



The role of the state and foreign capital in agricultural commercialisation: The case of sugarcane outgrowers in Kilombero District, Tanzania

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1 Introduction

Since the launch of the Kilimo Kwanza ('Agriculture First') slogan in 2009, the Tanzanian government has been part of efforts to inject foreign capital into its country's agricultural sector. A range of domestic and international players have developed plans to facilitate private acquisition of farmland; increase investment in irrigation and value addition; deepen the penetration of agribusiness; and bring more of Tanzania's small-scale farmers into commercial agriculture, particularly through outgrower arrangements. The plans include the Southern Agricultural Growth Corridor project (SAGCOT), a public–private partnership focused on Tanzania's south-central region, and Big Results Now, which aims at achieving rapid progress in commercialisation and other agricultural policies in priority crops (Cooksey 2013).

Sugar is a target sector. Through SAGCOT and Big Results Now, it is envisaged that up to 20 sugarcane estates and mills will be developed through publicprivate investment. These will include small- and mediumscale farmers supplying cane as outgrowers (URT 2013b; SAGCOT 2012). In 2012, the Ministry of Lands announced plans to prioritise investments based on the nucleusoutgrower model (Nshala et al. 2013). Outgrowing, a type of contract farming, has been endorsed by not only Tanzanian policymakers but other African governments, researchers and development agencies, although recent reports from the World Bank and FAO have been more ambivalent (FAO 2013; World Bank 2013). The renewed attention to contract farming should be understood in the context of life after structural adjustment, in which governments rolled back the provision of credit, subsidies and extension services to farmers (Oya 2012; Key and Runsten 1999; Dirven 1996; Schejtman 1996).

One of the areas of Tanzania in which development is planned, the Kilombero Valley, already has a nucleus–outgrower sugarcane business. Established in 1960, the business has involved foreign capital throughout its history, first as a private venture, then as a state-run business with foreign management and particularly since becoming a public–private company with foreign majority ownership in 1998. It is often cited as a success story by those aiming to reform or expand Tanzania's sugarcane industry (e.g. SAGCOT 2012: 17). The evolution of Kilombero Sugar Company provides us an opportunity to ask what lessons can be learned from agricultural commercialisation using outgrowers and the injection of fo reign capital through privatisation.

This working paper presents findings from a study of the sugarcane business in Kilombero. We argue that a dramatic but poorly planned expansion of the outgrower sector, combined with farmer services being transferred or reduced, has created wealth but also systemic weaknesses that are linked to falling returns for many outgrowers and a wider problem of land scarcity. The solution to these problems lies with the state, the company and associations of cane growers, as well as sugar industry regulatory institutions.

Our main research question is: what effect has privatisation of Kilombero Sugar Company had on its operations and surrounding communities? The study was undertaken within the context of the Future Agricultures Consortium (FAC) and our analytical framework draws from its Land theme, 1 especially its questions around agrarian structure; social differentiation; land and property; and livelihoods and food security. The paper contributes to the debate on large-scale land acquisition and agricultural commercialisation in sub-Saharan Africa, as well as providing insights for Tanzanian agricultural policymaking and giving a history of the company and local area.

The following section introduces the study area and methodology. Section 3 describes the situation up to 1998. Section 4 discusses the main changes made by the company since privatisation and their consequences. Section 5 considers the wider impacts on nearby communities. Concluding remarks are presented in section 6. Two appendices containing detailed information are available at the end of this paper.

2 Study area and methodology

Kilombero Sugar Company Limited (KSCL) is located in the northern part of the Kilombero Valley in Morogoro Region, south-eastern Tanzania (Figure 1), straddling Kilosa and Kilombero districts. The valley forms part of the Rufiji River Basin, the largest river basin in Tanzania. One of the tributaries of the Rufiji, the Great Ruaha River, passes by KSCL's headquarters at Kidatu. To the south is the Kilombero River, another Rufiji tributary, and its large floodplain. The area around KSCL is mountainous and heavily forested in places. The Udzungwa mountain range lies directly to the west, and at the foot of the mountains runs a trunk road that connects KSCL to the main Tanzam highway and Dar es Salaam around 350km away. Annual rainfall averages 1,200–1,600mm (Kilombero District Council). There are typically two distinct long and short rainy seasons of March-May and November-January/February, respectively, but rain sometimes falls uninterrupted from October to March (Harrison and Laizer 2007). The Udzungwas and extensive river system have deposited rich alluvial sediment in the valley (Marshall 2008; Futoshi 2007). Kilosa and Kilombero districts are the most and second most populated districts in Morogoro Region, respectively. According to the National Census of 2012, Kilombero District, where our study sites are found, has 407,880 people, of which 202,789 are men and 205,091 women, and 94,258 households, with an average household size of 4.3 persons (URT 2013a).

The Kilombero Valley has been earmarked for agricultural development within the SAGCOT corridor and was also identified during the Big Results Now policy process as a suitable location for large-scale rice and sugarcane farming and smallholder irrigation schemes. At Ruipa, approximately 100km south-west of KSCL, the Tanzanian government is seeking investors to lease a 10,000ha site that it has demarcated for sugarcane

production using the nucleus—outgrower model (Figure 2). As part of its policy commitments under the New Alliance for Food Security and Nutrition (see DFID 2013), the government pledged to demarcate and certify village land in Kilombero District to facilitate land acquisition and investment. The government and the business arm of SAGCOT are among several parties to have funded the development of village land-use plans in the district. All but 15 of the 102 villages have been surveyed for the issuance of 'Certificate of Customary Rights of Occupancy' (District Land Officer, interview, 18 November 2013). At the time of writing, experts from Mkurabita—the property and business formalisation programme under the President's office—were reportedly verifying outgrowers' land in five villages in the study area.

KSCL was established in 1960 with foreign capital and nationalised in 1967. In 1998 the business was privatised. Fifty-five per cent of the company was bought by Illovo Sugar, the South Africa-based sugar corporation which has since 2006 been a subsidiary of Associated British Foods. The remainder of KSCL is owned 20 percent by ED&F Man, a UK-based sugar merchant; and 25 percent by the Tanzanian government. The company runs two irrigated estates totalling 8,022ha, two mills and the outgrower operation, involving around 8,000 large-, medium-and small-scale producers.

Our research aim was to investigate what effect the privatisation of KSCL has had on operations and surrounding communities. This fits within the wider aims of FAC's Land and Commercialisation in Africa (LACA) project framework.² To operationalise and focus the research, we drew on literature on contract farming and agricultural commercialisation and the analytical areas of the FAC Land theme to identify sub-questions

and indicators that would help us evaluate the impacts of privatisation. This led us to consider the following:

- 1. What changes has Illovo made to the business?
- 2. How can KSCL and related institutions be assessed as a business model in terms of their impacts on: land use, access and ownership; incomes and food security; technology transfer and capacity-building; and inclusivity and differentiation?
- 3. How have operations and wider communities been affected by other factors, such as *ujamaa* (see section 3) or the regulatory and political environment in Tanzania?

Fieldwork took place in Dar es Salaam, Morogoro town and Kilombero and Kilosa districts during 2013. It involved 47 individual and group interviews with farmers (mostly but not exclusively sugarcane outgrowers) based in three villages – Msolwa Ujamaa, Sanje and Signali – and 33 interviews with national and local stakeholders, among them researchers and representatives of sugarcane grower associations, the company and the Sugar Board of Tanzania.

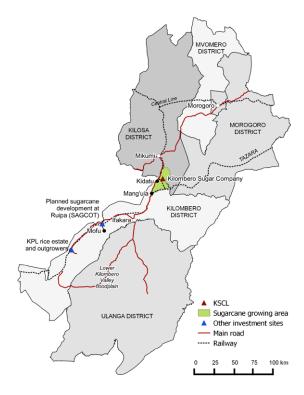
Before selecting villages, we reviewed the literature to avoid sites where surveys had been recently undertaken. Msolwa Ujamaa was selected because, as well as having a large number of sugarcane outgrowers with their own association, it is a well-known *ujamaa* village. Sanje is also a sugarcane-producing village but has a newer and smaller association and lies farther from the mills. One aspect of life in the area is farmers acquiring land in far-away villages and for that reason we conducted interviews in the village of Signali in order to investigate

Figure 1: Map showing location of Kilombero Sugar Company and key regions of economic migration into the study area



Source: Authors

Figure 2. Morogoro Region



Source: Authors.

how livelihoods outside the sugarcane zone differ and whether the influx of farmers has raised any issues in terms of access to and ownership of resources. Figure 3 shows the surveyed villages and the location of the KSCL estates. The figure portrays how the company and local inhabitants are surrounded by conservation areas.

This working paper is a report of our fieldwork. Our assessment of livelihoods and differentiation is not based on any financial analysis of assets or expenditures. Rather, we conducted semi-and un-structured interviews, compiled seasonal calendars and inspected outgrowers' pay slips and other documentary sources. Our initial sampling method was random selection from lists of

Figure 3. Study area



Source: Authors.

association members, but since many farmers were unavailable, our preferred method became random, purposive sampling, ensuring we included some non-outgrowers and villagers living in less accessible hilly areas. We also sought out village elders for oral history interviews. Respondents were promised anonymity, so their quotes are attributed to a number corresponding to the interview's code and some minor details have been changed to conceal identities.

3. Before privatisation

The first outgrowers

Until the 1960s, sugarcane was cultivated only marginally by smallholders in the study area. Historically, the main crops grown in the upper Kilombero Valley were millet and, as the twentieth century progressed, rice and maize. The colonial German administration attempted to commercialise cotton production (Baum 1968) and rubber was introduced to the area in the 1940s. Sugarcane remained marginal, as a researcher of the time reports:

The cultivation of sugarcane in the Kilombero Valley was commercialized by the Indians³ in the 1920s. They introduced better varieties, cultivated them on plantations and manufactured brown sugar. Since then, the farmers plant the new varieties next to the old one in their garden plots ... Hardly any smallholders took advantage of the opportunity of planting more sugarcane than was needed by the household and of selling it to the Indians. (Baum 1968: 25–26)

But that was to change. The Kilombero Valley had been identified by colonial officials as a zone of high agricultural potential because of its fertile alluvial soil and the irrigation potential of the floodplain (Beck 1964), and the upper part of the valley, also known as the Kiberege strip, became a strategic target for commercial sugarcane production. In 1957, Dutch experts carried out surveys for a potential estate at Kidatu and in 1960, Kilombero Sugar Company was formed. The new company was a joint venture financed by the International Finance Corporation (IFC), the Commonwealth Development Corporation (CDC), Standard Bank and two Dutch development finance agencies. They developed an estate of around 1,600ha and a sugar-processing factory in an area known as K1 on the south bank of the Great Ruaha River near Kidatu. A Dutch company, VKCM, was awarded a management contract, which transferred to fellow Dutch firm HVA in 1965.

The business was designed to operate as a nucleus estate with outgrowers. One of its backers, the CDC, supported outgrower schemes in several African countries during the 1960s, including the sugarcane scheme later established at Mumias in Kenya (Buch-Hansen and Marcussen 1982). KSCL was the first Tanzanian sugar company to use outgrowers, swiftly followed by Mtibwa Sugar Estates (also in Morogoro Region), and was probably one of the first nucleus—outgrower operations

in sub-Saharan Africa (see Glover 1984). Between 1959 and 1963, a settlement scheme was established at three sites south of Sanje with the aim of using some of the smallholdings to supply sugarcane to the K1 factory (Monson 2009; Beck 1964). When KSCL started crushing cane in 1962, it was supplied by "a few large Indian and European estates, [the] settlement scheme with 250 smallholders and a group of 14 African farmers" (Baum 1968: 23). The settlement scheme worked like an outgrowing operation, providing settler farmers with inputs and services on credit. The farmers included women, who were assigned small parcels for cane just as men were (Sprenger 1989).

After Independence, opening up the area for sugar development and increasing outgrowers' production became a key aim of the government. The route of the new transnational TAZARA railway was designed to pass K1. KSCL was nationalised following the Arusha Declaration of 1967 and in 1974 work began on a second estate and factory to the north of the river in the area known as K2, in support of the government's objective of national self-sufficiency in sugar (Mehos and Moon 2011; World Bank 1974). Planned by HVA and funded by the World Bank and the Dutch and Danish governments, K2 started crushing cane in 1976.

Employment and in-migration

KSCL became an employer of seasonal, often migrant, labour (see, for example, World Bank 1974: 6; Clyde 1961: 5). Jobs were also created by the TAZARA railway, a saw mill at Mang'ula and other employers. There is a pattern of people coming to the area for work then settling and acquiring farmland or establishing businesses. After TAZARA was completed in 1975, several employees were granted land nearby (Monson 2009).

As well as in-migration, there was movement of residents within the study area during the twentieth century. People moved to one village from another to escape cholera outbreaks or find work. The sugarcane plantations displaced some people, although much estate land was left fallow and therefore open to continued access (Mbilinyi and Semakafu 1995). But the most dramatic driver of resettlement before 1998 was the *ujamaa* policy of villagisation.

Villages under ujamaa

From 1969 onwards, President Nyerere's socialist *ujamaa* policy began to take effect. Variations in its extent and implementation in the study area contributed to current differences in social structure and land use. The first step was to restructure settlements and create new villages. Chiefdoms were abolished and scattered residents were encouraged, and later forced, to relocate to central villages. Many *ujamaa* villages were built up from settlements of farmers or labourers working for TAZARA. The latter accounts for our surveyed village of Signali, where migrant railway workers were joined by *ujamaa* arrivals in 1974.

As its name implies, Msolwa Ujamaa was another *ujamaa* village. Its present location was once mainly farmland owned by a member of the TANU political party, Sadru Meju, whose father bought the land from German rubber planters. Meju replaced the rubber with sugarcane and employed several workers. After Independence, he gave out a portion of land in two-acre (0.8ha) parcels for around 60 people to settle. In 1974, a further 400ha of his estate were nationalised. According to a village elder, the aggrieved Meju sold his remaining land to KSCL, but Prime Minister Rashid Kawawa took the land from the company and returned it to the village.⁴ That nationalised land comprises the current village farm of 400ha, on which sugarcane is cultivated and whose profits go towards the village.

