Contractual governance in agro-industry institutions in Tanzania
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Chapter 6
Kilombero Sugar Company Limited (KSCL)

6.1 Introduction

Kilombero Sugar Company Limited (KSCL) is a property of ILLOVO Sugar Limited (ISL), a South African company, which owns 55% of the shares. The Government of Tanzania still owns 25% of KSCL and ED&F Man Holding Limited, a company based in the United Kingdom owns 20% of KSCL. It is the largest sugar-processing company in Tanzania and it processes two types of sugar at two factories. These two factories are Msolwa (Kilombero 1, or K1) and Ruhembe factory (Kilombero 2, or K2) which started in 1962 and 1977 respectively. K1 produces brown sugar and K2 is the only factory in the country which produces refined white sugar. K1 and K2 contract members of Kilombero Cane Growers Association (KCGA) and Ruhembe Out-growers Association (ROA) respectively. The two factories started as government initiatives to involve smallholder farmers who collectively grew sugarcane in the Ujamaa farms. The Ujamaa farms started during the establishment of Ujamaa villages when the smallholder farmers came from different parts of the country and settled in the Kilombero valley in order to grow sugarcane. The Ujamaa farms were assigned to the Ujamaa villages. At that time, both factories were under government ownership. With the trade liberalisation policies the previously government owned companies were privatised. In 1998, both K1 and K2 were privatised.

This chapter explains the natural fertility of the Kilombero valley, the organisation of the SHFs and the contracting for sugarcane. Furthermore, it discusses the transportation contract and the governance of the sugar value chain. Finally, this chapter compares the efficiency of KSCL with MSEL.
6.2 The natural fertility of the Kilombero valley

The Kilombero valley is a flat bowl-like physical structure. It lies east of the Udzungwa Mountains and extends to the north and south of the Great Ruaha River in Kilosa District. The valley has warm climatic conditions, enough short and long rainfall seasons. The warm climatic conditions in the Kilombero valley are favorable for growing sugarcane. The short rainy season starts in November to December and the long rainy season starts in March to May. These rainy seasons provide excellent cane growing conditions in the areas at the base of the Udzungwa Mountains.

The rains affect the amount of sucrose levels in sugarcane, as explained in the MSEL case, but the Kilombero valley is much more fertile than the Turiani area. The bowl-like structure facilitates receiving alluvial soil in the valley. The water of the tributaries to the rivers in the valley runs from the volcanic soils of the Udzungwa Mountains and the Southern Highlands. The tributaries bring fertile alluvial soils to the valley during the rain seasons. They also facilitate irrigation. The major rivers running through Kilombero valley are the Kilombero River and the Great Ruaha River. The Great Ruaha River originates from a number of large and small streams at the Northern slopes of the Poroto and the Kipengele mountains, which are in the Southern Highlands. The river carries alluvial soil of the Usangu plain and several other rivers join it. The Kilombero River originates from the main tributaries of the Rufiji, Mpanga, and Kihanzi rivers. All rivers pass through Kilombero valley and ultimately join the Rufiji River. The Rufiji River pours its water into the Indian Ocean. In addition, Kilombero valley collects natural fertility from the wildlife in the untouched preserved land of the Udzungwa Game Reserves and the Mikumi National Park. The dung of wildlife, the protected fauna, and the remnants of dead animals fertilises the Kilombero valley as rainwater runs through the protected areas.

Although SHFs and the KSCL estate use fertilisers, the land is good enough to supply the nutrients for growing sugarcane. KSCL owns 13,000 hectares of land within the Kilombero valley of which 7,900 hectares are used to grow sugarcane in its estate.51

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51 These data are correct for the year 2008.
6.3 Economic organisation of SHFs in Kilombero valley

The SHFs’ out-growers organisation follows the historical, political, and social economic transformation of Tanzania. The out-growers associations at KSCL started in 1961 as farmers’ groups. These farmers’ groups transformed into Ujamaa settlements during the villagisation policies. These groups grew sugarcane for the government owned factories of KSCL. After privatisation, the Ujamaa collective model continued to organise the SHFs.

