Reforming the Smallholder Coffee Sector in Malawi: A Case Study of Smallholder Commercialisation

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Table of Contents

List of Tables

List of Figures

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Abbreviations

ADMARC	Agricultural Development and Marketing Corporation
EU	European Union
MZCPCU	Mzuzu Coffee Planters Cooperative Union
SCA	Smallholder Coffee Authority
SCU	Savings and Credit Union
SCFT	Smallholder Coffee Farmers Trust
SSA	Smallholder Sugar Authority
STA	Smallholder Tea Authority

1. Introduction

Coffee is one of the perennial crops in which the government established smallholder crop authorities – quasi commercial parastatals with responsibility over promotion of smallholder production of commercial crops. History shows that coffee is one of the earliest export crops to be grown by European planters, with the first plant brought in 1878 (Mulwafu, 2004). The participation of smallholder farmers in coffee production dates back to the colonial period in the early 1920s. Mulwafu (2004) notes both Africans and a few European settlers hard started growing coffee by 1926, but major interests in coffee among the smallholder farmers flourished in the 1950s in which smallholder farmers in the Misuku Hills were supplied with coffee seedlings by the government. This led to the establishment of the smallholder coffee association in Misuku to coordinate the development of smallholder coffee sector and later in 1957 the Misuku Coffee Growers Cooperative Society was established to take charge of buying coffee from smallholder farmers and selling it to interested buyers.[4]

Coffee in Malawi is grown in Chitipa, Rumphi, Mzimba and Nkhata-Bay in northern region; Dedza and Ntchisi in central region and Zomba, Thyolo and Mulanje in southern region. The coffee sector is organized under the Coffee Association of Malawi (CAML) consisting of the estate sector and smallholder sector. There are a few large-scale commercial growers where coffee is cultivated on estate land and the smallholder sector where coffee is cultivated on customary land. The coffee in the Northern and Central regions of Malawi is mainly grown by smallholder farmers while in Southern Malawi coffee is grown by commercial farmers on estates (Mulwafu, 2004). Relative to the main export crops such as tobacco, sugar and tea, the coffee sector is small. Tobacco, sugar and tea in total account for more than 75 percent of export earnings while coffee only accounts for nearly 2 percent, although over the years its share of export earnings has increased. The contribution of the coffee sector to foreign exchange earnings has not been consistent. In the early 1980s, coffee only accounted for 0.7 percent of export earnings, but the share increased to 3.4 percent in the late 1980s but declined to 2.7 percent in the late 1990s and down to 0.8 percent between 2000 and 2005. The maximum production level of coffee in Malawi is 8,160 tonnes registered in 1992, but it has consistently fallen to 1,500 tonnes by 2005. However, smallholder farmers have increased their production share from 2.6 percent in 1999 to 15.7 percent in 2005. In fact, in terms of volume of production, smallholder coffee production has been increasing at an average rate of 23.4 percent per annum.

The smallholder coffee sector, like the smallholder sugar and tea sectors have undergone reforms under the privatisation process in Malawi. The main objective of the reforms in the state-run crop authorities was to improving the performance of the smallholder sector – in terms of the expansion of the sector and the livelihoods of smallholder farmers. Nonetheless, the nature of reforms has varied and have resulted in different successes outcomes. Earlier studies in the smallholder tea and sugar sectors revealed that although the sectors experienced similar problems of parastatals management, the institutional changes that have taken place have yielded different results. For the tea industry, the reform agenda implemented by the Privatisation Commission has been resisted by smallholder farmers, with farmers opting for collaboration with commercial estate farmers for production and marketing services (Chirwa and Kydd, 2005). This resistance has resulted in the collapse of the smallholder tea processing factory. On the other hand, although reforms were successfully implemented by the

[4] Mulwafu (2004) provides a detailed historical analysis of smallholder coffee development in the Misuku Hills in Chitipa district.

Privatisation Commission in the sugar sector, Chirwa et al (2006) find that the reforms have not benefited the smallholder farmers in terms of improving their livelihoods.

The smallholder coffee sector is another sector that has undergone reforms under the auspices of the Privatisation Commission. There is anecdotal evidence that reforms in the smallholder coffee sector have empowered smallholder farmers to run their own affairs and have therefore generated commercial orientation of farmers. The objective of the study in the smallholder coffee sector is to understand the nature of institutional and organisational changes that have taken place in the sector and the impact of these changes on the livelihoods of smallholder farmers. Using the case studies in tea (Chirwa and Kydd, 2005) and sugar (Chirwa et al, 2006), the study of the coffee sector enables a comparative analysis which could generate lessons on reforms that are pro-smallholder farmer development.

The study is organised as follows. The next section will briefly outline the methodology used in the study of the smallholder coffee sector. Section 3 presents an overview of the reforms in the smallholder coffee sector. Section 4 analyses the characteristics of the coffee sector and the performance of the smallholder coffee sector. Section 5 presents a comparative analysis of the nature of reforms in the coffee, tea and sugar smallholder sectors. Section 6 presents lessons on how to successfully integrate smallholder farmers in high value cash crops.

2. Methodology

The study uses both qualitative and quantitative research methods. The quantitative research method involved interviewing smallholder coffee farmers through a questionnaire. Since reforms involve processes and institutional changes, the quantitative approach is complemented with the qualitative approach which involved focus group discussions with smallholder coffee growers, key informants' interviews with the executive members of farmer associations, technical field officers and managers of the cooperative union.

The smallholder sector is concentrated in the northern region in the districts of Chitipa, Rumphi, Mzimba and Nkhata-Bay. The sector has about 3,200 smallholder farmers, most in Misuku Hills of Chitipa. The farmers are organised under five geographically distinct cooperatives: Misuku Cooperative, Phoka Cooperative, Viphya North Cooperative, Mzimba South East Cooperative and Nkhata-Bay Cooperative. The Phoka and Nkhata-Bay Cooperatives were purposively selected for the study – with Phoka being more successful while Nkhata-Bay as mainly a new expansion area. With respect to the quantitative survey, a sample of 100 smallholder farmers randomly selected from the register of farmers (based on interval sampling) from each cooperative. This resulted in a total sample of 200 smallholder coffee farmers, with 98 farmers from Phoka Cooperative and 102 farmers from Nkhata-Bay Cooperative. With respect to qualitative research, four focus group interviews were conducted, two in each cooperative (one with women farmers and the other with male farmers). The participants to focus group discussions included mostly farmers that have had the experience of selling coffee at least for one season and those farmers that have been through the reform process.[5] Key informant interviews were also held with leaders of farmer clubs known as business centres, the marketing association known as the business zone, the local cooperatives and the officials of the Union of Cooperatives.

[5] This criterion was important in order to understand the whole farming system in coffee and the process of reforms and how the reforms have affected the various categories of smallholder farmers.

3. Overview of the Smallholder Coffee Sector and the Reform Process

3.1 Smallholder Sector under Smallholder Coffee Authority

Farmer organisations in the coffee sector in Malawi have been in existence before Independence in 1964.[6] After Independence, the government created special crop authorities as quasi-commercial parastatals responsible for the development of the smallholder sector in cash crops that were mainly cultivated by Europeans or foreign investors on estates. These crop authorities were created in tobacco, tea, sugar and coffee. In the colonial period smallholder coffee farmers were organized around cooperatives – the first being the Ntchenachena Coffee Growers Cooperative Society in Rumphi created in 1950 and the Misuku Coffee Growers Cooperative Society in Chitipa (Mulwafu, 2004). According to key informants, after Independence the cooperatives established during the colonial era were dissolved. The Agricultural Development and Marketing Corporation (ADMARC) took over the activities of cooperatives. The smallholder coffee sector was organized under the Smallholder Coffee Authority (SCA) in 1971. The SCA was under the Ministry of Agriculture and provided extension services, input loans and marketing services to smallholder farmers in northern Malawi. SCA provided initial processing factories in different zones and owned a processing plant in Mzuzu.