Thus the village grew through a small but steady influx of settlers. If a person wanted to join Msolwa Ujamaa in the 1970s, they applied in writing to the village government and their character was discussed. One elder recalled applicants being held in the village office until a reference from their home village could be provided. This is a reminder that *ujamaa* village authorities were "empowered to allocate land among private cultivators, so that the village council could be an agency of land reform even without a communal sector" (Huizer 1973: 5). *Ujamaa* had long since lapsed when, between 1990 and 1995, every adult in Msolwa Ujamaa was given two acres of land by the village government. At that time, the village had 490 households (as of 2013 it had 1,204). Plots were also made available for newcomers to lease. This allocation of farmland took place with the support of KSCL and in conjunction with loans for farmers from National Microfinance Bank (NMB), in order to ensure the supply of sugarcane.

At Sanje, a traditional settlement dates to the early 1940s. Before socialism, there were around 10 households in the current village location and 20 scattered hamlets administered by chiefs. There were some large nearby estates of German, Dutch or South African owners. They were ejected from Tanzania in the late 1960s, but whereas in Msolwa Ujamaa the privately owned land was redistributed to the village, in Sanje the foreignowned farms were re-acquired by new owners. Postindependence reforms continued at Sanje in 1970 with the introduction of an mfumaki farm, which involved proceeds from collective farming going into a village development fund. In 1974/75, as part of the nationwide Operation Vijiji, officials began efforts to relocate people from surrounding farms and establish a central ujamaa village at Sanje, through forced removal. As in Msolwa Ujamaa, land was made available at Sanje to settlers by the village administration. One elderly woman who moved to the village in 1975 said people cleared forest and bush to claim farm plots: "All you needed to acquire land was the power of your labour" (37).

Msolwa Ujamaa retains structural components of *ujamaa*. It has its village farm, and every June and December meetings are held to announce the income and expenditures of the village. Every adult who attends a meeting is given TZS 5,000 (US\$3). In contrast, Sanje

offered 13 acres (5.26ha) of its village farm, a 20-acre sugarcane estate, to a local large-scale farmer who pays 30 percent of the profits to the village. Other parts of the village farm were and continue to be allocated in individual parcels to villagers who gave up their own land for the construction of the secondary school (SACGA official, pers. comm., July 2014). Thus, historical differences between the two villages probably mean that today there is more land available for small-scale farmers and more communal benefits for ordinary residents at Msolwa Ujamaa than at Sanje.

The extent of collective farming

After villagisation, the second step to *ujamaa* in Tanzania was collective farming. This required villagers to work on a communal farm and share the proceeds according to their labour contribution. In 1972, the government introduced an intermediary model of block farming to create a stepping stone to the true *ujamaa* collectivism envisaged by Nyerere. The block farming system, known as *bega kwa bega* ('shoulder to shoulder'), worked as follows:

Block-farmers are private farmers who have their holdings next to each other, which allows them to make use of communal tractor services or spraying programmes (for which each farmer has to pay individually). Unlike scattered individual farmers, block-farmers are easy to reach and supervise. (Von Freyhold 1979: 111)

Block farms were preferred by the World Bank to communal farms (*ibid.*). Interestingly, the idea of block farming is being promoted again in Tanzania under SAGCOT and Big Results Now and by the European Union (EU) as part of its accompanying measures for Tanzania as a former Sugar Protocol country (URT 2013b: 116; EC 2012; SAGCOT 2011: 33).⁵

As one of our research questions was to assess the effect of external factors such as ujamaa on the development of KSCL, it is useful to explore the extent of farming changes during socialism in the study area. Before ujamaa, farmers in Kilombero Valley practised individualised, shifting cultivation, combining fallow with traditional irrigation, which gradually gave way to permanent farming and settlement. Households had multiple plots, tended by different household members. Baum (1968: 27) writes that although "it is customary for relatives and neighbours to help each other", the individual household was stronger than any cooperative element. But under socialism, households were required to contribute to collective farms, overseen by the new village councils. Proceeds from cash crops were distributed to households, minus a portion used for communal village needs.

At Msolwa Ujamaa, residents began farming paddy, maize and sugarcane communally from 1969 onwards. It was recognised as a good *ujamaa* village. There was a primary school and storehouse for crops, and the village

government provided residents with dried cassava and sorghum at times of food insecurity. In 1973, Zanzibar's president reportedly visited the village and donated a tractor. One village elder believes that the *ujamaa* experiment in Msolwa began to fail when the political ideology changed from *ujamaa* to *mfumaki* and then *bega kwa bega*. Through *bega kwa bega*, Msolwa Ujamaa villagers were given individual two-acre parcels, and the elder maintains that people spent too much time on them, neglecting the communal farms. According to the chair of Msolwa Ujamaa Cane Growers Association (MUCGA), by the end of villagisation there were three kinds of people: *ujamaa* types, independent people and company workers (interview, 27 November 2013).

We have less information about *ujamaa* at Sanje, but collective farming certainly took place. An elderly resident told us:

We participated fully in *ujamaa* activities ... Some people did not like it very much, because they spent much of their time in *ujamaa* farms instead of their own farms. They had mfumaki farms, or shamba la serikali [government farms]. But because it was decided by the central government no one dared to resist the idea of *ujamaa*. (Oral history interview)

In both villages, sugarcane was a strategic crop for the *ujamaa* administrations and was grown communally and individually. At the time, the socialist government was aiming for self-sufficiency in sugar and was planning to build the K2 plant in support of its Second Five-Year Plan. The government established the Sugar Development Corporation in 1974, and at the local level the Kilombero District Development Corporation,⁶ established in the 1960s, announced its intention to acquire land and cultivate sugarcane for supply to K2 (World Bank 1974). Sprenger (1989) reports that in 1978, the company launched a concerted outgrowing campaign:

The General Manager and other KSC employees went into the villages and did their best to encourage everybody to grow (more) sugarcane. This campaign was made possible by considerable financial support from the World Bank. Small-scale outgrowers were given total assistance and anyone who wanted to be an outgrower was admitted. (Sprenger 1989: 13)

Operational challenges

The legacy of *ujamaa* institutions and their influence on KSCL's outgrower scheme are explored in the next section. In the short term, the emphasis on small-scale, village-centred farming under *ujamaa* and political pressure on farmers to cultivate cane contributed to labour shortages at the company and a rise in outgrowing during the 1970s. However, Sprenger (1989) argues that the ideological commitment to small-scale producers was undermined by an emphasis among donors and the management firm HVA on efficiency and productivity. Tanzania's policy reorientation towards liberalisation and

structural adjustment from 1982 onwards also had an effect, as Mbilinyi and Semakafu (1995) explain. Although KSCL, like other Tanzanian millers, increased production during the 1980s by becoming more capital-intensive, it was affected by devaluation, foreign competition and the cost of imported equipment and machinery. Expatriate managers' wages were a huge expense, while KSCL – as well as outgrowers – found it difficult to hire enough labourers owing to low wages and unrest after a workers' protest in 1986 in which several workers and one bystander were killed (Sprenger 1989).

Partly to allow for absenteeism, KSCL before privatisation employed a large workforce - 9,992 permanent and seasonal workers as of 1992, including 2,785 male seasonal cane-cutters. Temporary or casual contracts were rarely used, although many seasonal and permanent workers were paid in piece-work rather than a guaranteed minimum wage. The company provided benefits including a hospital, primary schools and 1.5-acre (0.6ha) farm plots for long-term staff (Mbilinyi and Semakafu 1995). But the output from outgrowers declined during the 1980s (Figure 4, next section). During this time, few farmers were attracted to outgrowing because of "non-attractive prices and transportation problems" (Kamuzora 2011: 94). There were harvesting delays and the cash-strapped company was unable to sustain outgrower services. In 1986, outgrowers' contribution to overall cane deliveries had fallen to 15 percent from 42 percent in 1978 and the membership of associations and farmers' groups had fallen to 500 (Sprenger 1989). Between 1995 and 1998, the K2 factory closed because of a lack of spare parts, forcing many outgrowers to quit. Regaining the trust and participation of local producers became a major goal of Illovo Sugar and its partners when they took over the company in 1998.

4. Changes in company and outgrower operations since privatisation

This section considers how things have changed in company operations and outgrower contractual conditions since KSCL was privatised in 1998. We propose eight changes or events that have had significant impact (Table 1).

Contractual conditions for outgrowers

When it acquired KSCL in April 1998, Illovo faced a situation of under-productive factories and disillusioned producers. "The company was almost dead – no cane in the field, no salaries," recalled one elderly respondent. "Farmers had given up growing cane" (31). The owners took measures to increase yields on the estates, restore processing capacity and improve infrastructure, notably by rehabilitating the K2 factory in 1998 and building a bridge over the Great Ruaha River in 2001. The company also changed the outgrower system in order to regain

Table 1. Key actions taken by KSCL since privatise Action	
Action	Consequences
Improved factories, roads and irrigation and yields on estates	Increased sugar output; increased revenue for state
Changed outgrower contractual conditions	Improved payment terms and procedures; removed farmers' protection for fire risk
Greatly increased outgrower numbers, production and cane area	Increased cost and scarcity of farmland in sugarcane zone; reduced local cultivation of food crops; encouraged commuter farming; increased incomes for participating farmers; growth in associations and ancillary businesses; encouraged oversupply and harvesting delays
Reduced and devolved outgrower services	Associations multiplied and assumed new roles; growth in contractors; reduced oversight of outgrowing; fragmented supply of credit and extension; created scope for elite capture and corruption
Pulled in donor money for rural development through Kilombero Business Linkages Project and Trust	Some improved social services and facilities; encouraged outgrower expansion
Introduced more block farms	Lower incomes but higher yields for participants; provided title deeds and access to loans; created scope for bureaucracy and corruption
Expelled people living or farming on estate land	Decreased availability of farmland in certain areas; contributed to land dispute
Made (with national government) 3,000 workers redundant	More temporary contracts for workers; in-migration; some workers moved to villages and acquired farmland

Source: Authors.

producers' trust and increase supply. It introduced a 'division of proceeds' model and more reliable payment. Following negotiations with outgrower associations, it agreed in 2001 to fix the cane price at a nine percent sucrose level (Kamuzora 2011). The main elements of the outgrower system, as it stands today, are summarised here.

KSCL outgrowers must join a cane growers' association and register with the Sugar Board of Tanzania. They do not have individual contracts with the company. Instead, a contract called the Cane Supply Agreement (CSA) is signed between the company and the farmers' associations, of which there are 15. Under the conditions of the CSA, association members cannot grow sugarcane for any buyer other than KSCL, a rule introduced in 1976 (Sprenger 1989). There are no additional requirements for becoming an outgrower other than to have a plot of land available. Farmers do need capital for starting costs such as inputs and an association joining fee.

Farmers harvest and deliver their cane individually, and are paid by KSCL on the fifteenth day of the following month. A complex calculation is used to calculate the price that each farmer is paid. At the start of the season, a provisional producer price for sugarcane is agreed, to be adjusted if necessary at season's end in light of actual sales prices achieved by the company for sugar and molasses. Outgrowers are paid a cut of these sales through the division of proceeds system. For the

2013–2016 period, 57 percent of KSCL's net proceeds go to the outgrowers and the company retains 43 percent. To smooth out variations in the sucrose content of cane across the season, the company calculates a theoretical level of sucrose that could be achieved as an average over the whole period, known as the rendement. For the past few seasons, a level of ten percent has been used. The provisional sugarcane price for the season is pegged to this rendement. An individual farmer has his or her delivered cane measured for sucrose and this is used to adjust the baseline rate to produce the price per tonne, or 'relative rendement', that they will be paid the following month. Ten percent of the farmer's payment is retained until the end of the season, when the baseline sugarcane rate is finalised in accordance with actual market prices and the farmer's balance is increased or reduced as necessary.

A range of costs are deducted from outgrowers' payments, but the farmers bear many production costs themselves. Some of the tasks of producing sugarcane are managed by the farmers, who either do the work or hire labourers. The three most important tasks for harvesting – cutting the cane, loading it into trucks and transporting it to the factories for crushing – are done by private contractors who are engaged by the farmers' associations. A summary is shown in Appendix 1, Tables a and b. Until recently, an additional five percent was deducted to pay for inputs, which KSCL distributed to farmers via the associations. Following complaints, the

system was abolished in 2012 and outgrowers now buy inputs themselves or pay their associations a five percent deduction to provide them. The latter option is problematic if the five percent cut of their payment cannot cover the inputs the farmer needs to apply after harvesting.

None of the outgrowers that we interviewed had seen the CSA. It is common for people in the area to lack paper contracts and use verbal agreements for land and labour transactions. Without seeing the CSA, KSCL outgrowers are reliant on their associations to apprise them of parties' risks and obligations. Unsurprisingly, several respondents were unsure of contractual and operational detail. Even if the CSA were widely available, outgrowers might not be fully informed, as it is written in English and difficult to understand in places. One of the Kilombero associations, SACGA, has produced a Swahili translation of a previous version, but the other interviewed associations said they had asked the company for a translation and were still waiting. Outgrowers' pay slips (which are in Swahili) similarly fail to clarify how payments are calculated. One outgrower said, "We are not very sure of how the cane payment works, because no one is representing us in the operations of the company, for example at the weighbridge, measuring sucrose or calculating the rendement. We, the farmers, are just told that this is what the company earned" (7). In a review of contract farming cases, Prowse (2012: 67) found it was common for contracts to omit crucial information and noted that contracts not being available in a locally understood language can leave farmers vulnerable to manipulation. He concluded, after Hamilton, that "farmers need to read and understand the terms of the contract, and the meaning of all the terms within it".

Devolution of services

The KSCL-outgrower relationship constitutes a resource-providing, production-management contract (Key and Runsten 1999). In other words, the outgrower system involves aspects of control and input provision. The CSA gives instructions regarding varieties and cultivation practices (Appendix 1, Table c) and, as mentioned, outgrowers might obtain fertiliser on credit. However, compared with tightly controlled schemes described in the contract-farming literature, especially from horticulture (Prowse 2012; Eaton and Shepherd 2001), KSCL is a loosely regulated arrangement. Because the CSA is not seen by farmers according to our fieldwork, they are unlikely to be aware of the limited instructions it contains. Extension provision seems low, and inspection of cane fields focuses on the issue of cane burning. Although the system was apparently dysfunctional under state ownership, we argue that through a process of devolution, privatisation has reduced centralised control and service provision.