The organisation of SHFs follows KSCL’s factory locations. The headquarters and operations of KSCL are in the Kilombero valley, which is divided into two districts. KSCL owns two factories of which one is located in the Kilombero district (K1) and the other in the Kilosa district (K2), both in the Morogoro region. All SHFs’ farms are in the valley, but organised by two farmers associations. The farms of the SHFs who supply sugarcane to K1 belong to the Kilombero Cane Growers Association (KCGA) of the Kilombero district. Those who supply sugarcane to K2 grow sugarcane in the farms located in the Kilosa district and their organisation is the Ruhembe Out-growers Association (ROA).

Both associations are members of the umbrella organisation of Tanzania Sugar Growers Association (TSGA) and are regulated by the Sugar Industry Act 2001. Since both associations are bounded by a similar contract to KSCL, this case takes KCGA as the representative of both associations in the study.

KCGA

KCGA has 14 objectives as stated in the association’s constitution. All objectives are aimed at negotiating with KSCL on issues related to pricing, transportation, buying, and marketing farmers’ sugarcane. Other ones are to motivate farmers to plant sugarcane, receive credit services, and repay loans.

KCGA motivates farmers to join farmer community groups growing sugarcane. It is the role of the association to educate farmers on sugarcane farming, competitive farming, and environmental protection.

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52 The KCGA constitution, 2001.
KCGA organised members in the Ujamaa village system, but every individual member has his own sugarcane farm. The owners of the neighboring farms form groups. In 2008, members of KCGA were organised into 50 groups located in 11 villages. The community members in these villages register with KCGA in order to supply sugarcane to K1. KCGA has 4,200 members living in villages like Mkamba, Kidatu, Msolwa-Ujamaa, Msolwa station, Miwangani, Sanje, Mkula, Kamukila, Sonjo, Mangula, and Magereza. The members supply approximately 40 - 50% of all crushed sugarcane at K1. The Ruhembe Out-growers Association (ROA) has 1,989 members.

The constitution of KCGA defines the groups as voluntary sugarcane farmers, who engage in farming activities in the Kilombero valley. It defines membership and obligations. Membership depends on having an interest in sugarcane farming and supply sugarcane to KSCL. Obligations are to pay membership fees, attend meetings, and adhere to good farming practices. Each village in the districts elects five members to represent the village in the Executive Committee. Every member attends the Annual General Meeting every year. KCGA leaders complained that this annual meeting is very costly to organise.

6.4 Contracting for sugarcane

At KSCL, the contract is annually renewable, prior to the commencement of the harvesting season. ROA and KCGA may bring any issue that emerged in the preceding season to the table for discussion in the annual Review Date meeting (RD). The members of the two associations have the right to send proposals concerning the amendment of the contract prior to the RD. The renewed contract bounds the KCGA members as soon as the amendments have been incorporated in the contract. The contract is binding after it has been signed in the last RD meeting. A KSCL official observed that the 2008-contract includes more than 50 amendments, proposed over ten years. Still new proposals were on the table to be renegotiated in the RD of 2009.

Pricing of sugarcane (Clause 5)

Since the start of buying sugarcane from SHFs in 1962, the price of sugarcane was set to fluctuate with the sucrose level in the sugarcane supplied by the SHFs. KSCL offered prices according to the sucrose

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53 So, in 2008, both associations had 6,189 members together.
levels measured in the laboratory, similar to the procedure at MSEL. After contract renegotiations between 1999 and 2000, in 2001 KSCL, ROA and KCGA representatives agreed to fix the prices at a 9% level of sucrose. Given the fertility of the area, this sucrose level was thought to be achievable for every farmer, while it mitigated the variability in income for farmers. It was seen as a good incentive for smallholder farmers to grow more cane and as a solution to the measurement problem.