The performance of the SCA was poor throughout the 1970s and 1980s. For example, between 1979 and 1988, profits were only registered in 1985 and 1986 despite the fact that revenues from coffee sales were increasing during the period (NSO, 1988). The performance of the SCA was similar to the performance of the Smallholder Tea Authority (STA). The problems of overstaffing, conflicts of commercial and social objectives, gross mismanagement of parastatals that were also evident in the STA (Lawson and Kaluwa, 1996) also prevailed in the SCA. With structural adjustment programs, there was less support towards subsidizing commercial parastatals. As a result many accumulated debts which they could not service but which were guaranteed by the government,. The SCA accumulated debts mounting to MK40 million by 1999. According to the New Agriculturist (2004), under the SCA growers were paid between 20 – 30 percent of the sale price, while SCA retained 70 – 80 percent to cover overheads. Interviews with farmers and key informants in the study reveal that many farmers did not find coffee farming profitable and had abandoned coffee farming to the extent of uprooting the coffee trees. Mulwafu (2004) argues that there was very little profit incentives for growing coffee in Misuku Hills, but farmers grew it because it was the crop that grew well in the area.

3.2 The Reform Process and Organisational Arrangements

The reforms in the parastatals sector occurred within the context of structural adjustment programs under the policy of commercialisation and privatisation of state-owned enterprises. Although the restructuring and commercialisation of state-owned enterprises started in the late 1980s, a systematic programme of privatization was not launched until 1996, following the publication of the National Privatization Policy in 1995 and the Public Enterprises (Privatization) Act of 1996. This led to the development of a Divestiture Sequence Plan which was approved by the Government in 1997. The SCA was the 25th enterprise in the Divestiture Plan and reforms started in 1998. The SCA continued to operate as a loss making enterprises,

[6] See Mulwafu (2004) for a historical account of the development of the smallholder coffee associations in the northern region of Malawi.

it was failing to pay farmers and as a result many farmers abandoned coffee farming. In 1997, the Ministry of Agriculture assigned an officer, who is the current Chief Executive Officer of Mzuzu Coffee, to implement the reform in the coffee sector.[7] In 1998, the Government through the Privatisation Commission contracted a consultant to consult with smallholder farmers on how to reorganise the smallholder sector and whether they could manage to run the affairs on their own. There were two options available to the farmers – to reorganize themselves as cooperatives or have a transitional arrangement in form of a Trust. Farmers opted for a Trust as a transitional arrangement with the ultimate objective of transforming to a cooperative. This led to the creation of the Smallholder Coffee Farmers Trust (SCFT) that took over the activities of SCA. In contrast to the Trust arrangements in Smallholder Sugar Authority (SSA) and STA, all the Trustees in the SCFT were member farmers.[8] It is evident in the case of the smallholder coffee sector that reforms empowered the smallholder farmers to manage their own business. One of the issues that led to unsuccessful reforms in the smallholder tea sector was the fact that smallholder farmers rejected the idea of being controlled by a board dominated by people who had very little interest in tea production.

The Smallholder Coffee Farmers Trust, as a transitional arrangement has operated between 1999 and 2006 with the objective of building the capacity of smallholder farmers, revitalizing coffee development and initiating a crop diversification program. During this transitional arrangement several reforms have taken place. First, farmers held shares in the Trust and farmers themselves have been making decisions on the future direction of the business. Second, with the assistance from the European Union under STABEX, smallholder farmers embarked on a programme of coffee replanting. The coffee output initially remained low because farmers were replanting with late maturing varieties (five years). Many farmers were not in favour of such varieties, and coupled with low coffee prices, this led some to abandon coffee farming. The Trust introduced a new variety, Catimor, which takes three years to start bearing coffee fruits. Third, smallholder coffee farmers organized themselves into business centres (similar to a farmer club) with 10 to 30 people, with a business zone and association at Extension Planning Area (EPA) level. The coffee associations also run a farmer-based Savings and Credit Union under the microfinance program introduced in 2003. The coffee associations were advised by the SCFT. In addition, the SCFT provided transportation of coffee from the associations to the factory, processing services, and marketing of coffee to international and local buyers and bulk procurement of inputs, all at a cost of 30 percent of sales proceeds. The business zones provide extension services to the farmers through volunteer farmers known as contact farmers who have undergone training in coffee farming. Business zones provide marketing and processing services including input procurement for farmers. Each business zone has a factory (pulperies) for primary processing of cherries. In locations where motorized pulperies are not provided, hand pulperies are used by farmers. The association provides extension services through building the capacity of contact farmers, provides input loans, and trains farmers in business management and farm management. At each association there is a Technical Advisor who provides business training and extension services.

[7] The officer had just returned from training on cooperatives in Japan and initially refused stating that he 'couldn't revive a dead thing', but prepared a concept note on how to reform the sector. The Ministry of Agriculture sold the idea to the EU who liked it on condition that the person who wrote the concept note had to implement the reforms.

[8] In contrast SSA and STA the membership to the Trust are dominated by outsiders, with only two farmers represented out of seven trustees (Chirwa and Kydd, 2005; Chirwa et al., 2006).

Fourth, substantial labour restructuring has taken place, so that a staffing level of more than 150 staff in the SCA fell to 16 staff members in the Trust, although staff levels have since increased to 65 (in 2007). The operations of the factory have become more efficient. Fifth, the organisation restructuring of SCA entailed extensive training of smallholder farmers, including re-orienting them to business management of coffee farming, the operations of a cooperative and training in farm management including nursery management. Finally, the Board and Management ensured high standards of corporate management and transparency to the general membership. This instituted confidence among the farmers on the reforms. For instance, the discussion of the prices at which the association or cooperatives buy coffee from farmers start at the business zone level to the cooperative and the Union, with growers being represented at the final decision reached at the Union level.

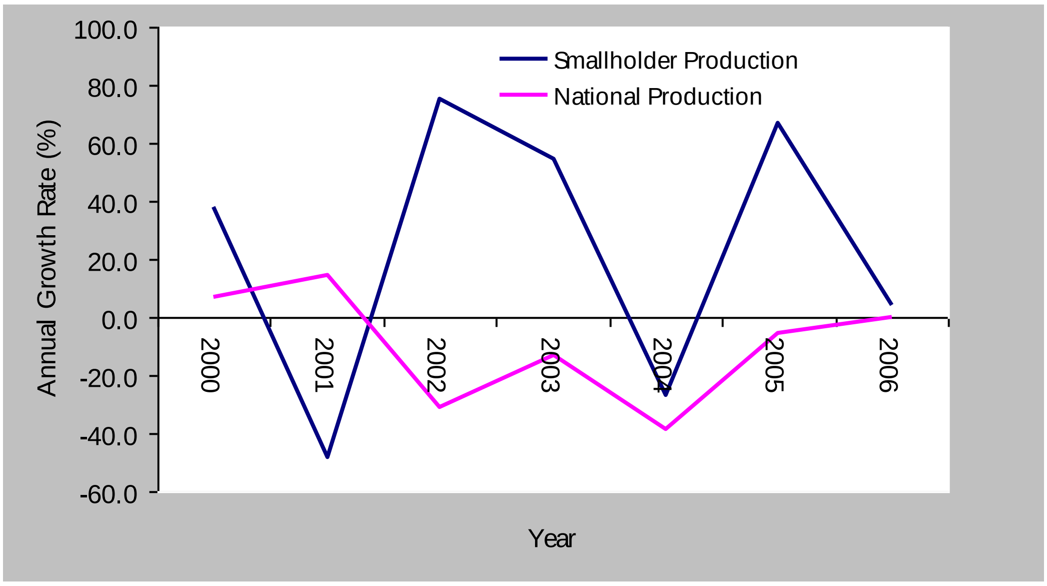
In April 2007, the SCFT which had lower level structures of associations, business zones and business centre was transformed into a cooperative following a consultative process between the Government and coffee growers. The SCFT registered as Mzuzu Coffee Planters Cooperative Union (MZCPCU) with geographic associations under the SCFT registering as cooperatives. This development implies that MZCPCU is an apex organisation of 5 primary Coffee Cooperatives of Misuku, Phoka, Viphya North, South East Mzimba and Nkhata-Bay Highlands. The business zones and business centres were maintained as lower structures of the primary cooperatives. Under the cooperative framework smallholder farmers own cooperatives through purchase of shares currently sold at MK1 000 per share. With this transformation, the primary cooperatives are responsible for employment and payment of cooperative staff. The operational costs are funded by management fees on farmers' proceeds at 30 percent of which 20 percent goes to the cooperative and 10 percent to the Union.