In the first decade of operation, the outgrowers were too large and too few to require many services from the company. A report from 1974 explains:

KSC has no obligation under the contract to provide extension service to the growers. It does have the right to inspect growing and cutting of cane ... However, a small-scale extension service is being provided. Outgrowers are otherwise normally self-reliant, providing their own machinery and labor for land-clearing, cultivation and cane transport. (World Bank 1974: Annex 1, p. 4)

As the number of small-scale outgrowers grew, the company provided more extension, harvesting and haulage services, albeit unreliably during periods of financial difficulty (Sprenger 1989). Older respondents described being given agricultural advice and support when they started cultivating sugarcane. In 1995, researchers wrote:

[The company] transports the cane to the factory, and supervises production... KSC organizes monthly meetings with outgrowers and village leaders ... However, the company can no longer provide services such as clearing and planting, and hires big growers to do it for them, on other outgrower farms. (Mbilinyi and Semakafu 1995: 103)

After 1998, KSCL continued to provide many services at cost to outgrowers, in addition to bulk input supply (Illovo Sugar Ltd 2005). But around 2004–06, the company transferred or 'devolved' provision of harvesting services to local private contractors. Approximately 26 contractors, hired by associations and paid for through outgrowers' deductions, now serve the K1 and K2 areas (KSCL uses its own firm, Unitrans, for its estates and large farms). Through an initiative called the Kilombero Business Linkages Project, the IFC and several donors provided funding to build the capacity of the associations and local businesses (Tomlinson 2005). The company also transferred some of its extension, monitoring, lending and infrastructure costs to a charitable Trust, established in 2003.8

KSCL continues to use ten specialist extension workers (interview, company official, 11 December). The only reported activity undertaken by company staff in the field is to monitor the burning of cane. KSCL's detachment from outgrowers' production is codified in the CSA, which states that the company:

has no obligation or responsibility to make available to the associations, or to the association growers, ... any management, operational, extension or administrative services, other than as may be mutually agreed in writing from time to time.

Contractually, it is the responsibility of the associations, not the company, to ensure that farmers grow authorised varieties and follow practices laid down by the Sugar Board. In practice, associations do not always provide extension and monitoring services, either. According to our small sample, effective extension services are not widely received. Three respondents said they or their husbands have attended seminars organised by

associations, but they are not regular events; another reported that extension officers advise Msolwa Ujamaa's village farms but not individual growers; and in a further interview, a young man and woman complaining of insect damage said that extension officers had visited but had not been helpful. A 2012 study of outgrowers in the K1 area revealed a lack of training, especially in the application of inputs, and access to extension officers (Siyao 2012). Perhaps the withdrawal of state extension services such as Village Extension Officers as part of structural adjustment is another factor. There is a branch of the Sugar Research Institute at Kidatu, yet its services to outgrowers are limited or non-existent.

As well as services being devolved to contractors and associations, some costs and risks were transferred to outgrowers. For example, the company introduced a road fee as a deduction to help pay for road construction and repair. Insurance against accidental fire damage was removed from the CSA several years ago (Kamuzora 2011) and farmers now bear the costs of cane-field fires.

One consequence of these changes has been to stimulate the growth of contractors in the area. This boosted the local economy and may have kept the costs of harvesting, loading and transport lower than they would have been if still carried out for the company by Unitrans or similar (note, however, that some respondents said contractors cooperate on pricing as a cartel). The devolution of services also changed the role of associations from farmer representatives to overseers of production and contractors of services. They received business training through the Kilombero Business Linkages Project and the Trust, and hired new staff. But combined with the associations' role in harvesting schedules, this development created opportunities for bribery and favouritism. In addition, the system has been challenged by the emergence of breakaway associations, which has engendered competition rather than cooperation among them as service providers.

A further consequence relates to the position of outgrowers within the supply chain. The absence of a strict system for instruction and monitoring means that farmers can take decisions over hiring labour and managing many tasks. Nevertheless, the situation appears detrimental in two ways.

Firstly, the main tasks of cane-cutting, loading and transport lie out of farmers' hands. Outgrowers can feel powerless in the face of low-quality or unfair treatment by contractors. One respondent said, "We farmers don't feel empowered. We want more machinery" (25) – expressing a wish to reduce dependence on the haulage services of contractors and associations. Farmers can switch to another association if dissatisfied with their contractor, although if it is the case that contractors collude, this strategy might not be effective.

Secondly, farmers have arguably suffered from a lack of monitoring and extension. They apparently receive little advice about achieving good sucrose levels, yet according to the CSA, the company may reject cane with less than eight percent sucrose. Furthermore, in devolving its provision of services and oversight of harvesting to the associations and their sub-contractors, the company has lost much control over the production process. According to a 2010 review document of the Trust, there was an "absence of a well-planned annual replanting program among the outgrowers' cane production arrangement" (KCCT 2010: 2), which, it said, had contributed to a recent decline in outgrower deliveries. And as we argue below, the cane harvesting system appears to lack centralised oversight and to have encouraged unhelpful competition among farmers and associations.

Expansion

The most significant change in the KSCL business since privatisation has been a dramatic increase in outgrower numbers. For several decades now, people in Kilombero have been encouraged to grow sugarcane by the company, local and national government and fellow villagers. They have been pulled by incentives and the prospect of commercial income, and pushed by agronomic pressures created by the encroachment of sugarcane and relatively low rewards from other crops.

Under Illovo, the company agreed with the government to increase annual sugar production from 72,000t to 200,000t, so raising supply from outgrowers was an immediate priority. Between 1998 and 2005 the company invested US\$2.7m into outgrower development, comprising "technical and financial support and infrastructure development" (Partners for Africa 2005). The above-mentioned Kilombero Business Linkages Project and Trust ran programmes to support outgrowing, including loans and grants; capacitybuilding for farmers, associations and SACCOs (savings and credit cooperatives); and mapping of outgrower areas (Befeki 2006; Tomlinson 2005). Much of this was funded by donors, among them the EU, the United States Agency for International Development (USAID), the UK Department for International Development (DFID) and British Petroleum (BP).9

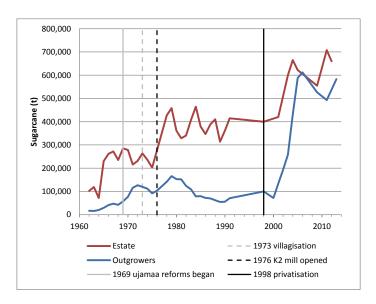
Reminiscent of the 1978 campaign to stimulate outgrowing, villagers were encouraged to increase sugarcane production and convert fields from other crops. They were offered incentives including cheap loans, road improvements and funding for clinics and primary schools. Msolwa Ujamaa residents recalled:

Illovo came and said they would buy all our cane so all the land became converted to sugar. (12)

After privatisation, we got loans and the company itself helped us with seeds for one year, and we got good income, and were motivated to plant more cane. (15)

Kamuzora (2011) suggests an influx of farmers into the area from 1999 onwards added to the planting and harvesting of sugarcane.¹⁰

Figure 4. Total amount of sugarcane produced or harvested* annually by the company estate(s) and by outgrowers



Sources: Illovo Sugar Ltd annual reports; SBT 2014; Nyundo et al. 2006; Illovo Sugar Ltd 2005; Tomlinson 2005; Mbilinyi and Semakafu 1995; World Bank 1974; interviews.

Monson (2009) argues that Illovo expanded its use of outgrowers at Kilombero to lower its labour costs and transfer production risk to farmers. Greater outgrower participation was also an objective of the Tanzanian government. At the time, the government was promoting initiatives that incorporated local communities in the sugar industry, as part of its aim for Tanzania to become self-sufficient in sugar production (a recurring policy objective since Independence). At Msolwa Ujamaa, several residents were persuaded to begin cultivating sugarcane by the village government, particularly when it distributed the two-acre plots in the early 1990s.

The farmers we interviewed joined the outgrower scheme for a range of reasons. Many began after 1998, following encouragement by the company. Other villagers joined because they liked the prospect of a reliable market and income compared with what was available for paddy, were impressed by the progress made by outgrower friends and neighbours, or felt obliged to convert their food-crop farms as they became surrounded by cane fields. Expansion was facilitated by the minimal requirements for participation: KSCL outgrowers needed as little as one acre, which may be rented, and plots could be converted from paddy without consideration for logistics at harvest time. It is also relatively easy to withdraw – farmers just notify their association in writing.

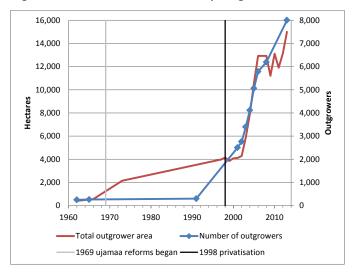
Outgrower production grew rapidly from under 100,000t of cane a year before privatisation to more than 500,000t by the 2004/5 season. The number of outgrowers and total area under outgrower cane also increased (Figures 4 and 5). These 'outgrowers' include large communal or private estates of several hundred acres. It is important to recognise that: (a) mediumand large-scale producers account for a substantial

proportion of all outgrower cane; and (b) their numbers, though small, increased during the 2000s, which is the decade for which we have most detailed information. According to Illovo figures (Tomlinson 2005), in the 2002/03 season there were 3,384 small, eight medium and three 'other', or large, outgrowers. By the 2005/06 season, within only three years, these numbers grew to 5,718 small, 56 medium and 11 large outgrowers. The 11 large-scale producers accounted for 24 percent of the total outgrower tonnage for the season (averaging 13,370t of cane per farm), compared with 17 percent from the medium producers (average 1,874t per farm) and 59 percent from the small-scale producers (average 63t per farm). Further research could investigate these medium and large farms or estates, and find out where their owners acquired land, from whom and with what capital.

The expansion strategy was successful in the short term, enabling KSCL to increase its sugar output from 29,000t in 1997 to 127,000t in 2003/04 (Figure 6). But the expansion was not controlled. By 2005 the company became overloaded with cane produced in the outgrowing areas, and had to introduce schedules and guotas for harvesting. A company staff member explained that in its efforts to rejuvenate operations, KSCL "forgot" that outgrower production might eventually overshoot the mills' capacity. However, it is not simply a matter of carelessness on Illovo's part. As the staff member alluded to, it is in the interest of the company for a surplus of cane to be produced each season. This provides a buffer to ensure the mills receive optimum throughput even in poor seasons. Variation in the volume of cane produced by outgrowers can be expected since their fields are not irrigated and are therefore vulnerable to drought (as occurred in 2005, when production fell) or excessive rain.

^{*} Some data unclear as to whether they show total cane produced, harvested or crushed.

Figure 5. Number of outgrowers and total area cultivated by outgrowers



Sources: SBT 2014; Kamuzora 2011; Monson 2009; Illovo Sugar Ltd 2005; Tomlinson 2005; World Bank 1974; Baum 1968; interviews.

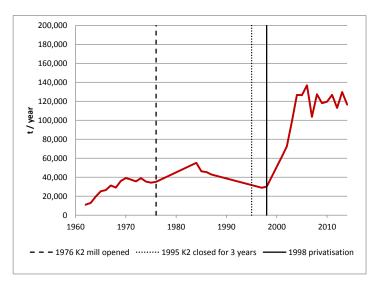
Note: chart is approximate as data come from multiple sources. No data found for 1980s. Some discrepancies between SBT and Illovo data. In such cases, Illovo data used.

Pressure to expand also came from outgrowers and their associations. Each season, associations agree with the company on how much cane they will deliver, based on the potential tonnage of their members. Some farmers, and the new associations especially, have been keen to increase their delivery quotas. The quota for MUCGA, for example, has increased year on year (Table 2) and the association feared it would miss its target for 2013/14, as so much cane had not been harvested. Although one might expect the quotas to account for all members' cane grown during a season, in practice the system allows a surplus of cane to be produced, beyond the processing capacity of the mills. This has led to problems when it comes to harvesting.

Harvesting issues

Owing to a combination of uncontrolled expansion, the decentralisation of harvesting logistics, transport-related problems and inconsistent crushing capacity at the mills, each year some farmers' cane is not harvested. The company estimates that in the 2012/13 season, 65,000t of outgrowers' cane could not be crushed, alongside 100,000t of estate cane (interview, company official, 11 December; see Massimba et al. 2013 for estimates for the previous season). Farmers whose cane is not crushed are not paid. Whether harvesting is deferred or simply fails to take place, it creates financial shocks

Figure 6. Annual sugar output by the company



Sources: SBT 2014; IUF 2004; Illovo Sugar Ltd 2005; Mbilinyi and Semakafu 1995. Note: most figures are for annual season (e.g. 2012/13), not calendar year.

 Table 2. Amount of sugarcane agreed for MUCGA to deliver during the season

 Season
 Delivery

 2009/10
 29,000 t

 2010/11
 36,000 t

 2011/12
 42,000 t

 2012/13
 50,885 t

 2013/14
 65,000 t

Source: MUCGA.

that the outgrowers must absorb. One woman in Sanje said, "If your cane is delayed until the next season, it will become like a sponge and instead of getting TZS 2 million [US\$1,200] you'll just get a few hundred thousand" (49).

According to respondents, the harvesting schedules still exist but associations and contractors regularly deviate from them, such that harvesting is no longer systematic or fair. There are three main reasons for this.

First, weather conditions, particularly heavy rain and flooding during the short rainy season, make accessing some farms difficult and leave cane stalks vulnerable to damage by trucks. Before privatisation, harvesting was finished by December and the short rainy season was used for re-planting (Mbilinyi and Semakafu 1995). These days, harvesting can last until March. Some of the roads that link fields to the main haulage road are prone to waterlogging. While farmers complain of inefficiencies among hauliers, the manager of one contractor firm pointed out that most of the small farms used to be paddy fields, and suggested they were converted to sugarcane without due consideration of the condition of the land or the surrounding road infrastructure (interview, 5 December 2013). Coordination problems may be related to the emergence of new, inexperienced associations and the geographical fragmentation and overlap of association membership.

Second, contractors may be forced to divert to farms where cane fires have broken out. Cane must be crushed within five days of being burnt or its quality will deteriorate. Burning one's cane before it is scheduled can be a way to ensure that it is harvested and the company estimates that most cane fires are started deliberately. We discovered that, to avoid suspicion, some big farmers were making deals with group or association leaders to deliberately start fires on small farms that would spread to their own. A related issue is that fires can accidentally spread to neighbouring cane fields. This problem has increased since the emergence of associations whose memberships are not geographically delimited. For example, a KCGA member might burn her cane, and this spreads to the farm of a MUCGA member whose cane was not due to be harvested.