The Roles of the Operating Board (OB) (Clause 8)

The Operating Board (OB) governs the sugarcane supply chain of KSCL. The OB comprises of four representatives from KSCL and two representatives from each of the two associations, ROA and KCGA. Thus, the OB comprises of eight people who oversee harvesting activities. The OB is the liaison between KSCL and the two associations. It ensures that the SHFs comply with the Sugarcane Supply Agreement (SCSA) and the Sugar Industry Act 2001.\(^\text{54}\) The OB receives the estimate of sugarcane KSCL needs in that year for the factories (K1 and K2) in the crushing season (Msimu).\(^\text{55}\) After receiving this estimate, the OB calculates the operational tasks for the following harvesting season and assigns the sugarcane supply tasks to the two associations. The assignment specifies the amount of sugarcane to be supplied by each association to the respective factories per day, week, and month. The OB announces this assignment in the local newspapers in January of every year prior to the crushing season. In this announcement, the OB reminds the associations to reassign the quotas announced in the newspaper to individual farmers who are able to supply the sugarcane in the next season. The association leaders use the announced quotas to estimate and prepare the harvesting schedules. The leaders of the associations have to submit the estimates before 30 April (at 12:00 hours) prior to the opening of the crushing season. If they fail to do so, then the association in question might not be allowed to harvest its sugarcane in the coming season.

The SHFs start supplying the sugarcane at the end of the month of May of every year. On 15 May each year, KSCL submits an estimate of the following year’s Net Division Proceeds (NDP) that is to be consolidated in the overall yearly budget. These NDP is to be


\(^{55}\) Msimu is a term for the period in which the two factories crush sugarcane, mainly between April and November.
consolidated into the plan of ILLOVO International Company Limited (ISICL).

**Rejection of sugarcane (Clause 5)**

The contract empowers the OB to inspect sugarcane before it is weighted at the Weighing Bridge (WB) and to reject the cane that is not suitable for crushing. It also bestows power on the OB to reject sugarcane that is supplied with less than an 8% sucrose level. The contract prescribes that when the average sucrose level in the sugarcane falls below 8%, the OB needs to give notice to the factory management to find a solution.

**Fire insurance policy**

Unlike MSEL, KSCL no longer provides insurance against accidental fires. The clauses that gave such an insurance against accidental fires were removed from the contract. At KSCL, SHFs have been informed that the accidental fires are caused by malicious people or careless farmers who do not put firebreaks between one farm and another.\(^{56}\) ROA and KCGA members receive training on how to control fires. If a fire incident happens and the SHF is not in the schedule he needs to bear the costs himself.

**Pre-harvesting and sales proceeds**

Pre-harvesting field operations (i.e. good farming practices before harvesting takes place) are the responsibilities of an individual farmer. Kilombero Community Trust (KCT), established by the owners of KSCL in 2001, monitors and provides advice to SHFs on good farming practices from the time of planting to the harvesting. KSCL field officers check sugarcane quality just prior to harvesting. Transportation arrangements and associated costs are the responsibility of individual farmers. When a member of ROA or KCGA happens to appear in the schedule, he needs to make his own arrangement with ROA and KCGA leader to contact UNITRANS. He has to make sure that his sugarcane reaches the factory, is weighed, and then crushed. Although KSCL offers cane cutting services, the farmer has to pay the costs involved in cutting. The two associations have acquired their own

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\(^{56}\) This is according to George Mlingwa’s report (George Mlingwa is the Chairman of the Tanzania sugar Growers Association, which is the umbrella organisation of smallholder farmers in the sugar industry). This report was presented at the World Association of Beet and Sugarcane Growers.
sugarcane loaders, which the members can hire and pay a rental fee to their associations. KSCL pays 90% of the sales proceeds at the moment the farmer delivers his sugarcane at the factory. The remaining 10% is paid in May; the next year after the company has sold and exported the sugar of the previous season. In May the overall sugar sales of ISICL have been audited.

**Credit and services**

KSCL has delegated the activities of offering credit and services to the Kilombero Community Trust (KCT). KCT helps the farming community to obtain loans, for not only sugarcane development but also other crops. KCT provides the loan services via KCGA and ROA. Furthermore, it offers training services, e.g. for entrepreneurship development. KCT carries out developing programs in the community such as supporting and building schools, health services provision, building primary courts houses and providing electricity for the community.

The owners of KSCL have endowed KCT with estate farmland to plant sugarcane. Eighty percent (80%) of the proceeds of the harvest of this farmland is used for funding its loan operations and its extension services. Twenty percent (20%) is used for the development of the local community. Provision of such services has attracted many donor agents to donate funds for the community development in the Kilombero valley.