3.3 Impact of Reforms in Smallholder Coffee

The reforms in the smallholder coffee sector have been pro-smallholder farmer through the consultation processes that took on board the views of the farmers. According to MZCPCU (2007) the transitional period under the SCFT has witnessed remarkable progress due to 'farmers' commitment, financial support from EU Stabex programme, Government support for the industry, and prudent governance and management of the Board and Management'. The reform program has generally had positive impact on smallholder growers and the smallholder coffee sector. First, the SCFT has been able to repay the MK40 million debt that it inherited from the SCA in 1999. The farmer-managed SCFT therefore turned a bankrupt SCA into a viable farmer organisation that is growing. Second, smallholder farmers have become more organized and more commercially oriented through capacity building training and the leadership of transparent management of the Trust. Smallholder coffee farmers have also diversified into other commercial activities such as bee-keeping and sell honey.

Third, the production of coffee by the smallholder farmers has increased from 95 metric tonnes of green beans in 1999 to 235 tonnes in 2006, with projections of 846 tonnes by 2011. The target for 2020 is 3,713 tonnes of green beans (MZCPCU, 2007). The share of smallholder coffee in coffee production has increased from 2 percent to 15 percent in 2006. Smallholder coffee traded as Mzuzu Coffee has gained international and local recognition as a brand. Figure 1 shows the growth rates in total coffee and smallholder production. On average smallholder coffee production has been increasing at 23.4 percent per annum compared to a decline of 9.6 percent per annum in estate production. During the transitional period of the SCFT, the peak growth rates in smallholder coffee production occurred in 2002 and 2005. The drop in smallholder production in 2001 and 2004 can be attributed to poor weather conditions experienced in the country, and good weather also explains the very high growth rates in years immediately following these bad years. .

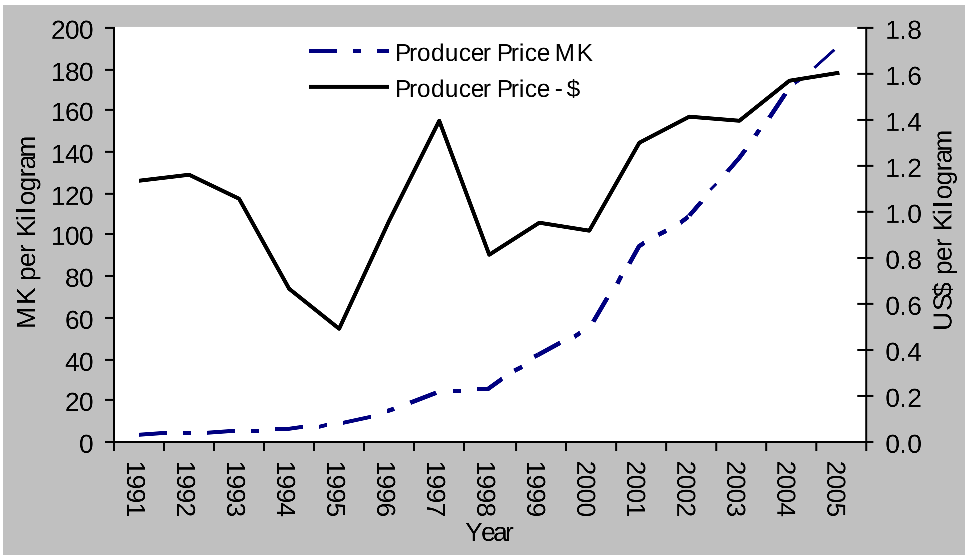
Figure 1 Growth Rates in the Production of Coffee, 2000 - 2006



Source: FAOSTAT database (2007) and MZCPCU(2007).

Fifth, farmers' returns from coffee have substantially increased from 20 – 30 percent of the price to 70 percent of the price, with the SCFT only retaining 30 percent for services rendered to the associations. In focus group discussions and key informants interviews, farmers talk positively about the progress that they have made during the reform period compared to how the situation was under the SCA. Some coffee lots have achieved a price premium up to 47 percent and it is reported that in 2004 growers received MK120 per kilogram for their coffee (MZCPCU, 2007). In the 2007 season, smallholder farmers are paid MK32 per kilogram for cherries. The price of parchment increased from MK45 per kilogram in 2002 to MK160 in 2006 and MK165 in 2007. The farmers get a rebate should their coffee fetch a higher price.

Figure 2 Trends in Producer Price of Coffee



Source: FOASTAT database, 2007

Sixth, coffee farm management has improved substantially from smallholder farms that were poorly managed with unplanted patches to well managed coffee filled due to support by a replanting program (Figure 3). The number of coffee trees planted per year increased from 255 000 in 1999 to 1.4 million trees in 2006. This has been possible due to better access to extension services at local level through developing capacity of contact farmers at the business centre level.

Figure 3 Smallholder Coffee Farms under Different Management System

Coffee field under SCA management

Coffee field under SCFT management

Source: MZCPCU (2007)

Seventh, through the creation of the Savings and Credit Union, which currently has a capital base of MK58 million comprising 40 percent member contribution through equity and savings and 60 percent capital grant from the EU, the SCFT has eased the credit constraints experienced by smallholder coffee farmers. Smallholder coffee farmers have access to input loans at business zone level. The business zones through the Savings and Credit Union provides voluntary savings facilities to members that are available on demand.