The third disruption is the practice of bribery by larger or wealthier farmers to ensure their cane is harvested first. Respondents said association leaders often have large farms, as do the owners of contractor firms, a situation which invites corruption. Our interviews support Kamuzora's (2011) suggestion that bribery in the harvesting system increased from 2005/06, around the time when KSCL introduced quotas and schedules.

For the least influential farmers, these factors can multiply. For example, first their farms may be overlooked in favour of a larger farmer. Then, as the season goes on, their fields and surrounding roads may become waterlogged and harvesting will again be postponed. A young man whose household farms three acres (1.2ha) of sugarcane described common challenges:

There is a lack of trucks to transport sugar, and rains can also cause delays. If cane has been harvested but is rained on for two days, it can start to ferment. If the contractor delays transport, you get no compensation and have to [transport] it yourself. (38)

Roads are of great importance in the KSCL supply chain for transporting cane and processed sugar, as railway transport is limited. The main trunk road, managed by the Ministry of Works, is in poor condition in places. As part of their support for SAGCOT, the US, UK and EU have signed an agreement to pay for 56km of the road to be paved between Kidatu and Kiberege and, south of the sugar zone, between Signali and Kibaoni (DFID 2012). KSCL maintains the roads on its estates, which are of noticeably higher quality than access roads in the outgrower areas. In recent years, the Community Trust and the EU (as part of its 'accompanying measures') have funded the development of some access roads. In addition, as mentioned above, outgrowers contribute to the road infrastructure through two deductions, one paid to their member association for roads in that area. and another paid to all associations to rehabilitate and maintain all supporting roads constructed by the EU and other donors. We heard that owing to squabbles and distrust, associations have failed to invest adequately in road improvements.

Current problems

The situation for outgrowers – the sugarcane price, sucrose levels, harvesting arrangements and overall incomes – has deteriorated in the last few years. Several respondents complain that deductions have increased to the point that sugarcane farming is no longer financially viable. According to our analysis, since 2008/09 the main deducted costs have indeed increased, but roughly in line

with the producer price for cane, with the exception of cane-cutting services, whose cost has increased by 151 percent. Although the relative cost of deductions has not risen significantly, if farmers are achieving lower levels of sucrose than previously or earning a lower baseline cane rate, this will effectively lower the tonnage of cane that is payable and increase the proportion of their payment that they lose in deductions. Such fluctuations can significantly affect how much farmers are paid for their harvest.

(i) Sucrose

The biggest concern raised by outgrowers is an apparent decline in the level of sucrose that farmers are achieving. Whereas the baseline cane rate is pegged to ten percent sucrose, respondents say they and their peers have been recording an average of 7.5 percent (Appendix 1, Table d). "These days, we might as well be harvesting maize stalks, the sucrose content of the cane is so low," said one respondent (47). Further research could corroborate this - we saw five pay receipts for which the average sucrose level was 9.6 percent. But a general fall in sucrose over the past few years is confirmed by a company official (interview, 11 December) and Massimba et al. (2013) (Appendix 1, Table f). By way of comparison, the World Bank reported in 1974 that the sucrose level of cane crushed at K1 had varied in recent years between 9.1 and 11.0 percent, and averaged 10.5 percent (World Bank 1974).

Possible agronomic explanations for the sucrose decline include: farmers harvesting cane before it is mature;12 inadequate or fake fertiliser application; a lack of irrigation; smut disease and whitescale pest; and cane being harvested too late in the season. Most respondents suspect that sucrose is being measured in an inaccurate or possibly corrupt way. Similar accusations were documented in 1987 by Sprenger (1989), whose interviewees complained of careless hauliers and corrupt weighbridge staff. The official measurement system used by KSCL is to begin crushing a consignment of cane and to take a sample of the first juice for testing. There is serious lack of trust and transparency in the system of measuring farmers' cane. Respondents cited examples of neighbouring farmers, or even two truckloads sent from the same field, recording markedly different sucrose levels. One respondent told us, "To get a higher level, you need to have a network and be able to bribe people at the factory" (35). He said he has paid bribes several times.

The fall in sucrose, then, could be attributed to a range of deficiencies in the system, some of which pre-dated privatisation and some of which are due to subsequent changes. They are: inadequate extension; absence of oversight to prevent farmers harvesting too early or to encourage farmers to replant; absence of regulatory or industry monitoring of weighing and sucrose measurement; extension of the harvesting period into the short rainy season to accommodate the expanded outgrower numbers; and the other factors already discussed that create delays in both harvesting cane and delivering it to the factories.

(ii) Sugarcane price and payment delays

A problem Illovo has faced since 1998 is importation of cheap foreign sugar into Tanzania, either by illegal traders or through the government issuing import permits with reduced or zero tariffs.¹³ There are also reports that sugar imported for industrial use14 is being sold for domestic consumption in direct competition with KSCL's Bwana Sukari brand (see Sugeco 2014; Rabobank 2013). In June 2000, Illovo threatened to pull out if the government did not address sugar smuggling (Rambali 2000). According to Illovo annual reports, in subsequent years the government took measures to restrict imports, and KSCL's sugar sales, and therefore the price it could pay outgrowers, improved. But importation remains a risk to the business. In 2013, the company reduced the cane price from TZS 69,000/t (US\$41.50) to TZS 62,889/t (US\$37.80), blaming weak domestic sales caused by an influx of cheap sugar (Balaigwa 2013). For the 2013/14 season, the baseline rate fell to TZS 58,000/t (US\$34.90). A company official told us, "We are in a distress situation because of sugar imports" (interview, 19 January 2013). Around August 2013, KSCL began delaying the payments due to outgrowers for their cane deliveries, claiming it lacked the money to pay them. Payments to contractors were suspended and firms could not pay cane-cutters their full wages. Outgrowers were informed of the news by text message:

The management of the company regrets to inform you that the condition for sugar sales continues to be poor because of the arbitrary importation of foreign sugar into the domestic market. For this reason the company will be unable to make payments as normal on 12 November for cane that was delivered during the month of October. The company management will monitor this situation closely and as soon as the situation stabilises you will be informed of the new date for payment. (translated from Swahili)

Farmers complained to their associations but are unsure of their contractual rights. According to New Institutional Economics theory, contract farming is an institution for companies and farmers to share risks. Yet as the economist Marini writes, "From the farmers' point of view, contract farming is preferable to spot markets insofar as it reduces their exposure to market risk" (Marini 2001: paragraph 27, our italics). This point is crucial, for in the case of KSCL, farmers have been exposed to such risk despite the presence of the CSA contract. Furthermore, the system at Kilombero whereby the associations rather than farmers hold contracts with the company and contractor firms, and the money flows from the company, both diminishes the power of outgrowers and allows the marketing risk faced by the company to be passed on to other actors in the cane supply chain. We have shown that many farmers have benefited from the sugar payments. The flipside is greater vulnerability to indebtedness and market shocks through their contractual relationship with KSCL.

Block farming

Although KSCL depends on outgrowers, it does not seem convinced by the long-term viability of its very smallest producers. In a 2010 document, the company stated that "outgrower farms at Kilombero are highly fragmented, with sizes as small as 0.02ha ... Such a setting requires a unique way of organizing canegrowing to achieve [a] sustainable and dependable cane supply system" (KCCT 2010: 4). One official said some smallholders are being bought out by bigger growers, and predicted more will be squeezed out. "We would not like to see that happen," he said, "but the economics will determine it" (interview, 11 December).

The company asserts that those who farm only two or three acres lack infrastructure, access to finance, and knowledge. To address this, KSCL has promoted block farming, whereby individually owned cane fields are demarcated to fall within a block and farmed together. This is similar to bega kwa bega and to block farms established by KSCL for groups of smallholders in the early 1990s. Between 2007 and 2012 the Trust established seven block farms, some of which have been financed by the EU. The average size is 67 acres (27ha) and the average number of farmers 29, meaning an average plot size of 2.3 acres (0.92ha) per farmer. Two of the block farms are at Msolwa Ujamaa, which has subsequently established other block farms, financed separately by the Tanzanian commercial banks CRDB and NMB. Sanje has one block farm.

Block farms are members of associations but have their own committees. The farmwork is contracted out and inputs are managed collectively. Harvesting is facilitated by in-field drainage and all-weather roads. Some farms have title deeds and farmers may, perhaps for the first time, be eligible for bank loans. Farmers sign a contract for three years and repay loans at the end of the period, having been paid according to the percentage of their land within the block, minus deductions. The deductions are the same as those charged to individual outgrowers, plus a range of charges to cover outsourced tasks such as weeding and applying fertiliser. These farming charges total TZS 1.3m/acre (US\$1,932/ha) - considerably higher than the TZS 665,000/acre (US\$988/ha) we estimate farmers spend on their independent farms. The block farming system is a work in progress, with some problems of bureaucracy and corruption among the leadership reported.

The legacy of ujamaa

Actions taken by Illovo/KSCL, and to a lesser extent by the national government, since privatisation have changed the outgrower system and local economy. Here we consider to what extent outgrowing has been shaped by pre-existing institutions, in particular the communal village farms, village government structures and collective farming institutions introduced under *ujamaa*. Our conclusions are speculative, pending further research.

Kamuzora (2011: 87) suggests the outgrower associations at Kilombero evolved from cooperative producer societies of ujamaa. She writes that "after privatisation, the *ujamaa* collective model continued to organize [smallholder farmers]". However, we did not find a clear connection between the *ujamaa* cooperatives and the associations operating today. Before ujamaa, sugarcane was supplied to KSCL by a mix of large estates, small farmers' groups and early outgrowers from the government settlement scheme. Around 1969-71, the scheme was dismantled and converted into *ujamaa* cooperatives (Monson 2009; World Bank 1974). But separate farmers' groups and associations such as Such as Kidatu Cane Growers Association and Kidogobasi Farmers' Group continued. According to Sprenger (1989), most associations and farmers' groups were established, under farmers' own initiative, around 1969 in the K1 area and 1977 in K2. A respondent from Sanje reported that in 1975, he and fellow farmers formed a group called Kisewe which supplied cane to K1 and was provided with credit and seeds by the company. According to the respondent, his group joined with three others to form KCGA. Officially, KCGA was established in June 1991, with 350 members in the K1 area. In May 1992, Ruembe Cane Growers Association (RCGA) was established, representing 47 members in the K2 area. Since then, the number of associations has mushroomed to 15. There are still farmers' groups in each village, a layer below associations. Therefore, although the chronology is unclear, the associations could have evolved from independent farmers' groups rather than ujamaa cooperatives as Kamuzora asserts. The commercial cooperatives and settlement scheme introduced by the colonial administration and TANU government, which were undermined by socialist reforms, were at least as influential.

We also considered if KSCL outgrowers display a preference for cooperative production that might be attributable to ujamaa reforms. In general, there is a long history in the Kilombero area of farmers producing sugarcane in groups or via an intermediary. We found that most interviewed outgrowers do not consider themselves 'contract farmers' and have a closer relationship with their associations than with the company. The associations at Kilombero certainly form an important element of the outgrower system and inspire loyalty among farmers. But it is not unusual for sugarcane schemes to deal with outgrowers via associations, or to devolve services to contractors. This is the case for Illovo's sugar businesses in Malawi and Zambia, for example (Chinsinga and Zuka 2014; Matenga 2014). Furthermore, there is plenty of local criticism of associations. One reason for the formation of breakaway associations was unhappiness among members regarding the KCGA management. Farmers held public protests, demanding change. Another reason was that farmers wanted outgrowing representation closer to home, although association membership is not strictly geographical. Indeed, it is possible for outgrowers to belong to more than one association to double their chances of their cane being harvested. The smallest associations are not recognised by the umbrella organisation Tanzania Sugarcane Growers Association



Sugarcane farm in Msolwa Ujamaa village.

(TASGA),¹⁵ and may lack machinery, which can be helpful to augment contractor services at harvest. Their emergence has increased the number of actors involved in negotiations with the company, and could have diluted the bargaining power of outgrowers (Massimba et al. 2013).

While the mushrooming of associations could suggest a preference among local farmers to have *ujamaa*-style representation at a village level, it might be a simple response to Illovo's business model. Illovo encouraged outgrowers to form associations as part of the devolution process, as a farmer in Msolwa Ujamaa recalled:

The company used the phrase that associations would be the best way to help farmers. Before associations, it was only the company that cut and transported the cane. But it was unable to do everything because of expansion. (15)

It may be that many farmers in Kilombero would prefer to be more independent but lack the voice, capital and regulatory freedom to go it alone.

The village farms, another feature of *ujamaa*, are no longer significant suppliers to KSCL but may have created useful structures and institutions. By 1973, six of the new *ujamaa* villages supplied cane from collective farms to the K1 factory, ¹⁶ representing five percent of all cane delivered (World Bank 1974). This rose to a peak in 1978 with 12 *ujamaa* villages supplying 30 percent of outgrowers' cane, but fell during the 1980s as the system stuttered and the company's provision of services declined, to just 7.5 percent from eight *ujamaa* villages in 1986 (Sprenger 1989, see Table 3). By the early 1990s, *ujamaa* villages still accounted for two percent of cane supplied to K2, but "villages [were] becoming less and less important sources of cane, as a result of local resistance against 'communal' farming" (Mbilinyi and Semakafu 1995: 103). Communal

farms survive in Msolwa Ujamaa and other villages but are marginal elements of the outgrower system. However, the history in Msolwa Ujamaa of large farms being split up and redistributed to residents by the village government in regular parcels, and the continuation of *ujamaa* institutions in that village, has made it easier to establish the new block farms there. According to a company official, it has been more challenging to establish block farms in non-*ujamaa* villages because they lack the *ujamaa* structures and farmers have feared losing ownership or physical boundaries of their land (interview, 14 April 2014).

OPhoto by E. Sulle 2014

Another aspect of the KSCL scheme with roots in the past is the inclusion of scattered cane fields of only 1 or 2 acres (<1ha). This makes KSCL unusual among Illovo's operations and many other sugarcane businesses in sub-Saharan Africa. For example, farmers joining the private outgrower scheme at Mumias in Kenya in the 1980s had to own at least 2.1ha and to have a plot adjacent to other plots "so that farmers might operate in 6-hectare units to facilitate mechanical cultivation and a straightforward harvesting routine" (Graham and Floering 1984: 115). While Kilombero also has many medium- and large-scale sugarcane farms, inclusion of small-scale farmers was promoted not only for the 1960s settlement scheme (when women were explicitly included) and during *ujamaa* but in the following decades, for example when Msolwa Ujamaa residents were given two-acre parcels by the village government. Further encouraged by Illovo as part of its expansion policy, scattered small-scale fields with no formal land ownership are a key characteristic of the current KSCL outgrower scheme.