During the focus group interviews, the leaders of the two associations were positive about what KCT does for the community. However, the SHFs who participated were less positive about the way these services were provided. They were confused by the way, in which the KCT has taken up the name of “community” in its own name, while the community itself was not involved. They would like to get involved as it was before privatisation when they were working in the Ujamaa communities.

Furthermore, the role of KCT is not clear to the majority of the participants whose interest it is to sell sugarcane to the factories. In their view, KCT uses scarce production capacity, which might be used to crush the KCGA and ROA members’ sugarcane. The SHFs could crush less as part of the quota was assigned to KCT as KSCL regarded KCT as part of the community.\(^{57}\) According to the participants, in 2008

\(^{57}\) The production of KCT is included in the quota for the associations.
only 50% of the SHFs were able to sell their sugarcane to KSCL. The participants said that because of the problems of not being able to sell sugarcane as before, many SHFs are now shifting to growing rice and maize instead. Rice and maize farming are booming nowadays.

**Logistics and opportunistic drivers**

When KSCL was privatised in 1998, there were not enough trucks available to haul sugarcane in the fields. KSCL contracted private drivers and private trucks to expand transport capacity.

To speed up the haulage and transport of sugarcane from the SHFs’ farms and from the estate farms, KSCL automated the Weighing Bridge (WB). Trucks passing through the entrance gates of the WB are now automatically weighed and the information is automatically recorded in a computer system. The owner of a truck was paid according to the tons of cane the trucks hauled and this was related to the capacity of the truck. The driver received payment based on the tons he delivered according to the records of the computerised automatic WB.

This automation turned out to create a new problem of cheating truck drivers. The drivers wanted to maximise weights. With this set-up, drivers hauled sugarcane, but packed sacks of sand or heavy iron bars first in order to increase the weight of the truck. Some drivers drove around with a truck full of sand or iron bars. They conspired with the guards at the rear gates, which were not automatically operated. After off-loading sugarcane, or sometimes even pretending to off-load sugarcane, a truck driver then went out through the rear gates, either to re-enter the WB with the same load, or to return to the fields to haul new sugarcane.

When KSCL discovered these tricks, it terminated the contracts with the private truck drivers, and fired some of its own employed drivers. Many of KSCL’s own trucks were already damaged because of carrying too heavy loads throughout the sugarcane-harvesting season. KSCL then contracted UNITRANS Company Limited (UNITRANS) in 2001 to deal with all motor vehicles at KSCL. UNITRANS, on its turn, contracts private drivers.

UNITRANS registers trucks, which have a capacity of six tons in order to prevent extreme wear and tear of the roads and to monitor the drivers. Trucks with a higher capacity than six tons are required to partition the body into two sections. During the harvesting season, the
owner may use only one of the sections. The trucks are inspected for roadworthiness every two months throughout the harvesting season, and also to check whether drivers rig the system again. If there is any damage of the Weighing Bridge due to poor driving, UNITRANS and the owner(s) of the trucks have to compensate the damage. Failure to pay for the damage might lead to termination of the contract. In addition, the contract requires UNITRANS to keep the approved trucks on the KSCL’s premises during the harvesting season.

6.5 Coping with overproduction

Figure 13 below shows the sugarcane production trend from the SHFs and the estate. The topmost line shows the sugarcane supplied from KSCL’s own estate.58

*Figure 13 Production of sugarcane of ROA and KCGA, 1992-2008*

The other line represents the sugarcane supply from ROA and KCGA members. Until 1992, the factories were not running at full capacity and the SHFs supplied less sugarcane to the factory than the estate did. The participants in the group discussion revealed that between the 1980s and 1990s only very few farmers were attracted to KSCL,

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58 Each factory (K1 and K2) has a separate estate, but both are under the same ownership and management.
because of non-attractive prices and transportation problems. The ROA and KCGA members shifted from planting sugarcane towards rice and maize farming. Others abandoned farming and migrated to the cities to find other employment. Furthermore, between 1995 and 1998, K2 was closed down due to a lack of spare parts. This also forced SHFs to quit sugarcane farming in Kilombero valley. Figure 13 shows that between 1995 and 1998 production dwindled.