4. Organisation and Characteristics of Smallholder Coffee Farmers

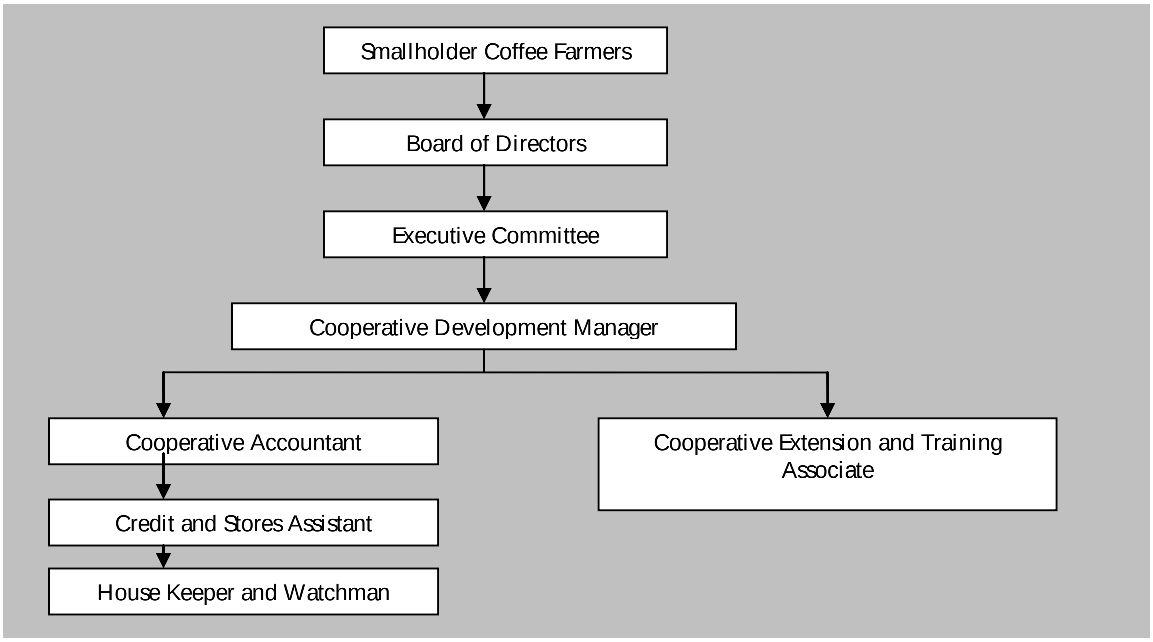
4.1 Organisation of Coffee Farmers

Smallholder coffee growers are organised into a four tier hierarchical organisational structure comprising business centre, business zones, primary cooperative and union. The first and lowest level is the business centre at village level comprising10 to 30 farmers. The business centres have committees and are responsible for farm management and extension services through contact farmers. In some cases, the business centres have special groups responsible for nurseries, bee-keeping and macadamia nuts. Contact farmers are volunteer smallholder coffee farmers trained to provide extension services to fellow farmers at the village level. Smallholder growers become members of the business centre through annual subscription fee of MK250 (MK50 for the business centre, MK50 for the zone and MK150 for the cooperative) deducted from coffee sales and each business centre has by-laws governing its operations. The registration, membership fees and penalties vary from one business centre to another. Members are also required to have a minimum of 1 500 – 2 000 coffee trees, although this requirement is waived for small farmers provided they pay the membership fees. The business centres also generate revenues through fines and penalties on members that break the by-laws and those that do not attend meetings. The business centres also encourage farmers to help each other in the management of coffee plots. Members of the business centres have the responsibility of monitoring the coffee fields of fellow members. Some of the business centres have coffee plots that they cultivate to generate additional income for the centre.

The second level is the business zone. This comprises business centres at sectional or pulpery level and is more of a marketing structure at sectional level with a pulpery (initial processing factory). The zones are responsible for the purchase and processing of cherries into parchment coffee, transportation of coffee to the Union, making arrangements with the cooperative on the procurement of inputs, making payments to farmers and are custodian of the pulpery equipment. The management committee is responsible for the day to day operations of the business zone. In some zones, there are sub-committees responsible for quality control. In some cases, the zones have permanent staff, but in most cases the zones employ temporary staff. The committee is responsible for grading of coffee. Some zones also have communal coffee plots for generating revenues. The other source of revenue for the zone is the levy on processing of coffee set at MK2 per every kilogram sold.

The third level is the cooperative, made up of business zones at extension planning area level. The cooperative is owned by smallholder farmers through issue of unlimited shares. Each share costs MK1 000 and farmers are encouraged to buy not less than MK1 000 shares per annum. The cooperative has a Board of Directors, an Executive Committee and full-time staff members. Board of Directors and Executive Committee members are elected among the smallholder coffee growers membership of the cooperative. The most significant development at this level is that the primary cooperatives are financially independent with its own Board of Directors (Figure 4). The cooperative employs permanent members of staff including the Cooperative Advisor (Technical Advisor)/ Cooperative Development Manager, Cooperative Accountant, Cooperative Extension and Training Associate, Credit and Stores Assistant, House-keeper and a watchman. The employees of the cooperative are directly paid from revenues of the cooperative. The cooperative also manages the microfinance program through the farmer-based Savings and Credit Union. The cooperative is also responsible for training the contact farmers at business centre level.

Figure 4 Typical Organisational Structure of the Coffee Cooperative



The final level is the Union that comprises five primary cooperatives. The Union has a Board of Directors drawn from smallholder coffee farmers. Below the Board of Directors is the Chief Executive Officer and management team. The Union aims at promoting sustainable production, processing and marketing of high quality Arabica Coffee and other food products through farmer-owned, controlled and managed sustainable business organisations (MZCPCU, 2007). The Union is responsible for processing of the parchment at its hulling plant in Mzuzu. It ensures quality through checks on moisture, parchment classification, roast assessment and cup tasting. The hulling plant polishes and grades the beans while sorting of the beans is carried out manually by experienced seasonal workers. The Union also provides marketing services for the processed coffee to national and international buyers. The Union procures farm inputs on behalf of cooperatives and transport inputs to cooperatives at no additional costs. The cost of its activities to cooperatives is financed from the management fees that growers pay out of the proceeds.

The farmer organisations have played a critical role in the transformation of the smallholder coffee sector in Malawi. Over the past 7 years the sector that nearly collapsed has been revived. With the help of external assistance, smallholder coffee farmers have embarked on a program of re-planting with new early maturing varieties. The assessment of the farmers on the contribution of the farmer organisation is generally positive and the case of coffee has demonstrated that with proper guidance and capacity building farmers can run their organisations in a sustainable manner with greater impact on their livelihoods. Table 1 presents the analysis of strength, weaknesses, opportunities and threats of various layers of the farmer organisations based on discussions with the farmers.

The major strength of the union has been its ability to operate with limited resources, particularly transport facilities. Farmers also believe that the achievements that have been made in reviving the smallholder coffee sector are partly due to the dedicated management team at the union level which has encouraged and guided farmers in the reform process. However, one weakness is in the pricing decisions and questions about transparency in the setting of prices.[9] Most farmers feel that the price of coffee is still low and the farmers do not have influence on the final price of coffee. Farmers view the marketability of the 'Mzuzu coffee' brand as the most significant opportunity that can be exploited. Currently, the demand for 'Mzuzu coffee' surpasses the supply. Major threats at union level that may affect coffee production are poor coffee prices, high input prices and the imposition of the minimum required number of coffee trees for smallholder farmers to qualify for membership to the farmer organisation.

With respect to primary cooperatives, the farmers view the efficient response of farmers' problems and engaging farmers in the decision making processes as the major strength. Similar to the union level, the issue of pricing was cited as one of the weaknesses of the cooperative in the sense that the cooperative has little influence over prices. The human resource capacity of the cooperative is a major weakness. The primary associations have one technical advisor each operating highly resource constrained environments. With the increase in the number of farmers, it is difficult to provide extension services in a timely manner. Although, the technical advisor trains volunteer contact farmers, there is still need for the technical advisor to visit farmers. The cooperatives are also constrained in terms of transport

[9] Key informants interviews revealed that information on prices is provided to farmers only that most farmers do not lead or understand the information leaflets which are presented in English.

facilities. The technical advisors are using their own transport facilities to visit farmers. In spite of these weaknesses, there is high potential for farmers to expand coffee production provided the inputs are available. However, the unpredictability of increases in input prices pose a major threat to smallholder coffee expansion. Results from the survey of smallholder farmers pointed to a number of problems that their cooperatives experience, problems which corroborate the SWOT analysis from the focus group discussions. The survey of smallholder farmers ranked financial constraints as the main problem for the cooperative (73.5 percent of farmers), followed by ineffectiveness in obtaining better prices (48 percent) and human capacity constraints (41 percent).