In summary, the influence of local institutions on the current KSCL set-up is visible in the enduring village farms, the participation of very small producers and, perhaps, the prominence of outgrower associations.

Table 3. Categories of KSCL outgrower in 1986			
	Number	Harvested cane	
		(ha)	(t)
Large private estates*	10	833	27,141
Associations and group farms	13 (representing 500 members)	814	26,528
Individual small-scale farmers**	30	223	9,024
Ujamaa villages ***	8	243	5,173
Kilosa Development Corporation	1	93	2,315

Source: Modified from Sprenger 1989: 16.

- * Some owners operated their own jaggery plants before 1976.
- ** Farmers with 1.5–111 acres (0.6–45ha) and individually registered with KSCL. Many previously belonged to an association.

Further research could trace the evolution of institutions in the area and assess whether the long history of working with intermediaries has helped farmers to engage in liberalised, commercial agriculture through outgrower contracts and association membership.

Employment

We have little information on the status of workers directly after privatisation. According to a 2005 presentation by Illovo, at the time of privatisation the work force was on half pay (Illovo Sugar Ltd 2005). A former employee who used to live on the K1 compound said that after privatisation, "the South Africans" wanted to pay low salaries so everyone, including her, left and the company hired new people from outside the area on low wages and temporary seasonal contracts.

In June 2000, the workforce launched what became a four-week strike and three acres of estate sugarcane were set on fire. The action was triggered by 60 employees being reassigned to unskilled field labour. Workers demanded that Illovo honour an agreement on hours and wages made prior to privatisation (Rambali 2000). Illovo threatened to withdraw its investment, so the government acted in July 2000 by making all company workers, who numbered more than 3,000, redundant. The workers were sent termination letters promising severance pay equivalent to one month's salary per year of service for a maximum of ten years (Appendix 2). Illovo was then free to re-hire as many of them as it liked. According to Monson (2009), most of the contracts were replaced with casual day-labour arrangements. He found that many people used their severance pay to acquire farmland nearby. An elder at Msolwa Ujamaa recalled a number of people relocating to his and other villages after having been made redundant by the new management. There were further strikes by workers in 2004 over pay and housing quality (IUF 2004). In 2011, the entire harvesting workforce of 1,400 people was

reportedly sacked after continuing to protest when a ten percent salary rise was agreed. The company hired buses to return migrant workers to their home regions (The Guardian 2011).

The workforce decreased after privatisation. As of 2012/13, KSCL employed 870 permanent staff and 2,073 seasonal workers (Illovo Sugar Ltd 2014). Nombo (2010) reports that during the peak cane-harvesting season (May to December), 5,000–6,000 casual labourers are recruited from other regions. All workers are offered accommodation, although some migrant workers prefer to rent rooms. The seasonal workers are usually employed for seven months and most work on the estates. Others work for Unitrans, KSCL's haulage contractor. Respondents said few local people are employed in professional positions with the company, and it is easier to find casual work on local farms than on the estates.

Employment is also created by the private firms that are contracted by associations to cut, load and transport outgrowers' cane. The company and contractors use manual, not mechanised, harvesting and employ (male) cane-cutters, many of whom come from outside the area. They work four men to one acre, moving from farm to farm a few hours after the cane is burned, and are typically paid fortnightly or monthly, around TZS 7,500 (US\$4.50) per day. At the time of writing, the national minimum wage for the agricultural services sector is TZS 3,846.50 (US\$2.30) per day.

5. Wider socio-economic change

This section presents socio-economic information about Msolwa Ujamaa, Sanje and Signali and relates dynamics of change to the outgrower system and other aspects of KSCL post-privatisation. The section focuses on land use, access and ownership; farming livelihoods

^{***} Includes the converted former settlement scheme.

and expenditure; and social differentiation. It presents quantitative data gathered during 47 interviews with villagers, but also draws on other interviews, oral histories and secondary data.

a. Land use, access and ownership

Land endowments

Interviews with key stakeholders and evidence from the contract farming literature (Smalley 2013) suggested that KSCL outgrowers do not belong to the poorest social group in Kilombero, and that there is probably class or wealth differentiation within and between outgrower villages. In order to gather information about the relative wealth of outgrowers and non-outgrowers, using land endowment as an indicator, and to address our research question regarding the impact of KSCL on land use and ownership, we asked respondents in the three villages about their farm holdings. Table 4 shows the range and average size of holdings cultivated for sugarcane or paddy by a sample of respondents. Many respondents have multiple plots for cultivating more than one crop, so Table 5 shows the average size of respondents' combined holdings.

We found a wider range in the size of sugarcane holdings, and a larger holding on average, among the outgrowers in Sanje (0.5–50 acres or 2–20ha, average 7.7 acres or 3.1ha) than in Msolwa Ujamaa (1.5–20 acres or 0.6-8ha, average 6.1 acres or 2.4ha). When it comes to paddy fields farmed by both outgrowers and non-outgrowers, the range and average size are also larger in Sanje (1–50 acres or 0.4–20ha, average 8.2 acres

or 3.3ha) than in Msolwa Ujamaa (1–7 acres or 0.4–2.8ha, average 4.0 acres or 1.6ha). Our sample size is too small to say whether this reflects greater differentiation in land ownership among villagers in Sanje than in Msolwa Ujamaa. The three respondents in Msolwa Ujamaa and Sanje who said they can't afford to cultivate sugarcane have particularly small paddy holdings (average 1.8 acres or 0.7ha), which supports their descriptions of themselves as poor.

The respondents in Signali, who are unable to cultivate sugarcane not necessarily because they are poor but because they live outside the outgrower area, have on average a larger area for growing paddy (9.6 acres or 3.8ha, n=5) than the respondents in Msolwa Ujamaa and Sanje do (6.6 acres or 2.6ha, n=25 for both villages). But when we include sugarcane, we find that the combined sugarcane and paddy holdings of Msolwa Ujamaa and Sanje outgrowers for whom we have data (average 18 acres or 6.7ha, n=15) are larger than those single paddy holdings of Signali residents. This might suggest that sugarcane outgrowers tend to be better off than farmers who do not grow sugarcane in terms of land endowments and, given the current relative prices for cane and rice perhaps also in terms of cash-crop income.

In addition to the small- and medium-scale farmers that we interviewed, there are large-scale farms in the villages. Sanje has four large, private sugarcane farms ranging from 101 to 521 acres (40–208ha), belonging to the landowners who took over white-owned farms after Independence. In Msolwa Ujamaa there are reported to be large farmers with 50–100 acres (20–40ha) of scattered plots. These people are said to rent the land from locals and live elsewhere.

Table 4. Range and average size of respondents' sugarcane and paddy holdings – owned or leased (acres)				
	Msolwa Ujamaa	Sanje	Signali	All
(a) Sugarcane holding	js			
Current outgrowers	6.6 (2–20)	7.9 (0.5–50)	N/A	7.4 (0.5–50)
Former outgrowers who rent out holdings	1.8 (1.5–2)	3	N/A	2.2 (1.5–3)
Everyone	6.1 (1.5–20)	7.7 (0.5–50)	N/A	6.9 (0.5–50)
(b) Paddy holdings				
Current outgrowers	3.3 (1–6)	9.2 (1–50)	N/A	7.2 (1–50)
Former outgrowers who rent out holdings	7	No data	N/A	7
Cannot afford to participate in outgrowing	3	1.3 (1–1.5)	N/A	1.8 (1–3)
Everyone	4.0 (1–7)	8.2 (1–50)	9.6 (2–17)	7.6 (1–50)

Ranges are shown in brackets.

Table 5. Average size of respondents' combined sugarcane, paddy and maize holdings – owned or leased (acres)

Crops grown by respondent	Msolwa Ujamaa	Sanje	Signali	Total
Sugarcane, paddy and maize (n=5)	11.1	14.0	N/A	11.7
Sugarcane and paddy only (n=15)	8.6	20.9	N/A	16.8
Paddy and maize only (n=3)	No data	1.75	19	7.5
Paddy only (n=5)	3	No data	7.8	6.8

Note: number of respondents is given as we did not gather data from every interview.

How land is acquired

The research found that villagers have acquired their farmland in a variety of ways and continue to increase or decrease their holdings in an active rental market. There are six ways in which respondents' land has been acquired: (1) cleared from bushland; (2) granted by the village government, the national government or an employer; (3) inherited; (4) acquired from a living family member; (5) purchased from the village government or an individual; or (6) leased. Many farmers have acquired land through multiple channels to build a portfolio of holdings. Older residents tend to have acquired more of their farmland by clearing land or receiving it as a grant than have younger people or more recent incomers. Young people acquire more land through inheritance or family connections than others do, and middle-aged people and newcomers acquire proportionately more land through leasing and purchase.

The pattern of acquisition of plots now used for sugarcane is different from that of land being used for paddy and maize. Many of the present cane farms were previously used for food crops, before farmers were encouraged to switch. The data suggest that many outgrowers have converted land allocated to them by their village governments into sugarcane fields, and then purchased or leased additional land for paddy or maize. Just under half of the outgrowers for whom we have information (n=12,44 percent) include in their sugarcane holdings land that was granted by government or an employer, whereas only two respondents (nine percent) use granted land for paddy or maize cultivation. A smaller number of outgrowers acquired their sugarcane fields through inheritance, family members or purchase.

In contrast, in 32 percent of cases (n=7) farmers leased their entire maize or rice holdings, and a further nine percent combined rented fields with acquisitions from family members. The number is even higher for land purchases: over half of the respondents (51 percent) had bought at least some of the land on which they cultivate paddy and maize. These are informal purchases and the land is under customary ownership: none of the interviewees have title deeds for their plots, and only a small number have any written proof of ownership. It is

an expensive process to apply for title deed, and only very large farmers and the block farms have it. This may change following the Mkurabita property formalisation programme, but Sanje does not even have a certificate of registration at the village level and is thus ineligible for this programme.

An example of a 'portfolio' of smallholdings is the case of a young couple from Sanje. They leased a plot of land in Signali for growing paddy, since the land near home was taken up by sugarcane, and they travel to the farm by *boda-boda* (motorbike taxi) to produce rice for the household and occasional sale. In 2007 they began farming sugarcane back in Sanje as outgrowers, firstly on rented land and since 2011 on a 2.5-acre (1ha) plot the husband acquired from his uncle. Because the plot was tied up with the family, they have found it difficult to invest their sugarcane income.

None of the outgrowers that we interviewed acquired their cane fields through lease, but that practice goes on. Without title deeds, informal rental of small sugarcane plots is commonplace. Some farmers rent out their sugarcane fields because they became frustrated with outgrowing or needed money urgently. It is not only smallholders who rent out land; in Sanje, a large-scale owner has ploughed up part of the land and rented it to people to cultivate maize. Leasing an acre of farmland in Msolwa Ujamaa or Sanje costs around TZS 50,000-200,000 (US\$74–296/ha) per year. Purchasing outright costs around TZS 700,000-1,500,000 per acre (US\$1,038-2,224/ha). Respondents mentioned the practice of 'per harvest'leasing, whereby an individual pays a land-owner around TZS 200,000 (US\$120) to cultivate a sugarcane plot through until harvest. If the cane is not harvested during the season for some reason, the person who leases the plot retains access until harvesting finally takes place. This is a scenario in which both parties lose out: the lessee misses the income they had expected from harvesting the cane, and the lessor must extend the lease without additional rental income. Land is cheaper to rent farther down the valley: in Signali, renting one acre for paddy costs around TZS 30,000-100,000 (US\$44-148/ ha) per season. This points to a premium for land in the sugarcane zone.

Land scarcity

Farmland in Msolwa Ujamaa and Sanje, especially land for growing food crops, has become scarce and expensive. Accessing land to cultivate paddy is difficult unless an outgrower opts to temporarily rent out his or her sugarcane plot to rejuvenate the soil. It is not just that little surplus land is available to claim or purchase from the village governments; it is also costly to rent land from others. Sometimes land is rented out for a minimum of three or five years, which increases the entry cost. If farmers do not have substantial assets as collateral, loans are not usually available until they begin harvesting cane and can use their pay receipts as proof of income. It may be that less well-off outgrowers are not earning enough to afford to acquire additional land.

Villagers have adapted by acquiring land for paddy or maize in locations farther afield, such as Signali. Eight respondents in Sanje and Msolwa Ujamaa had paddy or maize plots in Signali, ranging from 1 to 17 acres (0.4–6.8ha) in size (mean: 6.5 acres or 2.6 ha). Among the holdings acquired by non-residents in Signali we can differentiate between plots of a few acres farmed by smallholders who may or may not also be sugarcane outgrowers; medium-sized plots farmed by wealthier outgrowers; and much larger farms of 20ha, 40ha or more operated by wealthier farmers.

Acquiring distant plots was a straightforward process. In the case of Signali, people paid a moderate fee to the village government, which made land available to in-comers, and/or acquired land directly from individuals - again, without title deeds. Most of their holdings are located in a place where much of the land had not previously been farmed. But the Ward Executive Officer and other respondents in Signali said that whereas in the past agricultural land was abundant in the village, shortages have become an issue here, too, especially for young men. They feel it is no longer appropriate to give village land away cheaply. "The in-comers have opened our eyes to the potential of renting land instead of just giving it away," one man said (57). When asked if anyone $in Signali\,has\,acquired\,sugarcane\,plots, or\,\textit{shambas}, in\,the$ outgrower area, villagers said it was impossible. "No one from here goes north to get a sugarcane shamba! How would they get a shamba there?" said an elder. "It's hard, no one dares. We don't know anything about sugarcane farming" (60).