After privatisation in 1998, the new KSCL owners rehabilitated the K2 factory. This increased the demand for sugarcane supply in the valley. KSCL offered incentives to farmers to resume sugarcane farming. These incentives were such as offering low interest rate loans for buying farm inputs, clearing the roads for easy transportation of sugarcane, building health centres for sick farmers, offering primary school materials, and advice on good farming practices. With an influx of farmers into the valley from 1999 onward, more sugarcane was planted and harvested every year. The members of the two associations were able to sell all sugarcane they were able to supply. Figure 13 shows that from 1998 to 2005 sugarcane supply increased dramatically.

From 1999, when the rehabilitation of K2 was done, ROA members could sell all their sugarcane to the K2 factory again. Figure 13 shows an increase of sugarcane supply to KSCL from the associations’ members. In addition to that, the 2002 negotiation fixed the sucrose levels at 9%, which motivated the SHFs to produce even more sugarcane. Figure 13 shows the increased sugarcane supply starting from 2003 onwards. In 2005, KSCL capped the amount of sugarcane SHFs could deliver to the factory in order to stop the increase in production. To comply with the cap, the associations were forced to set up a harvesting schedule in which not every member could be taken up.\footnote{Due to floods in the valley, especially hindering the harvesting in the estate in 2006, SHFs were able to supply more sugarcane than the cap initially allowed.}

From the year 2005, ROA and KCGA leaders set up a schedule in which the sugarcane of whole villages is harvested instead of a schedule in which small amounts of sugarcane of every farmer in the whole valley are harvested. The leaders thus had to prioritise members in order to give every member a chance to sell his sugarcane. To adhere to the assigned quota, different members could sell only in different seasons. For example, a member might have sold in the crushing season of 2006, but not in 2007 or 2008, depending on the allocated quota. Those farmers who were not included to sell their
sugarcane had to cut down their cane in order to preserve the plant for next year’s harvest.

This assignment of the rights to sell generates another problem. During the focus group interviews, participants complained that they were treated unequally as they thought that some of the members bribed ROA and KCGA leaders in order to be taken up in the harvesting schedule. The participants alleged that their leaders conspired with the OB to manipulate the schedule. This manipulation favoured those members who could bribe. The participants claimed that when such manipulation happened, their leaders and the OB could not write the names of favoured SHFs in the schedule. However, they could secretly allow them to harvest regardless of the harvesting schedule and sell. The participants claimed that this happened because of the time-lag between planting and harvesting.

All farmers start planting sugarcane in the long rainy season of January to May with the expectation to sell in the following year in the month of May. KSCL releases harvesting quotas usually in January of the following year, while the sugarcane has then already matured. The RD (review date) meeting, which amends the contract and approves the schedule, takes place in April. Farmers thus get to know the harvesting schedule only in April of the year, while the sugarcane is waiting to be harvested. The SHFs, who are not in taken up in the schedule, need to cut their sugarcane and let it rot. Failure to sell the sugarcane in the season means losses to the farmer, because unharvested sugarcane sprouts and becomes unsuitable for crushing as it loses sugar to feed the sprouting stem.

In the group discussion, participants expressed their outrage that some farmers could harvest every year, while their names were not even scheduled. Meanwhile others whose names were listed in the schedule were skipped. This gave rise to the allegation of bribery. The association leaders pointed out that these allegations were likely to come up, as not all members whose names appeared in the schedule could actually harvest as by the time of harvesting their sugarcane had already sprouted, or was physically unsuitable for harvesting. Inspection of farms by extension officers prior to harvesting might result into the removal of the name of the farmer of the schedule by the OB. The OB had the right to remove them out of the schedule simply because their sugarcane was not good for harvesting. This created a supply gap in the schedule that needed to be filled. New ones that did not originally appear in the schedule might then take that place.
The participants explained how it had been good for them to receive fertilisers and farm inputs from KCT, but they were outraged because they could not sell their sugarcane every year to KSCL. As SHFs received subsidised fertilisers every year, they could divert it to grow maize and rice. The SHFs participants stated that with the sucrose level fixed at 9% it did not matter if one applied fertilisers to grow sugarcane or not. The participants said that the “unfair” assignment of rights to sell stimulated the culture of not using fertilisers in the sugarcane farms. The fertilisers were used to grow rice and maize instead.