Table 1 SWOT Analysis of Smallholder Coffee Organisations

Organisational Level	Strengths	Weaknesses	Opportunities	Threats
MZCPCU	- Ability to operate using limited resources such as transport facilities - Dedicated management team	- Lack of transparency on pricing - Lack of involvement of farmers on price decision	- Mzuzu coffee marketable as a brand	- Poor prices - High input prices - Minimum tree requirement
Primary Cooperatives	- Responded quickly to farmers problem - Engage farmers in decision making	- Not effective in influencing price adjustment - Shortage of extension staff	- Potential to produce more coffee as long as inputs are available	- Unpredictable input price hike
Business Zones	- Transparent - Accountable - Do not cheat on quality and volume	- Limited and old pulperies - Poor attendance of farmers in factory activities	- Increased number of coffee farmers	- Input loans default - Frequent machine breakdowns
Business Centres	- Involve individual farmers in decision making	- Limited influence on price changes - Do not enforce fines and penalties	- More farmers are planting extra trees - Increased number of coffee farmers	- Failure of some farmers in repaying input creditors

Source: Field Notes – Smallholder Coffee Farmers Survey 2007

At business zone level, the most frequently cited strength is the transparency and accountability of members in the operations. Most farmers hailed the transparency in marketing of coffee with no incidents of cheating over prices and quality. The marketing of coffee is handled by farmers themselves through a member committee, and this eliminates rent seeking by workers. The major weaknesses include the dilapidation of the processing facilities – pulperies and the poor attendance of farmers to participate in factory activities. There have been limited new investments in pulperies, and the capacity of the existing pulperies is being stretched due to the increase in coffee production resulting in frequent breakdown of machines. The assessment of business centres is similar to that of the business zone. Lack of enforcement of fines and penalties for farmers that break the rules is viewed as a major weakness in ensuring cohesiveness of the farmer organisation at grassroots level. Farmers view the increase in number of farmers and increase in the number of coffee trees as the main opportunities for sustaining the business centres.

4.2 Characteristics of Coffee Farmers

The union categorizes the smallholder coffee farmers in terms of number of coffee trees following a comprehensive census of smallholder coffee farmers undertaken in 2005. There are four categories: micro-scale, small-scale, medium-scale and large-scale farmers. Micro-scale farmers have less than 2 222 coffee trees and account for 92 percent of smallholder coffee farmers. Small scale farmers have 2 222 – 5 555 coffee trees, medium-scale farmers have 5 556 – 11 110 trees and large-scale farmers have 11 111 – 27 775 trees (MZCPCU, 2007). Commercial farmers have more than 27 775 coffee trees. The survey of smallholder farmers interviewed found that 53 percent of sampled smallholder farmers have less than 2 222 trees, 35.5 percent small-scale coffee farmers, 10 percent are medium-scale farmers while only 1.5 percent are large scale farmers. The farmers group themselves into three categories based on socio-economic characteristics: the well to do (rich), the a bit well to do (average) and the poor (Table 2). The poor tend to have small parcels of land on which they mainly grow food crops. The poor are also unable to produce food to meet their subsistence needs and therefore resort to ‘ganyu’ labour for cash income towards the purchase of food. Another contrast between poor and non-poor groups is farmers’ affordability with respect to inputs. In contrast to the other groups, a majority of the poor cannot afford to buy fertilizers at the current subsidized prices. The well-to-do farmers tend to have many plots and grow a diverse range of crops – mainly cash crops and can afford subsidized and unsubsidized fertilizers.

Table 2 Socio-economic Groups of Smallholder Farmers

Well-being Group	Main Characteristics
The Well to Do	• Have many fields where they grow many and diverse crops • Able to buy fertilizers, both subsidized and unsubsidized • Eat as many times as they wish per day or can afford three meals per day • Able to send children to school • Some have cars and pick-up • Dress well and wear expensive clothes • Employ others for 'ganyu'
The a bit Well to Do	• Have two to three medium size gardens and grow various crops but less than the 'well-to-do'. • Eat twice per day and their food lasts 8 to 9 months. • Manage to send their children to school up to Form 4. • Able to buy a few bags of fertilizer (both unsubsidized and subsidized) • Work on their own – are unable to employ others • Wear clean clothes but many are 'second-hand' • Own bicycles but usually carry their coffee to the zone on head
The Poor	• Have mostly one small piece of land on which they grow food crops – maize, cassava and vegetables • Have no means of transport – no bicycle and no car. • Eat once in day, but sometimes can go entire day without eating • Few manage to buy subsidized fertilizer • Unable to send their children to school • Engage in 'ganyu' labour and depend on the well-to-do to employ them • Do not dress well

Source: Field Notes - Smallholder Coffee Farmers Survey 2007

In terms of the other socio-economic characteristics of the households in the smallholder farmers' communities, the survey revealed 85.5 percent of the households are headed by males, 35.5 percent of the household heads completed primary education and beyond and 96.5 percent take farming as their main occupation. The average number of years of schooling among the smallholder farmers is 6 years, which is equivalent to completing standard 6. On average household heads are 49 years old with a minimum age of 22 years and maximum age of 85 years. In contrast, there are more female headed households in the smallholder tea sector (36.8 percent) and sugar sector (26 percent) but fewer heads that completed primary school and above in tea sector (33.3 percent) and sugar sector (29 percent) (Chirwa and Kydd, 2005; Chirwa et al., 2006).

The main major source of income among smallholder coffee farmers is crop sales, with 86.5 percent of sampled farmers deriving their livelihood from crop sales. The second major source is livestock sales (29 percent) followed by small business enterprise (17 percent). The mean income level of smallholder farming households from all sources of income is MK73

586.[10] The average mean annual incomes from crop sales are MK37 818 (with standard deviation of MK40 372) among 197 farmers and for livestock sales are MK13 089 (standard deviation of MK20 066) among 102 farmers. The mean average expenditure is MK59 762, and an average of MK16 225 is spent on food while MK15 379 is spent on agricultural inputs including labour.

The food security situation in the coffee growing areas is much better than that found in the smallholder tea and sugar growing areas in the studies reported by Chirwa and Kydd, 2005 and by Chirwa et al., 2006. Among smallholder coffee farmers 88 percent of interviewed households reported having adequate food that lasts them the whole year under normal rainfall conditions. Of those that do not have adequate food, the average number of months their own production lasts is 5.2 months. In the smallholder sugar study, 79 percent of the smallholder farmers had adequate food and the mean number of months their own food last for those that do not have adequate food was 4 months (Chirwa et al., 2006). In the tea sector study only 13.2 percent produced maize that lasted them for a year while own production lasted only up to 3 months for most households (Chirwa and Kydd, 2005). Care should be taken in reading too much into these comparisons, however, as the 2005/6 and 2006/7 seasons have been generally good maize production in the country whereas the 2004/5 season was poor. There are also regional differences associated with differing land pressure across the three areas surveyed in these studies.

4.3 Cropping Patterns

The smallholder coffee farmers grow a diverse range of crops on fragmented land holdings. 833 plots were cultivated by the sample of 200 smallholder coffee farmers with the mean number of plots per household equal to 4 with a minimum of 1 plot and a maximum of 10 plots. The survey also revealed that 84.5 percent of the sampled coffee farmers have more than 2 plots of agricultural land. The fragmentation of land is higher in the coffee sector compared to that found in the study on tea (with an average of 3 plots) and in the study on sugar (with an average of 2 plots) (Chirwa and Kydd, 2005).[11] The mean size of the plots among smallholder coffee farmers is 0.56 hectares, averaging 2.32 hectares per farmer. On average of 0.58 hectares of the land, representing only 25 percent of the total, is allocated to coffee production. The other crops grown in the coffee areas include the main crops on the plots being maize (37.7 percent of the plots), cassava (10.4 percent of the plots) and pulses (8.5 percent of the plots). Although, coffee is the main cash crop among smallholder farmers in the area, a lot of land is devoted to food crops. A similar pattern was observed in the smallholder tea sector in which 33 percent of smallholder land is used for maize cultivation although maize does not grow well in the tea growing areas (Chirwa and Kydd, 2005).