Respondents attributed the cost and scarcity of farmland in Msolwa and Sanje to the sugarcane expansion and population growth. In some villages, people are building houses on the hilly slopes because housing plots in the village centres have been exhausted. Writing about the village of Mkamba, where farmland is particularly scarce, Nombo reports:

Employment opportunities in sugarcane estate and in the service sector of the economy as well as easy accessibility to the village have brought people from all corners of Tanzania, resulting in a tremendous population increase and a high degree of ethnic heterogeneity in the village. (Nombo 2010: 64)

To what extent this situation has been caused by KSCL privatisation is hard to say. There has been migration into the area since the 1960s. Figure 1 above shows the main regions where seasonal workers and in-migrants have come from. In the early 1990s, before privatisation, researchers found that some villagers were selling land to wealthy outgrowers and housing developers, which was taking away land for food and cash crops (Mbilinyi and Semakafu 1995). However, the skyrocketing of outgrower sugarcane and attendant growth in business and employment opportunities following privatisation have clearly increased demand for land and reduced the availability of food-crop plots. It therefore seems likely that processes of land scarcity have been accelerated by changes since 1998.

Illovo's land issues

To a lesser extent, some people's land access has been affected by KSCL bringing estate land back into production and expanding estate blocks. This affected places such as Mkamba, Msolwa Station and Kidodi near the estate boundaries to the north of Msolwa Ujamaa (Chachage 2012; Nombo and Niehof 2008; Harrison and Laizer 2007). When Illovo took over, some estate land was occupied by villagers. Some farm plots were reclaimed by the company; but as compensation from the national government for occupied land that could not be reclaimed, the company requested land at Ruipa¹⁷ farther down the valley for estate production and a new processing plant. It was supported by the district bureaucracy and the national Sugar Board, which wanted to revive plans for sugarcane development in the area (Mwalongo 2011). But the plan was opposed by local people, creating "a protracted and long-drawn land crisis with a number of villages" (Mwami and Kamata 2011: 24) that has frustrated the plans of Illovo and government officials. Under SAGCOT plans, Ruipa is again the target for sugarcane development (see Figure 3).

Currently, the biggest land-related disputes seem to be resentment of large private farm-owners and, outside the central sugarcane area, contestation between farmers and pastoralists. Villages like Sanje and Signali appear to be challenging the ownership of the very large private farms. As land scarcity increases in the sugarcane area and the predominantly rice-producing villages beyond, pressure on the large farms may be increasing.

b. Income and livelihoods

Farming livelihoods

All of the villagers we interviewed are, or have been, involved in agriculture – as cane association members, farmers who work the land or farm-owners who employ

labourers. We did not meet any landless farm workers or villagers with non-farm incomes who did not also have land of their own. Some elderly respondents no longer farm but remain in households that share produce and income from the land. Our sample was small and purposive, but if it can be shown that people living in or moving to the area, including young people, resist landlessness and value farming as a livelihood, it could be significant both to our understanding of the KSCL experience and to the planning of future agribusiness developments in the Kilombero Valley.

When probed, respondents revealed additional income sources. Common activities are selling food, milk and farm produce (some villagers keep cows or other livestock), having a small shop, selling homebrew and doing casual labour. Past and present salaried jobs were rarer and included working at a local hospital, working as a cook, working for the village office and being a teacher. We came across only two people in Msolwa Ujamaa and Sanje who work for KSCL, as a weighbridge operative and driver, respectively. Villagers said the company offers mostly low-paid, temporary jobs such as weeding or cane-cutting and that most workers come from outside the area.

It is common for outgrowers to combine sugarcane plots with paddy or maize farms. There are also villagers who grow only paddy and/or maize as the main crop as they are unable or choose not to participate in cane outgrowing. Many of these paddy and maize plots are located tens of kilometres distant from Msolwa Ujamaa and Sanje, in places outside the sugarcane zone such as Signali. It often requires a journey by bus of two hours or more, and then perhaps another stage by bicycle or motorbike, to reach the farm. This phenomenon of commuting between locations, or what Nombo (2010) calls "distant farming", is not new or exclusive to the Kilombero sugarcane zone. But it has become more pronounced in our study area with the expansion of sugarcane, including during the period of renewed expansion since privatisation in 1998. As villagers became attracted to sugarcane farming and were encouraged to become outgrowers, many converted plots from food crops to cane. Others felt compelled to shift because the risk of cane fires spreading and the presence of insects and seed-eating birds nesting in the cane made maize and paddy farming impossible. As farmland became scarce and expensive, some low-income villagers sold or rented out their holdings. But for economic and cultural reasons, people who sold their land or shifted to sugarcane wanted to continue to hold land and produce rice, so they have sought access to plots farther afield. Poor in-migrants have also been obliged to acquire land in distant locations.

Food insecurity was not reported in Msolwa Ujamaa or Sanje, although a respondent said that since sugarcane expansion, there have been incidences of people stealing rice from paddy fields to sell. But food insecurity has been recorded in Mkamba, where contributing factors include a serious lack of access to land for food cultivation and a high proportion of migrants without kinship networks

(Nombo and Niehof 2008). According to a company official, there is also hunger in some villages in the K2 area, where residents have rented out land and either lack areas to grow food crops or have been forced on to marginal soils (interview, 12 December 2013). Thus there is some evidence linking the land-use changes to increased food insecurity.

Labour and consumption

Further to the information on land endowments, we gathered information on farmers' labour and consumption patterns to assess the state of local agriculture and wealth and class relationships. We found that most farmers make some use of hired labour on their farms and sell at least some of the maize or rice that they produce, as and when they need cash. This is true even for poor farmers or farmers with very small holdings. Indeed, poor farmers often hire others because they lack time, energy or good health to do all the work themselves. For example, one female outgrower in Msolwa Ujamaa employs someone from the village to share the work on her 3-acre (1.2ha) sugarcane plot so that she can also farm a 3-acre paddy field. She sells the rice to buy clothes for her children and for other expenses, using the sugarcane payment to pay for school fees and loan repayments. Households adjust their labour patterns according to how much time and cash they have available. Labour supply is not an apparent problem. Outgrowers hire both local villagers and seasonal labourers who stay after working on the KSCL estates.

Tractors are used by farmers in the sugarcane areas especially for uprooting and replanting cane at the end of its cycle. They are available for hire from the village government, the big sugarcane associations, contractors and private individuals. But generally, tractors do not seem to be particularly accessible or affordable. There is perhaps greater use by smallholders of tractors – as well as oxen-in the paddy-producing areas. In Signali, tractors are readily available for private hire for around TZS 40,000–60,000 per acre (US\$60–90/ha) with driver. The majority are brought from outside the area – including by wealthy sugarcane farmers – and operated by drivers who stay for the season. Commuter farmers use tractors not only for cultivation but also for transporting sacks of rice, and some respondents in Signali suggested that the commuters have spread the use of tractors by paddy farmers in the village.

While some villagers visit their distant farms infrequently for stays of two or three days, others regularly travel to do hands-on farmwork, which means costly commuting or long stays away from home. Many build shelters to stay on site. What makes the difference is time, money and social connections. Those who can afford it hire tractors and labourers to cultivate their distant farms and visit just to oversee activities and arrange transport. But families with less money must do more work themselves by hand hoe, and with paddy that means several weeks or even months at a time for planting, weeding and harvesting. Some combine their

Table 6. The	farming calendar of a commuter farming household
January	Plant rice on plot near home in Msolwa Ujamaa. Wife stays to look after the children. Husband goes to Signali to plant maize, and visits Mang'ula to hire workers for a day's weeding. Apply fertiliser and insecticide on their sugarcane plot in Msolwa Ujamaa if it was harvested by December.
February	Husband and wife share tasks of weeding in Msolwa Ujamaa (rice) and Signali (maize).
March	Second weeding for rice in Msolwa Ujamaa and Mang'ula.
April	Maize harvesting in Signali. Husband goes there with their older children, and they stay for two weeks in temporary shelter by the farm. Wife stays home with the younger children who are in school.
May	Everyone back for rice harvesting in Msolwa Ujamaa.
June	Rice harvesting in Mang'ula. Husband goes there alone for two weeks and does the work himself rather than using labourers.
July	Husband returns home to help finish rice harvesting and plant maize on the same plot.
August	Maize weeding in Msolwa Ujamaa. They might grow okra and other vegetables.
September	Possibly harvest and sell vegetables here in Msolwa Ujamaa. Otherwise rest.
October	Rest.
November	Harvest maize in Msolwa Ujamaa. Husband's mother in Signali hires labourers to prepare their farm there and husband goes there to pay them. They might harvest their sugarcane, although the harvesting schedule is uncertain. If so, they pay labourers to weed the cane area after harvesting.
December	Husband goes to Mang'ula to plant rice (two weeks). He also goes to Signali for one week to plant maize. Depending on their financial situation, he might hire labourers to help him.

Note: many thanks go to the respondent for providing this information.

own labour with hiring additional workers, perhaps balancing time demands of waged work elsewhere. An outgrower in Msolwa Ujamaa described the challenges she and her husband face in managing tasks on plots at three locations while she stays at home to care for a sick daughter. It is a constant juggling act with lengthy spells away for her husband and older children, but they are helped by relatives at the site of their maize field who monitor the crop and hire labourers. Their typical farming year is shown in Table 6.

For all commuter households, but especially the poorest whose members stay away for long periods, there are potentially negative consequences for children, who either travel with their parents to the farm or stay behind alone. Without adult supervision children can fall ill or play truant and houses are at risk of burglary. A teacher at a local secondary school confirmed that truancy among children left home alone is a perennial problem. Although it is not a subject discussed in interviews, other studies in Kilombero Valley suggest teenage girls in self-care arrangements are prone to sexual abuse or engaging in sexual activity in exchange for money (Makungu 2011; Nombo 2010).

In Signali, the influx of farmers from the sugarcane zone has apparently had mixed results. Those who acquired small plots keep to themselves in an area far from the village settlement. But there are also large-scale paddy farms with absentee landlords whose presence seems more antagonistic, particularly now that farmland is becoming scarce. Wealthier farmers use tractors, which

local farmers might hire. If they don't bring workers with them, many of the in-comers also hire local people. Clearly this is a source of employment but interviews suggest it could be inflating wages.

In summary, the farming households whose members we interviewed tended to hire workers and/or sell some produce. The use of hired labour is not, therefore, an accurate indicator of wealth. The use of tractors and other expensive inputs, however, is more likely to be prohibitive for poor farming households, and this has consequences for commuter farmers and their children.

Sugarcane income

In the 1960s, some farmers in the study area were already benefiting from a cash-crop income. "Whoever has the means, builds himself a solid house with a tin roof," notes Baum (1968: 35). Researchers in 1995 encountered population growth, land speculation and a housing shortage linked to the sugarcane company and other local employers, with villages near the K1 and K2 plants having become "multi-ethnic urban centres, complete with hotels, restaurants, bars, shops, markets and prostitution" (Mbilinyi and Semakafu 1995: 60).

This trend continued after privatisation. Stimulated by expansion and the devolution of services to local businesses and associations, an agricultural service sector has grown up alongside KSCL. In the towns of Kidatu (K1) and Ruaha (K2) and along the main trunk road can be found input suppliers, spare-part stores, construction firms and bicycle and motorbike dealers. Once a small village, Ruaha is now a busy trading centre and township with several financial institutions. An elderly male respondent said, "Look how busy the people of Ruaha are – it's because of Illovo!" (31). Local leaders have acquired cane-loaders and other agricultural and haulage equipment for hire, pointing to elite capture of business opportunities, financed by accumulation of capital from sugarcane farming or other business interests.

Respondents said sugarcane has brought prosperity to their villages, particularly Msolwa Ujamaa. It has enabled outgrowers to access electricity and water, build good houses and educate their children. Msolwa Ujamaa benefits from still having the *ujamaa* village farm, whose proceeds have paid for a village office, tractor, dispensary and school facilities. "Each and everything you see in this village is because of sugar," said a resident (26). By comparison Signali appears less prosperous.

Outgrowers have spent their money on house plots and home improvements, children's education, healthcare costs, small businesses such as guesthouses, paddy farming, increasing their farm holdings and buying a car or motorbike. When we asked outgrowers what were the priority uses of their sugarcane income, the most common answer was education for their children: specifically, private secondary school fees (Table 7).

Thus, among the small-scale outgrowers that we interviewed, the income from contract farming and commercial agriculture is being channelled into education and the home rather than off-farm investments. For the small-scale outgrowers in Kilombero, the income from their harvested cane is not large enough for significant business investment. Many lack the capital and access to credit required to reinvest their earnings in off-farm enterprises. Because of the land scarcity, it has become harder to invest in land, while rising costs of rice cultivation has led outgrowers to plough more of their earnings into their paddy fields. Outgrowers are effectively using their sugarcane payments to subsidise paddy farming, by hiring tractors and workers or buying inputs. They are using the distant farms as insurance and a source of food or a second income, which is important because, even

though they are within a contract farming arrangement with KSCL, there is no guarantee that their sugarcane will be harvested or that they will receive a good price.

The income from sugarcane is highly prized. Several farmers differentiated it from food crops by describing sugarcane as a "commercial" crop. In the words of one villager, "We don't have any farms for growing food, we just have farms for business" (27). Villagers said that the large sugarcane payments are the only realistic source of money for school fees and large house-building projects. Farmers' rice tends to be stored at home or in a village warehouse and is difficult to sell all at once. At Kilombero, at least in Msolwa Ujamaa and Sanje, outgrowers budget for the lump-sum sugar payment in advance. Future research could investigate the intra-household dynamics of this, and compare spending pattern of sugarcane households with paddy and maize-only households.

Another perceived advantage of outgrower membership is improved access to inputs. Outgrowers also have a better chance of accessing loans than maize or paddy farmers, although participating as an outgrower does not guarantee access to credit. Some outgrowers said it was possible to obtain - or at least to apply for – commercial bank loans through associations. Without title deed, people can use their KSCL pay receipts to provide collateral for the bank but they may need other assets such as a house. Others have accessed loans through SACCOs or the block farms. A male respondent in Msolwa Ujamaa had recently applied for a bank loan after becoming eligible for the first time through impending block farm membership. But such opportunities are piecemeal. There is a lack of a single, inclusive and consistent source of lending for outgrowers in the postprivatisation KSCL system.

Financial challenges

At the time of fieldwork, both sugarcane and paddy farmers were experiencing financial challenges. Outgrowers were grappling with the issues described earlier in this paper: cane being deferred or not harvested at all; declining sucrose levels and cane prices; and payment delays. Paddy farming had been hit by a catastrophic decline in the price of rice and an increase

Table 7. Spending priorities for sugarcane payment received by outgrowers				
Expenditure	Number of times mentioned as a spending priority			
	Msolwa Ujamaa	Sanje	Total	
School fees	7	8	15	
Home improvements or building a new house	3	4	7	
Farming costs, including inputs	1	5	6	
Food and other basic household needs	1	4	5	
Buying or renting farmland	2	0	2	
Loan payments	1	0	1	
Extended family members	1	0	1	

Note: respondents could give more than one answer.

in farming costs. Farmers' responses to these challenges could lead to significant changes in livelihoods, land use and agricultural production.