6.6 Comparing the efficiency of KSCL and MSEL

As explained in chapter five and in this chapter, both KSCL and MSEL strive to maximise the sucrose level contained in the sugarcane crushed at the three factories. The sugar production of the two companies since 1992 to 2008 can be compared in order to assess their relative efficiency. Regressing the amount of sugarcane against the sugar produced in the same year, compares the efficiency between MSEL and KSCL in relation to the tons of sugar produced per tons of sugarcane crushed per year. The outcome of the regressions is presented in two figures. With the aid of two figures, one can assess the relative efficiency of the two factories. Note that this also compares the farming efforts by SHFs as these partly drive sucrose levels in sugarcane.

Together with the farming efforts of SHFs, the monitoring system and the valley’s natural endowment, KSCL is a more efficient sugar producer than MSEL based on sugar produced by the two companies.

Figure 14 below shows the relation between sugar produced and sugarcane crushed for MSEL and KSCL respectively. The left hand side of figure 14 shows that one ton of sugarcane crushed at MSEL, gets 0.086 tons of sugar over the past 16 years. At KSCL, one ton of sugarcane crushed delivers 0.105 tons of sugar.

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60 Depending on the actual amount of sugarcane harvested in a year, the harvesting cycle might be less or more than two years for an individual farmer. Due to the increasing number of members in the valley and the corresponding increasing in sugarcane, it might take more than two years for the associations to prepare a schedule which includes all members.
Table 2 provides additional descriptive statistics on the sugar yields of the two companies. The table shows that before privatisation (1992-1998) KSCL and MSEL realised a sugar yield of respectively 8.5% and 8.3%. This shows that KSCL was on average only slightly more efficient than MSEL in the period 1992 to 1998, even though the land in Kilombero valley is more fertile than in Turiani. After 1998, the Tanzanian government privatised the sugar processing facilities. In the period after transformation from Ujamaa to private ownership (1999 to 2002), both companies contracted SHFs on sucrose levels. Both companies increased their yields, with KSCL reaching a much higher
yield level than MSEL, 10.3% versus 9.0% respectively. In 2002, Kilombero changed its policy, which allowed farmers to sell their sugarcane at a fixed sucrose level of 9.0% regardless of the exact sucrose levels in the sugarcane the farmers supply.

At the same time, KSCL increased the monitoring of the quality of the sugarcane that was to be supplied in the farm and at the entrance gate before crushing. This change has further increased KSCL’s efficiency by 0.7% on average. Although the period on which data is available, is still relatively short, it seems safe to conclude that KSCL is able to produce at a higher efficiency; it crushes more cane with a higher sucrose content thus yielding more sugar.

6.7 Summary

The chapter describes the Kilombero Sugar Company Limited (KSCL), the largest sugar producing company in Tanzania. Unlike MSEL, which is discussed in the previous chapter, KSCL contracts sugarcane delivery while MSEL contracts sugar content in the cane delivered by SHFs. Therefore, at KSCL, the more sugarcane the SHF delivers, the higher the sales income he receives. As discussed earlier in Chapter 5, prices are, next to the amount of sugarcane, depending on the quality of sugarcane in terms of sucrose levels the SHF delivers.

The chapter also compares the efficiency of the two factories. It is shown that both cases had similar sugar yields during the Ujamaa period. However, after privatisation KSCL seemed to be able to operate more efficiently than MSEL partly because of more fertile land. Furthermore, at MSEL, SHFs used fertiliser to grow sugarcane, while at KSCL farmers’ diverted fertiliser to rice and maize farming. Still sugar yields are higher in Kilombero due to its geographical location. The effect of the contractual change in 2002 to a fixing of the sucrose level in Kilombero, together with the monitoring of the sugarcane prior to crushing has lifted sugar yields at KSCL. The other side of the coin is that this policy led to opportunistic use of fertiliser and created mistrust especially among farmers that are not yet fully experienced sugarcane growers.