The focus group interviews with smallholder coffee farmers revealed that the main motivation for growing more food crops relative to the cash crops was that maize as a staple food is necessary for survival and it is risky to rely solely on the market. Farmers also pointed out that maize does not demand that much labour compared to coffee. The introduction of the input subsidy that focuses on maize and tobacco have also motivated some farmers to increase their production of maize. Mostly among the poor smallholder farmers, most have relocated

[10] These figures should be interpreted with caution as the standard deviations tend to be higher than the mean values, indicating high variability and wide confidence intervals in estimates.

[11] In the smallholder sugar sector, farmers on the irrigation scheme have a standard plot size of 3 hectares for sugar cultivation and 0.7 hectares for food crop production (Chirwa et al., 2006).

more land to maize due to subsidized inputs and decreased coffee production as the inputs are not subsidized and fertilizer costs for coffee are high. On the other hand, the factors that motivate smallholder farmers to grow coffee include profitability (due to modest increases in prices), access to inputs on loan from the farmer organisation and availability of a steady market.

4.4 Coffee Production, Processing and Marketing[12]

4.4.1 Coffee Production Process

Similar to other perennial crops such as tea, smallholder coffee production is capital and labour intensive. The capital requirements in coffee are in the form of investments in coffee trees that take more than a year to mature. In addition, coffee processing requires high capital outlays in processing facilities. The earlier varieties that farmers tended to grow took 7 years to start bearing fruit. The late maturing varieties played a major role in the expansion of smallholder coffee production. Most smallholder farmers were not willing to commit their resources to a crop that takes so long to start generating returns. In 2001, the SCFT introduced an early maturing variety of coffee Catimor Populations – which takes three years to mature. The early maturing varieties have reduced the capital needs of coffee farming and as a result many smallholder farmers that had abandoned coffee farming have resumed coffee farming. Smallholder coffee in Malawi is grown under rain-fed conditions. Table 3 shows the varieties of coffee trees among smallholder farmers. The most popular varieties are Catimor Populations and Geisha, grown by 86.5 percent and 62.5 percent, respectively of farmers. Of the 86.5 percent of farmers that have Catimor Populations, 71 percent of the coffee trees that the farmers have on their coffee farms are of the Catimor Populations variety. The survey also revealed that only 31 percent of farmers grow only one variety of coffee trees with 53.5 percent having two varieties.

Table 3 Varieties of Coffee among Smallholder farmers

Variety	Proportion with Variety	Percent of Plot with Variety
S Agaro	7.0	19.29
Geisha	62.5	31.08
SL 28 and SL 34	7.0	40.13
Catura	4.5	9.90
Catimor 125/128/129	21	43.46
Catimor Populations 1–5	86.5	70.95

Source: Smallholder Coffee Farmers Survey 2007

Coffee production starts with nursery preparation which requires high degree of nursery management and fertilizer application on the seedlings. The next stage is field preparation which has to follow best practice techniques in order to enhance productivity and cost efficiency of coffee farming. The main considerations in field preparation are site selection, land preparation, soil and water conservation, layout and planting density and hole/trench digging and filling. Some of the factors that are critical in site selection are soil depth, soil drainage, soil types and structures (acidic soils with pH 5.0 and below), temperatures (18^oC to 25^oC) and slope (0 – 15 percent) (SCFT, 2001).

[12] This section is largely based on information available in a coffee production handbook (SCFT, 2001) and the experiences of smallholder farmers from key informants and focus group discussion interviews.

4.4.2 Labour Use in Various Stages of Value Chain

Coffee farming is labour intensive due to the long production processes and the complex management of the coffee tree. The production of coffee involves five main processes of management: nursery management, field preparation, coffee field planting, fertilizer application and coffee field management. It is argued that the production of a strong and health seedling is a foundation for a healthy and productive coffee plant (SCFT, 2001). Table 4 presents the utilisation of family and hired labour among smallholder farmers. Family labour requirements are highest during harvesting in terms of number of family members involved and the mean man-days expended on the activity. This is followed by weeding and fertilizer/chemical applications. These family labour requirements are similar to those obtained in the tea sector especially with respect to harvesting (see Chirwa and Kydd, 2005). There is also high utilization of hired labour in coffee farms, indicating its potential to generate employment. The number of employees on smallholder coffee farms in the four main activities average 3 persons with higher man-days during harvesting and weeding compared with similar activities among smallholder tea farmers.

Table 4 Utilization of Labour in Smallholder Coffee Farms

Labour Type and Farming Activity	Average Number of Members per farm	Mean Man-days per farm*
Family Labour		
Land preparation &planting	2.96	66.10
Weeding and fertilizers	2.94	84.94
Harvesting	3.95	143.28
Processing and grading	3.15	40.83
Hired Labour		
Land preparation & planting	3.54	59.55
Weeding and fertilizers	3.43	171.60
Harvesting	4.64	195.21
Processing and grading	3.12	63.96

Note: * Computed based on a normal working day of 8 hours.
Source: Smallholder Coffee Farmers Survey 2007

4.4.3 Fertilizer Use and Management

Coffee farming also requires intensive use of organic or inorganic fertilizers. At nursery stage CAN or Potassium Nitrate are recommended, although the use of Potassium Nitrate requires careful application to avoid withering the coffee leaves. The main nutrients required for coffee depending on the soils are phosphorous, potassium, calcium, nitrogen and sulphur. According to SCFT (2001), under rain-fed conditions nitrogen fertilizers, CAN, 23:21:0+4S and Compound J, are applied 2–3 times with a minimum of 4 weeks intervals between applications. Compound J is recommended in the productive stages of the coffee trees. The application of fertilizers among smallholder farmers is quite high, with 97.9 percent of farmers interviewed revealing that they had applied fertilizers in the past 12 months and 62.5 percent had used pesticides. On average coffee farmers used 297 kilograms of fertilizers on all crops, with 53 percent of the fertilizers applied on coffee farm at an average cost of MK19,000 per coffee farm. The cash purchases of fertilizers are high with 47.6 percent of farmers indicating cash purchase as the main source of fertilizers while 45 percent relied mainly on credit from cooperatives. The study also reveals that 89 percent of farmers had access to credit facilities and 85.5 percent obtained agricultural credit in the past 12 months of the interviews.

The high use of fertilizers is not surprising due to the subsidy on maize and tobacco fertilizers and the availability of input loans from the cooperative. The fertilizers used by smallholder farmers are provided by the MZCPCU at cost.[13] MZCPCU centrally procure fertilizers for its members. The fertilizer is provided on credit a processes facilitated by the grassroots structures of the farmer organisation. At business centre level, smallholder farmers, using application forms, apply for fertilizers on credit through to the business zones. However, farmers that can afford cash purchases buy their inputs from the private retailers. The applications are aggregated at Cooperative level. The aggregate fertilizers from the cooperative form the basis for bulk purchase by the MZCPCU. The seed capital that is used to finance fertilizer purchases was provided by the European Union. The creation of a Credit and Savings Union (CSU) has enabled smallholder coffee farmers to augment the capital fund with their savings and shares in the CSU. Nonetheless, most poor farmers shun input loans due to the high interest rates on loans. The availability of input loans from the Cooperative, make fertilizer application quite high although most farmers complain that the increasing cost of fertilizers is eroding the profitability of coffee farming given modest increases in coffee prices.