The current problem for outgrowers is that payment is either delayed or lower than they were expecting. Farmers respond by taking out loans to meet the shortfall, raising money another way – in extreme cases through the short-term measure of renting out their land – or cutting back on expenses. For the less well-off outgrowers, the scope for reinvesting their sugarcane payments has shrunk to the priority areas of household expenses, children's education, paddy farming and debt payments. Some are finding it difficult to pay school fees. "We are failing to take care of our families," one outgrower said (54).

Some outgrowers are making a loss and considering withdrawing from sugarcane. Others may be forced to withdraw by indebtedness. Farmers are vulnerable to debt if payment is delayed or cane is not harvested and, because of the practice of holding back 10 percent for final price adjustment, if the price is revised downwards at the end of the season, farmers' debts can slip from one season to the next. We met five people who, because of financial problems or dissatisfaction with their association, have either replaced some of their cane with another crop or rented out their cane fields. Several more respondents said they would like to leave sugarcane or knew of villagers who had recently quit. In March 2013, it was reported that farmers from six villages in the K2 area were threatening to withdraw from the outgrower scheme in response to a fall in the cane price (Balaigwa

But the decision to leave sugarcane is not easy. Low-income farmers are unable to shift to another crop because they lack the capital needed to uproot cane, replant the land and apply inputs. One man said that if people had such capital, they would use it for their children's education, instead. And the factors that made it difficult to farm paddy or maize among cane fields crop fires and pests – remain. Furthermore, refocusing on rice or maize is problematic: both crops are more labour-intensive than sugarcane and more vulnerable to flooding and drought, and, at the time of fieldwork, fetched low prices. During 2013, the price that farmers received for one sack of rice fell from TZS 100,000 (US\$60) in 2012 to TZS 40,000-50,000 (US\$24-30). Members of one poor farming family in Signali noted that although paddy was a more difficult crop to cultivate, it was now selling at a lower price than maize. Although fieldwork suggests some small-scale farmers can make more money from selling rice or maize than from outgrowing, many of those who have the option of participating as an outgrower retain optimism for - or dependence on - an income from sugarcane. One young man at Msolwa Ujamaa who expressed a desire to get out of sugarcane admitted, "The sugar payment is everything. Without sugar, nothing can be achieved" (23).

In Signali, where sugarcane is not grown, the low rice price seemed to be having a negative effect on

incomes and forcing a change in labour patterns and in household expenditure. Interviewees reported that people were selling more sacks of rice to cover the cost of paddy cultivation, and keeping less rice at home for food. Farmers were reducing expenditure by not cultivating all of their land, using less paid labour or cutting back on purchases.

Among both paddy farmers and small-scale outgrowers, there are signs of retreat and re-peasantisation. They may be cultivating only a portion of their holdings or doing more farmwork themselves, while, conversely, selling a larger proportion of their food crop. For the commuter farmers, this can mean household members spending more time at their distant farms. One farmer explained that he used to hire someone to go and check his paddy farm in Lungongole. Recently, as finances have become tight, he and his wife have travelled there to do the work themselves. Before, it was easier, he said, because they could leave some money with the children left at home, but these days it's more difficult. "But without cultivating food crops, how are you going to survive?" he said. "If you don't farm paddy, you have to buy food. But if sugarcane were doing well, there would be no need to grow paddy"

c. Differentiation

We conclude the section with some observations about power relations within the outgrower system and social differentiation in the study villages. More research on this is needed but the small amount of quantitative data used for this analysis are shown in Appendix 1, Table g.

The spread of commercial sugarcane agriculture has contributed to the emergence of a group or class of small-scale capitalist farmers. Outgrowers with sugarcane holdings of between 5 and 20 acres (2–8ha) comprise 40 percent of farmers interviewed in Msolwa Ujamaa and 35 percent of farmers in Sanje. They gained farms through inheritance and land reform but have accumulated further land by renting or purchasing fields from other villagers. Total holdings average around 9-16 acres (3.6-6.4ha). Farmers in this group have earned a modest but significant income from cane which has been reinvested in education, asset accumulation and paddy farming. An example is a 43-year-old respondent in Sanje who uses payments from his 9 acres (3.6ha) of sugarcane to cultivate rice on 5 acres (2ha) down the valley, which he sells to a dealer in Dar es Salaam. He and others in this group use paid labour, inputs and tractors. However, spillover effects in terms of agricultural development appear limited – sugarcane does not lend itself to technological innovation among small-scale farmers or to the transfer of technology to other crops. Outgrowers' cane is not irrigated, so there are no lessons to be learned in irrigation, and extension and training have not been universally available. Some have, or had, off-farm income from salaried jobs or small businesses, but this group still grow food crops for subsistence. These farming households have a chance of withstanding delays in their

sugarcane payments and, if faced with inefficiencies in the outgrower system, may have capital available to pay bribes or shift to another crop.

Another group or class are outgrowers with less than 3 acres (1.2ha) under sugarcane. These comprise around 45 percent of farmers interviewed in Msolwa Ujamaa and 35 percent of those in Sanje. Many of these farmers joined the outgrower system more recently, during the 2000s. They typically inherited or purchased their small cane plots, as well as perhaps an additional few acres for cultivating paddy or maize. These farming households hire workers for tasks on their small plots but seem to do proportionally more farmwork than the other group and are less able to afford inputs and tractor services. This means that those with distant farm plots must spend much longer away with home.

With a smaller income from sugarcane, most of the farmers cannot accumulate significant capital or spend payments on anything other than household and farming costs. Some were barely breaking even in 2013. These smallest outgrowers have the least capacity to buffer payment shocks, yet appear to be the most vulnerable to harvesting delays. They are being squeezed by largescale farmers, bribery and nepotism in the system, declining profits from sugarcane, and the consequences of outgrower numbers being allowed to expand beyond KSCL's processing capacity. The KSCL outgrower scheme is relatively inclusive, but the smallest and poorest farmers are not well protected within the current system. Farming blocks could potentially provide some protection to this sector of the outgrower community, but it is yet to be proven.

Faced with financial challenges, members of this group are more likely than the larger outgrowers to resort to distress sales or leasing. They include a man in Msolwa Ujamaa who rented out his cane field to raise money for school fees, which his sugarcane payment wouldn't cover. "Most small growers are poor," he explained. "They might get TZS 1.5 million [US\$900] for their sugarcane and spend that money on expenses, but then perhaps an emergency arises, so the obvious solution is to rent out their land to raise money. The problem is, you wait the whole year for a big payment, and it can't sustain the family" (66). An exception is households with less than (3 acres) (1.2ha) but good off-farm incomes: this group includes the two respondents who worked for the company and one who worked for the village office, and one of those respondents chose to withdraw from sugarcane by renting out his cane field as he had the buffer of income from wages and paddy farming.

The requirements of land and capital to become a KSCL outgrower are relatively small, but they still pose an entry barrier. Below the smallest outgrowers are paddy and maize farmers who are unable to join the outgrower system because they cannot acquire a cane plot or meet the start-up costs. Such farmers account for ten percent of the Msolwa Ujamaa sample and nine percent of the Sanje sample. Their paddy and maize fields are probably smaller than those acquired by outgrowers, and their

total holdings may cover less than 3 acres (1.2ha). Farmers in this group miss out on cash payments from sugarcane to pay for school fees or subsidise their farming costs, and they are more likely to rent than purchase land. Also, their households may be vulnerable to food insecurity as they have to use food crops as a source of cash as well as subsistence, even though they might have additional income through waged farm labour or micro-enterprise.

In both sugarcane and paddy farming, the poorest farmers are losing or failing to increase their land endowments. Increasing land scarcity and high prices for plots in the sugarcane zone, set against a backdrop of falling returns from sugar and rice, mean that poor in-migrants, youths and the smallest farmers may struggle to acquire holdings or expand their farming operations. During fieldwork we did not meet any landless workers and it may be that a lack of employment opportunities and the economic and cultural importance attached to farming are retarding a process of proletarianisation. But if the present financial challenges continue, more people may be forced to sell or rent out unused land. It may be significant that whereas fieldwork in 1987 found a shortage of local labour (Sprenger 1989), none of our respondents suggested having difficulties in hiring workers.

Another development is that, as farmers face delayed or declining incomes, more are spending time away from home on distant farm plots instead of outsourcing the labour and fewer are able to afford private school fees. There is already a potential gap between social classes in terms of the quality of education that children receive. As noted earlier, outgrowers aim for good-quality private education and make school fees the top priority for their cane payments. A local teacher explained that it is only the paddy farmers and smallest outgrowers who send their children to shule za kata (ward public secondary schools), which are perceived to be a lower standard. Furthermore, the problem of children being left home alone particularly affects paddy-farming households. It is an example of how commercial agriculture can exacerbate forces of social differentiation in rural society.

The remaining observable groups or classes of farmers in Msolwa Ujamaa and Sanje are the owners of medium-and large-scale sugarcane farms of 20 acres (8ha) or more. Outgrowers with over 20 acres are considered medium-scale and outgrowers with 50–100 acres (20–40ha) or more, large-scale. In Sanje, the biggest estates have existed for decades and therefore cannot be an example of land concentration subsequent to KSCL's privatisation in 1998. But in Msolwa Ujamaa and elsewhere, we heard of individuals acquiring land from poor villagers in recent years to create substantial farm holdings. Illovo data reveal that the number and acreage of medium and large outgrowers increased during the 2000s. Researchers visiting Kidatu and Mang'ula divisions in 2005 reported that:

Indigenous people ... are selling their land to migrants and are becoming poor and landless with limited resources to support their lives. Discussions

with focus groups noted that migrants own the majority of small and big investments in the areas. (Nyundo et al. 2006: 27)

Big landowners access loans and are given priority in harvesting schedules. It is reported that the owners of contracting firms often also own large sugarcane farms, and that having a large holding (50–100 acres) can be a condition for election as an association leader. This creates clear opportunity for elites to control the harvesting process and push for the interests of the larger outgrowers. Land-owning elites become linked in class relations with villagers by buying their land and labour-power and selling them tractor and contractor services. Farmers with over 20 acres under sugarcane comprise around ten percent of interviewees in both villages. They all became outgrowers during the 1990s, before privatisation, and include the chairmen of two cane grower associations.

In summary, there are visible power asymmetries and forces of social differentiation in outgrower villages which have been strengthened by the indirect consequences of KSCL's privatisation. While some local elites, wealthy in-comers and small-scale outgrowers have prospered, villagers who cannot afford to participate and the smallest outgrowers – many of whom began sugarcane farming after 1998 – find themselves in positions of vulnerability which have caused them to respond to recent financial shocks with actions that reduce their land endowments, lower their agricultural productivity and threaten negative impacts within the household in terms of food security and children's welfare.

Additional factors can affect an individual's ability to prosper within the rural economy in Kilombero. These include: illness; suitability of a farmer's soil to sugarcane, paddy and maize; social and kinship networks; gender and generational differences; and the supportiveness of associations and other institutions. For example, according to our sample Msolwa Ujamaa has more of the smallest farmers than Sanje. Perhaps its village farm provides mitigating benefits.

6. Conclusion

The growth of commercial sugarcane farming in the upper Kilombero Valley helped transform the area. Like the construction of the TAZARA railroad, the establishment of KSCL in 1960 attracted migrant workers and provided a new source of income. But by the mid-1990s, operations needed rehabilitation and sugar output was in decline. Since privatisation in 1998, local farmers have been motivated to grow more sugarcane: by the new owners, who needed to increase output, and by the national government, which had self-sufficiency targets. As the area under sugarcane has expanded, more farmers have been pulled into outgrowing by the rewards of a commercial income and pushed out of paddy and maize. The outgrowing scheme is relatively inclusive, allowing farmers to participate with just one

acre of rented land. This is partly due to the historical emphasis on smallholders in the area.

The income from sugarcane has improved living standards for some – individual outgrower households have better housing and education; well-off outgrowers have reinvested in businesses; some villages have benefited from the proceeds of collective farms. And, while staff numbers were reduced after privatisation and spillover effects in terms of technology transfer appear to be limited, there have been positive economic linkages through the growth of ancillary businesses and outgrowers hiring farm workers. Even small-scale outgrowers have been able to acquire farmland and fund other crops.

But there was inadequate planning for the inevitable pressure on land that would result from expansion of the area under sugarcane and the influx of workers and businesspeople. It is only now that village land-use planning and titling exercises are taking place. As a consequence, people have been driven to acquire farmland far away from their homes, with potentially negative effects on the children of poor families. The increasing economic scarcity of land has encouraged land concentration by elites and is stifling the ability of young, newcomer and poor members of society to acquire or increase land endowments. The proportion of mediumand large-scale outgrowers supplying KSCL increased in the years following privatisation. Some of those young, newcomer and poor members of society may have found employment elsewhere, but the company itself offers mostly low-paid, temporary jobs to workers from outside the area. In many ways, changes to the system since privatisation have accelerated forces of differentiation in rural society. Our research identified at least four agrarian social groups of medium-and large-scale landowners; small-scale capitalist farmers; smaller outgrowers with less than 3 acres (1.2 ha) of cane; and poor paddy and maize farmers.

There has also been insufficient protection for the small farmers who were encouraged to join the outgrowers' scheme. After privatisation, the company devolved many services to associations, a process supported by foreign donors. This devolution, in combination with the introduction of harvesting quotas in response to over-expansion, reduced centralised oversight and service provision while increasing scope for corruption. Association leaders, contractors and large outgrowers are often one and the same, creating vested interests within the system. Poor farmers are particularly vulnerable when the company decreases or delays payment because of cheap sugar imports.

Given that Tanzania's government is promoting new sugarcane developments involving smallholders through the SAGCOT and Big Results Now initiatives, the lack of consistency and accountability among officials with regard to sugar importation is alarming. Outgrowers with small harvests – and who cannot afford bribes, perhaps – are also least able to cope with the decline in sucrose

levels, which we have again attributed to expansion and the absence of oversight. The state, which we must not forget is a 25 percent stakeholder in the business, has failed to ensure transparency and independence in the weighing and measurement of cane. Access to extension and credit has fallen between the cracks between company, state and associations.

