), pp.246-271.
- Klein, A., Kamwaza, C., Chisusu, D., Nyirenda, M.C. and Kayange E., 2019. *Rural perspectives on alternatives to tobacco farming and environmental degradation in Malawi*. FSFW Agriculture Working Paper No.1, Foundation for a Smoke-Free World, New York, NY.
- Lall, S.V., Wang, H. and Munthali, T., 2009. *Explaining high transport costs within Malawi-bad roads or lack of trucking competition?* The World Bank.
- Li, G., Messina, J.P., Peter, B.G. and Snapp, S.S., 2017. Mapping land suitability for agriculture in Malawi. *Land degradation & development*, 28(7), pp.2001-2016.
- Malawi Economic Monitor 2017. *Land for Inclusive Development*. [online] The World Bank. Available at:
<http://documents.worldbank.org/curated/en/422571510808901529/Malawi-economic-monitor-land-for-inclusive-development>.

- Mandondo, A. and German, L., 2015. Customary rights and societal stakes of large-scale tobacco cultivation in Malawi. *Agriculture and Human Values*, 32(1), pp.31-46.
- Matonga, G., 2020, October 22. Chakwera tackles sticky land issues: Orders review of land laws of 2017. *The Nation*, p. 1.
- Mhone, G.C., 1992. *Malawi at the crossroads: The post-colonial political economy* (No. 338.96897 MHO. CIMMYT).
- Mlaka, E., 2018. *New Land Law Overview: Key Changes*. [online] Available at: https://www.kas.de/c/document_library/get_file?uuid=%2044e3c804-d97e-6aab-c002-4d90c33f07b8&groupId=252038 [Accessed 9 Jun. 2020].
- Munthali, T., 2004. *The impact of Structural Adjustment Policies (SAPs) on manufacturing growth in Malawi* (No. 0410002). University Library of Munich, Germany.
- Muyanga, M. and Jayne, T.S., 2019. Revisiting the farm size-productivity relationship based on a relatively wide range of farm sizes: Evidence from Kenya. *American Journal of Agricultural Economics*, 101(4), pp.1140-1163.
- Muyanga, M., Nyirenda, Z. and Lifeyo, Y., 2020. The future of smallholder farming in Malawi. MwAPATA Working Paper No: 20/03. Lilongwe.
- Namfuko, J., 2017. *New land acts and implications on customary land holding, access to land for large commercial agriculture, women's and youth access to land*. [online] Available at: https://www.canr.msu.edu/fsp/countries/malawi/MoLHUD_-_2017_Malawi_Land_Symposium_-_James_Namfuko.pdf [Accessed 9 Jun. 2020].
- Ngwira, S. and Watanabe, T., 2019. An analysis of the causes of deforestation in Malawi: a case of Mwazisi. *Land*, 8(3), p.48.
- Otañez, M.G., Mamudu, H.M. and Glantz, S.A., 2009. Tobacco companies' use of developing countries' economic reliance on tobacco to lobby against global tobacco control: The case of Malawi. *American Journal of Public Health* 99, pp. 1759-1771

- Pachai, B., 1973. Land policies in Malawi: An examination of the colonial legacy. *Journal of African History*, pp.681-698.
- PESA, 2018. *Malawi Land Reform and Rural Transformation Overview*. [online] Available at: <https://politicaleconomy.org.za/2018/05/malawi-land-reform-and-rural-transformation-overview/> [Accessed 9 Jun. 2020].
- Ray, D.K., West, P.C., Clark, M., Gerber, J.S., Prishchepov, A.V. and Chatterjee, S., 2019. Climate change has likely already affected global food production. *PloS one*, 14(5), p.e0217148.
- Somerville, J.J.B., 1963. The Central African Federation. *International Affairs (Royal Institute of International Affairs 1944-)*, 39(3), pp.386-402.
- Strong, J., 2019. *Understanding the role of finance in creating a successful farming cooperative*. [online] niras.com. Available at: <https://www.niras.com/development-consulting/news/agdevco-case-study-in-malawi/> [Accessed 9 Jun. 2020].
- Swinnen, J., 2017. Some dynamic aspects of food standards. *American Journal of Agricultural Economics*, 99(2), pp.321-338.
- Tadele, Z., 2017. Raising crop productivity in Africa through intensification. *Agronomy*, 7(1), p.22.
- Tibbo, K. and van der Velden, I., 2020. *From smallholder to small business* [online] Grow Africa. Available at: <https://www.growafrica.com/resources/smallholder-small-business-private-sector-insights-service-delivery-boosting-profitability> [Accessed 21 Sep. 2020]
- Tittonell, P. and Giller, K.E., 2013. When yield gaps are poverty traps: The paradigm of ecological intensification in African smallholder agriculture. *Field Crops Research*, 143, 76–90.
- United Nations 2019. *World Population Prospects 2019: Highlights* (ST/ESA/SER.A/423) *Highlights*. [online] United Nations Department of Economic and Social Affairs.

Available at: <https://www.un.org/development/desa/publications/world-population-prospects-2019-highlights.html> [Accessed 9 Jun. 2020].

Verkerk, T.A.L., 2010. The politics of agriculture: understanding Malawi's transition from estate based export crops to smallholder food crops.