Over the last two seasons farmers have had limited access to highly subsidised maize and tobacco fertilizers, but there are no subsidies on the price of fertilizers that are critical for coffee production. The smallholder coffee sector that constitute 3,200 farmers do not benefit from the policy of subsidization on commercial crops as do tobacco farmers. Interviews with smallholder farmers revealed that the high cost of fertilizers and chemicals is a major constraint to smallholder coffee expansion given that most of the farmers are poor. Interestingly, the use of subsidized fertilizers on coffee farms is not widespread. However, farmers noted that it is quite common to apply fertilizers obtained on loan from the Cooperatives to be used for maize production. This behaviour just demonstrates the importance that farmers place on their own food production over food supplies from the market based on the incomes from coffee sales. In the 2004/05 season, coffee did not do well and many farmers did not receive any income and had outstanding input loans with the Cooperative due to poor sales, this placed the households at greater risk of food insecurity.

4.4.4 Coffee Harvesting and Grading

Harvesting of coffee occurs from June to October. Similar to tea, harvesting of coffee is a very labour intensive activity, and picking is done by hand every 10-15 days. Harvesting has to take place in the morning so that the cherries are taken to the pulpery by 2 o’clock for processing. This is done to prevent the fermentation of the cherries from the harvesting bags. The cherries are picked by hand and placed in bamboo woven baskets or old jute bags. Grading starts at the time of harvesting - only well ripened berries are picked. Primary processing is done at the business zones where there are pulperies which are motorized, and in some cases hand operated. The farmers take their berries to the factory at the business zone

[13] The cost of local transportation is borne by MZCPCU and is financed by the management fees that farmers are deducted on their sales revenue. However, farmers pay interest on their input loans from the microfinance program.

where they further grade to remove foreign matter. The pulperies are within 5 kilometres of the farmers. Most of the farmers do not have transport facilities; they carry the cherries on their head. The primary processing involves cherry inspection, placing the cherries in floating canals so that it is washed, grading by floatation, dry fermentation, washing, soaking and drying. These processes turn the cherries into parchment. The business zones committees are responsible for the management of the pulperies and recruit workers to operate the factory. Nonetheless, smallholder farmers themselves are responsible for maintaining the processing facilities such as cleaning the canals and equipment.

4.4.5 Coffee Marketing Arrangements

Smallholder coffee farmers sell their coffee to the Union through the business zones. The farmers can sell to the business zones coffee berries or parchment. The prices given to the farmers are based on previous seasons' prices but farmers get rebates if the actual price at which the coffee is sold increased. The marketing and grading of coffee is done under farmers' supervision. The farmers weigh their cherries and record the weights in the farmer's record book and the factory book. This minimizes cheating on quality and measurements associated with many cash crops sold to the private traders in Malawi. In contrast to smallholder tea and smallholder sugar, where farmers are more suspicious about the quality assessments and measurement of their produce, the farmer managed marketing system that exists in smallholder coffee has brought confidence among farmers that they can manage their operations in a more transparent and accountable manner. The parchment is transported to the processing factory in Mzuzu by the Union whose cost is covered by the management fees deducted from farmers. Farmers are paid at once after the MZCPCU sell the coffee. The process of payment is also transparent. The farmers are deducted 40 percent of sales revenue – 10 percent to support operational costs of the Union and 30 percent to support operational costs of the Cooperative. The zones invite all business centres to receive payments such that every farmer receives his/her payment in the presence of everybody according to the amount of cherries supplied to the zone. The farmers usually get their payment in December. The same arrangement is maintained during payment of rebates, usually 3 months after the first payment.

The farmers do not experience substantial delays in the receipt of their proceeds once they sell the coffee to the zone. Delays that do occur arise because some farmers sell their coffee late which affects the transportation of the coffee from the zone to the Union as coffee is transported in bulk to reap economies of transportation. The main problem in the marketing of coffee cited by smallholder farmers is the low price of coffee and their lack of influence over final coffee prices. Although farmers do acknowledge that prices of coffee have increased over the past five years, increases in the price of inputs have eroded the profitability of coffee. Nonetheless, about 71 percent of smallholder coffee farmers acknowledged that coffee farming has become more profitable in the past five years and only 10 percent noted that it has become less profitable. About 29.5 percent and 28.9 percent of farmers that have experienced increased profitability attributed the improvements to better coffee prices and increased production of cash crops. This is in contrast to the perceptions in the smallholder tea sector in which less than 40 percent of farmers experienced increases in profitability (Chirwa and Kydd, 2005). Due to the positive developments in the smallholder coffee sector 76.5 percent of smallholder farmers revealed that their household welfare is better now compared to 5 years ago.

MZCPCU is responsible for marketing coffee in Malawi and in foreign markets. Mzuzu coffee is packed in gold foil in ground or roasted form and is sold in retail markets in Malawi and international markets including Zimbabwe, Namibia, Mozambique, Germany, Australia and United Kingdom. The bulk of Mzuzu coffee is exported to Germany, South Africa, Switzerland, Netherlands, United States of America and Japan.

4.5 General Problems and Constraints

Although the smallholder sector has made remarkable progress from a collapsing sector to a viable farmer-managed business, such success has been achieved despite a number of problems and constraints experienced by smallholder farmers. The main problems cited by farmers include increase in the cost of inputs (99 percent), poor crop prices (74 percent), lack of agricultural inputs (73 percent), lack of produce markets (58.8 percent), labour shortages (56.6 percent), lack of extension services (41 percent), lack of land (39.6 percent) and lack of access to credit (38.1 percent). Other problems cited by farmers in focus group interviews include the poor road infrastructure and lack of transport services especially at cooperative and business zone levels. In some areas, smallholder farmers are resolving the problem of poor road infrastructure by repairing the roads on their own.

5. Lessons from Reforms in Smallholder Coffee, Tea and Sugar

Tea, sugar and coffee are crops largely grown on commercial estates who own their processing facilities in Malawi. Smallholder participation in the production of these crops was previously facilitated by the creation of special crop authorities with the responsibility of integrating smallholder farmers into high value export crops. Although, these sectors have been opened up to smallholder farmers, the estate sector remains the dominant producer. For instance, smallholder farmers only account for 10 percent, 20 percent and 15 percent of tea, sugar and coffee production, respectively. All the three sectors require high capital investments in terms of the input requirements and processing facilities. This being the case, smallholder farmers were naturally excluded due to high capital requirements. In the case of tea and coffee, the crop authorities had processing facilities of their own while in sugar smallholder farmers relied on the factory owned by the commercial company.

The different crop authorities in tea, sugar and coffee experienced similar problems associated with many parastatals in the 1980s. Under the Privatisation Divestiture Plan, the Privatisation Commission embarked on reforming the crop authority as a way of addressing financial problems that the crop authorities were experiencing in servicing farmers efficiently and effectively. The reforms in the coffee sector, however, are strikingly different from the crop authorities in the tea and sugar sectors. The manner in which reforms were implemented, through focussing on farmer participation in reform plans and allowing the farmers to manage their own affairs, combined with farmer-centred management largely account for the success of reforms in the coffee sector.

Table 5 presents a comparative analysis of the reform processes in the coffee, sugar and tea sectors. The assessment of the three smallholder sub-sectors is in terms of nature of pre-reform problems, type of reforms, arrangements for agronomy services, general business practices, influence of smallholder farmers, and levels of success. All the three sectors, prior to the reform processes, were experiencing deteriorating financial performance with huge indebtedness. These problems were worst in the coffee and tea sectors in which resources were poorly managed leading to the neglect of farmers. Coffee and tea farmers were having no markets to sell their produce, and payments for the sale of crops were substantially delayed. In smallholder sugar, the problem was mainly low financial performance with poor management of resources.