Farmers have responded in various ways: by forming breakaway associations, by experimenting with block farms, or by reducing household expenditure. Some are leaving sugarcane, although it is important to note that because of exit costs and the current problems in other crop markets, outgrowers can remain stuck in the system despite technically being able to withdraw from their contracts. Given the current trend of payment delays and market shocks, we may begin to see increasing numbers of struggling sugarcane and paddy farmers selling or renting out their land to others, and becoming landless. Should another mill be established in Kilombero to take the glut of cane? Should farmers be assisted in shifting out of cane and into other crops? Should more block farms be established as a means of protecting small outgrowers, despite the bureaucratic and financial problems reported during our fieldwork? These are questions for further exploration.

Outgrowing, and other forms of contract farming, have become popular as vehicles for agricultural investment. Drivers include the commercialisation of developing country agriculture, the expansion strategies of agribusiness and the political unacceptability of plantations in large-scale land deals (Oya 2012). Discussions and experiments have followed over what form contract farming should take and how to make it socially inclusive and manage contradictions within the model. These are a microcosm of broader debates about appropriate roles for states, the market, the private sector and producer organisations in the post-liberalisation era, as well as about the position for small-scale farmers within globalised farming systems. In many ways, the Kilombero case brings those debates alive. It illustrates both the potential benefits (increased access to credit, technology and markets) and shortfalls (poor wages, decreased land for other crops) of contract farming (Smalley 2013; Poulton et al. 2010; Key and Runsten 1999). Moves by donors (i.e. the EU, in this case) and the private sector (i.e. Illovo) to amend the model by incorporating outgrowers into block farms to create economies of scale and make their production more vertically coordinated suggests frustrations and/or challenges with contract farming as a supposedly win-win institutional arrangement. In an attempt to address the declining benefits of sugarcane farming in Kilombero Valley, this paper recommends a formulation of the policy, legal and institutional framework which would curb those challenges and shortfalls.

End Notes

- www.future-agricultures.org/research/land.
- The LACA project asks: (1) Can new land and agricultural commercialisation initiatives be used as opportunities to promote growth and reduce poverty and inequality in developing countries? If so, how? (2) What are the better and worse models? (3) Which sets of institutional arrangements between investors and local smallholders provide the best opportunities for benefit-sharing and for synergies between large and small farms? See www. future-agricultures.org/laca.
- Refers to Tanzanian estate owners of Indian or Asian descent.
- Sprenger (1989) notes that Asian- and Arab-Tanzanian estates such as the estate at Msolwa were viewed as overly capitalist by the government.
- Since 2006 the EU has provided financial compensation to several countries affected by EU sugar reforms, including Tanzania.
- This may be the Kilosa Development Corporation (Kilodeco) reported in Sprenger (1989), which had 400ha under cane in 1987.
- ⁷ The term 'devolved' comes from Dubb 2013.
- The Trust also funded community initiatives such as school facilities, health centres and water supply.
- 9 BP was involved as a supplier of fuel to Unitrans and the KSCL fleet.
- Our fieldwork found that outgrowers have moved to the area from a range of locations, but we did not find many who had arrived after 1999 (Appendix 1, Table e).
- Unlike other associations, Kilombero Cane Growers Association in Mkamba village requires that members own a plot of at least one acre (Nombo 2007).
- An extension officer said cane is best left to mature for 12–18 months after planting, but local farmers say only nine months are necessary.
- In 2011/12, some 185,883t of gap sugar was imported at zero percent tax. This large total was apparently permitted in response to heavy rains disrupting operations at the four Tanzanian companies, which produced a total of 262,879t by season's end, down from 304,135t in 2010/11 (SBT 2014).
- In additional to 'gap' sugar for domestic consumption, Tanzania imports a quota of industrial sugar each year. In July 2013, the East African Community approved a request by Tanzania to issue permits to 23 companies to import a total of

170,505t of industrial sugar at a reduced duty rate of ten percent.

- An official from MUCGA reported that the small associations have established the Council of Sugar Growers instead.
- Of these six, the authors name only Kitete and Kidogobasi, which are shown in Figure 3 of this working paper.
- ¹⁷ Also known as Lwipwa.

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Appendix 1. Tables

Service	Recipient of payment	Cost (TZS)*
Transport	Private contractor	6,290/t (up to 10km), 8,125/t (11–20km)**
Cane-cutting	Private contractor	6,293/t
Loading	Private contractor or association	3,577/t
Association membership fee	Association	433/t
Infrastructure – association	Association	400/t
Social service fund	Association	333/t
Infrastructure – outgrower area	K1 or K2 Joint Infrastructure fund	300/t
Farmers' group fee	Farmers' group	200/t
Cess or revenue tax	District council	120/t
Sundry association-related fees	Association	800-2,745/t**
Total		18,746-22,526/t

 $^{^{\}ast}$ An average of the 2013/14 costs for KCGA, MUCGA and SACGA members.

Table b. Typical own-account costs for KSCL outgrowers setting up in sugarcane, if using paid labour*			
Task	Cost (TZS)		
Ploughing	60,000/acre		
Harrowing over	50,000/acre		
Ridge	45,000/acre		
Seed cutting	40,000/acre		
Transporting seedcane (3 trips)	120,000/acre		
Planting	45,000/acre		
Fertiliser	140,000 for two sacks		
Application of fertiliser	Farmer may do it him/herself, or pay a worker: 5,000/acre for insecticide, 7,000/acre for fertiliser		
Weeding (x 2)	160,000/acre		
Constructing a firebreak	5,000/acre		
Total	> 665,000/acre		

^{*} Based on estimates from two MUCGA members.

^{**} KCGA provided additional figures of TZS 11,400/t (21–30km) and TZS 15,230/t (31–40km).

^{***} Examples: secondary school contribution, office repairs, machinery fee.

Table c. Instructions given to outgrowers in the Cane Supply Agreement			
Instruction	Where specified	Practical reality	
Area cultivated – must be no more or less than registered cane area	Clauses 5.1.1–2	Unknown if this is monitored	
Cane variety (instructions are minimal)	Clause 11	Unknown if/how this is enforced	
Cultivation practices (instructions are minimal)	Clauses 5.1.3 and 5.2.2	Farmers' cultivation practices are not closely monitored	
Minimum sucrose level	Clause 5.2.3.3	Cane may be accepted below this level	
Timing of delivery, including once cane is mature and within 5 days of burning	Clauses 5.2.3.4 and 6.1.1	Harvesting timing is unpredictable and disrupted by corruption and bad weather	
Means of delivery	Clause 5.2 and annexure A	Loading and transport facilities do not appear to be closely regulated or within farmers' control	

Table d. Sucro	se levels (in perc	ent) reported b	y respondents and	d stated in pay re	eceipts
	Respondent	Level of sucrose according to receipt	Level of sucrose reported by respondent	Previous level of sucrose according to receipt	Previous level of sucrose reported by respondent
Msolwa Ujamaa	#14		8		12 in 2013
	#15	10.13 in 2013; 8 [date unknown]		10.8 in October 2010	
	#16		As low as 6		
	#19		7–8		10
	#23		9		
	#25		You might get 5; some people are getting 0		
	#26		Some people are getting 0.5. Village farms get 10		
	#28		8–9		
	#29		6–7 is normal for people		Before privatisation, people got 9–11
	#66		8–9		11–12 in 2012/13 when sugar price was only TZS 30,000
	Pay receipt of a MUCGA member (individual)	8.41			
	Pay receipt of a MUCGA member (a church)	10.13			
Sanje	#34	9.49			
·	#35		7–9 (or 10 if you bribe)		Before privatisation, you could get 10–11
	#37		It can be 6–7		11–12
	#38 (elder man)		6–8		10–11 in the 1990s
	#38 (mother and son)	10.16			
	#39		5–8		
	#44		8–9		
	#45		7–8 (KCGA), 9–10 (SACGA)		
	#53		7		9–10

Village	Type of farmer	Year started as outgrower	Year moved to village	Where moved from
Msolwa Ujamaa	Outgrower	1972/3	Not stated, but in village in 1960s	?
		1998	1988	?
		2003	Not stated, but in village during ujamaa	?
		2005	1977	Iringa
		?	1979	?
		?	1997	K1 compound (nearby)
	Paddy and/or maize only	N/A	2006	Singida
Sanje Outgrower	Outgrower	1975	1952	?
		1984	1975	Kilosa
		1987	1983	Pwani
		1989	Born here	N/A
		2002	1985	Mang'ula (nearby)
		2003	1985	Morogoro
		2004	1988	Mbeya
		2006	1990s	?
		2007	Born here	Husband from Rukwa
		2007	Born here	N/A
		2008	1978	?
		2008/9	1985	Njombe
		2013	2013	Mbeya
	Paddy and/or maize only	2007 (withdrew in 2011)	1998	?
		N/A	1993	Mvomero
		N/A	1996	Mkamba (nearby)

Note: information available from only a small number of respondents.

Table f. Sucrose levels of KCGA cane, 2009–2012		
Year	Sucrose (%)	
2009	10.4	
2010	10.2	
2011	9.8	
2012	8.4	

Reproduced from Massimba et al. (2013:18), table 1.

Group or class	Village	n	% of total	When started as outgrower	Average cane holding (acres)	How acquired cane holding	Average paddy or maize holdings (acres)	How acquired paddy or maize holdings	Average total holdings (acres)	Income sources
Non-OG	MU	2	10%	N/A	N/A	N/A	>3.25	Rented and some family	>3.25	?
	Sanje	2	8.7%	N/A	N/A	N/A	1.75	Rented or unknown	1.75	Rabbits, sell food, casual wage work
OG, cane plot of 0–3 acres	MU	7	35%	2000–6, [2 unknown]	2.2	3 inherited, 2 granted, 1 unknown	5.5 (n=3) [others unknown]	Rented or purchased	>5 (n=6)	Driver, village office
	Sanje	10	44%	2004–2013 [3 unknown]	2.1	Mostly purchased, 1 family, 1 inherited; 2 unknown	3.7 (<i>n</i> =6) [3 unknown]	Mostly purchased, 2 family or rented; 2 unknown	4.9 (n=7)	Homebrew, weighbridge, sell milk, former cane-cutter
OG, cane plot of 4–9 acres	MU	8	40%	(1) 1972/3; (2) 1995, 1998; (4) 2005–2011/12 [1 unknown]	6	Mostly granted or purchased; 3 family, 4 unknown	4.4 (<i>n</i> =6), 1 none [1 unknown]	Mostly unknown, 3 purchased, 1 rented	>9.3	Sell vegetables, former watchwoman
	Sanje	6	26%	(1) 1975; (2) 1984-7; (3)2000–2004	5.6	Mostly granted or purchased, 1 cleared, 2 unknown	8.2 (<i>n</i> =5), 1 none	Mostly purchased, 1 rented, 2 cleared	12.75	Sell milk, sell food, small business, former cook, former teacher
OG, cane plot of 10–19 acres	MU	0	/	/	1	/	/	/	1	/
	Sanje	2	9%	2001, 2003	13	Unknown	4, other unknown	Rented	>16.5	Shop and milling machine, grocery
OG, 20+ acres	MU	2	10%	1992, 1998	20	Granted, Inherited and/or rented	?	?	?	Hospital
	Sanje	2	9%	1989, 1995	36.5	Purchased, partly inherited	30	Purchased or rented	66.5	Shop and hire out tractor

MU = Msolwa Ujamaa; OG = outgrower.

^{*}Total respondents: Msolwa Ujamaa, 20; Sanje, 23.

Appendix 2. Letter of termination

The following is a transcript of a letter sent en masse to KSCL workers in 2000.

KILOMBERO SUGAR COMPANY LIMITED

P.O. BOX [xxx] KIDATU

TANZANIA
TEL: [xxx]

10 July, 2000

WEBSITE: [xxx]

Ref. No. KSCL/06/PF/xxxx/2000

This letter is applicable to Mr/Mrs/Miss [xxx]

RE: TERMINATION OF EMPLOYMENT

Kilombero Sugar Company Limited (KSCL) has been directed by the Parastatal Sector Reform Commission (PSRC) in accordance with the Memorandum of Settlement Agreement dated 21st June 2000 agreed to by the Tanzanian Plantation Agricultural Workers Union (TPAWU) on your behalf; to terminate your employment effective from 6th July 2000. Payment in lieu of notice of termination of your employment in terms of section 31 and 32 of the Employment Ordinance effective from 6 July 2000 will be made.

Termination benefits have been agreed to in terms of the memorandum of settlement and will be payable as follows;

- 1. Payment provided for under statutes (statutory terminal benefits), which include one month's notice.
- 2. A golden handshake in the sum, which is equal to one month's salary per year for a maximum of ten years continuous services over and above the statutory terminal benefits.

Such payments will be made subject to the following conditions;

- a) There will be deducted from the gross amount payable all amounts owing by you to the company and all tax liabilities.
- b) Acceptance of per payment will constitute confirmation of the final settlement in connection with the Voluntary Agreement No. 4/95 on the basis set out in the Memorandum of Settlement.
- c) That the payments will be in full and final settlement of all claims of whatsoever nature that you may have against KSCL arising out of your employment and this termination.
- d) Unless you have been advised to the contrary, you and all persons in occupation are given 30 days from the date of this letter to vacate Company accommodation. The amount payable in one above shall be paid by the independent auditors Philip & Co., as soon as is practical and the amount payable on your leaving accommodation as set out above, in a clean and habitable condition.

Arrangements are being made for the independent auditors Philip & Co. who settled the gross amounts payable, to visit Kilombero as soon as possible in order to process the payments and you will be advised as soon as is done.

We thank you for your services to the company and wish you well in the future.								
Yours faithfully								

For KILOMBERO SUGAR COMPANY LIMITED

HUMAN RESOURCE MANAGER



This Working Paper was written by Rebecca Smalley, Emmanuel Sulle and Lameck Malale for the Future Agricultures Consortium and the Institute for Poverty, Land and Agrarian Studies (PLAAS) at the University of the Western Cape. The FAC Working Paper series publishes work in progress by FAC members. All papers are technical research papers which have been peer reviewed, and are available in open access format. The series editors are Paul Cox and Beatrice Ouma. Further information about this series of Working Papers at: www.future-agricultures.org

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