In terms of type of reforms, in all the three sectors the creation of a Trust was seen as the first step towards the divestiture of the smallholder crop authorities. However, the implementation processes differs. In the case of smallholder coffee, the Trust was managed by farmers with all the Trustees being smallholder coffee farmers. In the sugar sector, the transitional arrangement created two entities: a Trust responsible for smallholder development and a smallholder growers' limited company owned largely by farmers. However, the difference with the coffee structure is that in smallholder sugar only 2 of the 10 Trustees were smallholder farmers. In addition, the same Trustees for the Trust also comprise the Board of Directors of the smallholder growers' limited company. Consequently although smallholder sugar farmers were majority shareholders, farmers had very little influence over the running of the company. Similarly in tea, reforms introduced two entities, a Trust for smallholder tea development and a tea processing company as separate entities. As in smallholder sugar, only two of the Trustees were smallholder farmers. Another notable difference in the reform process is the extent to which the reforms addressed the issues of over-employment in smallholder crop authorities. In the coffee sector, labour restructuring was substantial while in the sugar and tea sectors little labour restructuring occurred. Thus, the lack of labour restructuring in tea and sugar meant that smallholder farmers were still supporting a top-heavy structure. There was complete change in the management of the smallholder coffee while in the case of smallholder sugar and tea the same management and employees of SSA and STA took up positions in the new structures.

Prior to reforms agronomy and extension services in the three smallholder crop sectors were organized around the crop authorities. These services virtually collapsed in coffee and tea sub-sectors as the crop authorities experienced financial difficulties. The re-organisation of these services has been different in the three crops. The most effective re-organisations are evident in the smallholder coffee sector. Agronomy and extension services in the smallholder sector are simple and cost effective and have tended to focus on building the capacity of farmers to help each other. Each cooperative employs just one technical advisor who is responsible for extension services and training of volunteer contact farmers in providing technical services at grassroots level.[14] This has created a pool of expertise in specialized extension services whose services are available at business centre levels. This system has been able to deliver extension services more cost effectively. Farmers have also created their own microfinance program that provides savings and input loan facilities with donor support and the microfinance program is managed by farmer organisations.

[14] However, farmers and key informants have raised concerns over the sustainability of voluntary contact farmer services and believe that introduction of incentives and provision of transport means (such as bicycles) could increase the chance of retaining such expertise.

Table 5 Comparative Analysis of Reforms in Smallholder Crop Authorities

Feature	Coffee	Sugar	Tea
Nature of Pre-reform Problems	- Poor financial performance and mismanagement - Neglect of coffee farming by farmers	- Low financial performance and mismanagement	- Poor financial performance and mismanagement - Neglect of tea farming by farmers
Type of Reforms	- Farmer managed Trust as a transitional arrangement and creation of grower cooperatives - Substantial labour restructuring - New management	- Creation of two entities, Trust for smallholder development and Growers Limited for agronomy services - Low farmer representation - Low labour restructuring, retention based on ownership status - Old management	- Creation of two entities, Trust for smallholder development and STECO as a tea factory - Low farmer representation - Low labour restructuring - Old management
Agronomy Services	- Simple and cost effective, one technical advisor employed per cooperative - Local capacity building of volunteer contact farmers - Farmer friendly and managed input regime	- Creation of a company owned by employees (22%) and smallholder farmers (78%) - Growers limited representation as a top heavy structure - Externally managed & farmer unfriendly input regime	- Non-existent after the reforms - No input credit regime
General Business Practices	- Transparent systems of management resulting in farmers' confidence in management - Pricing decisions highly consultative - Management fees at 40 percent all inclusive of Union services to its members	- Lack transparency and accountability - Growers pay 30 percent management fees but are overcharged for agronomy services - Differential management fees and cost structures for irrigation and rain-fed farmers	- Lack of transparency and accountability - Delays in collection of green leaf and in payment of farmer proceeds - Lower prices compared to those offered by commercial estates
Areas of influence of smallholder farmers	- Trustees exclusively smallholder farmers - Farmers decided on the reform path - Strong farmer based organisation	- Trustees doubling as Board of Directors in Growers Limited - Trustees dominated by outsiders - Farmers excluded on the reform path - Weak farmer organisations with no or little influence	- Trustees doubling as Board of Directors in Factory - Trustees dominated by outsiders - Farmers excluded on the reform path - Weak farmer organisations with no influence
Level of Financial Success of Reformed Organisations	- Highly successful reforms, bankrupt business turned solvent	- Profitable business, though not loss making before reforms	- Not successful resulting in the collapse of the factory and the Trust
Smallholder assessment of reforms	- Positive and proud of the reforms with improved returns - Well managed transition to a farmer organisations with real voice	- Irrigation farmers locked in a bad system with poor returns - Some rain-fed farmers forming a break away association not linked to the Trust	- Nature of reforms rejected by most farmers - Farmers forming breakaway associations and linking themselves to commercial farmers

Sources: Field Notes – Smallholder Coffee Farmers Survey 2007, Chirwa and Kydd (2005) and Chirwa et al. (2006).

In contrast, smallholder sugar reforms created the smallholder growers management company that retained the high employment levels. Although, growers own the limited company they have very little voice in the activities and strategies of the company. Most farmers believe that the operating norms and attitudes towards the smallholder sugar farmers have not changed with reforms. The input regime is managed by the growers' limited company, but many farmers complain that they are overcharged for services provided by the company (Chirwa et al., 2006). In the tea sector, the extension services virtually collapsed after the reform and smallholder tea farmers do not have access to extension services and smallholder farmers aligned to the Trust have no access to input credit (Chirwa and Kydd, 2005).

The comparison of these reforms in the smallholder sector suggest that if management of farmer organisation demonstrates transparent management systems, farmer confidence can be restored and farmers are likely to be more willing to organize themselves in commercial production.[15] For example, pricing decisions are highly consultative and discussions about prices start from the lowest level of the business centre to the Union at which farmers from different cooperatives are also represented in deciding the final price. The culture of holding annual general meetings was also introduced as a way of demonstrating transparency and accountability. Service charges are also transparent and are clearly known by the smallholder farmers. The experience in smallholder sugar is quite different and many farmers do not have the confidence in the management of the company. There is lack of transparency and accountability and the pricing structure of services are less known by smallholder farmers. Although the growers' company levies a 30 percent management fee, lower than in coffee, most of the services offered to growers are charged above the cost of delivering them, with a profit margin added over the cost. Chirwa et al (2006) shows that although sugar is replanted once in seven years, growers' returns show that farmers are charged for replanting every year and the cost of gravity fed water is very high. The growers' limited company also charges differential and lower fees and costs on rain-fed farmers from those paid by farmers under irrigation. Reforms in the smallholder tea were also characterized by lack of transparency in the reform process and in the management of the smallholder tea factory. Farmers continued to experience delays in the collection of green leaf and were paid lower prices than those received by farmers who were selling to commercial estates, and farmers continued to experience delays in payments.

Smallholder coffee farmers have more influence over the management of their own affairs. Reforms in the smallholder coffee sector have been more empowering due to the consultative nature and the positive attitudes of officials in accepting farmers ideas on the way forward. The transitional arrangement of the Trust was entirely run by farmers by ensuring that all Trustees were exclusively farmers. This has had tremendous influence on the response of the smallholder farmers in building strong farmer organisations at lower level. In the smallholder sugar sector, the Trustees that are dominated by outsiders double as Board of Directors to the growers' limited company, raising questions about governance. Management is more powerful than owners of the company – and owners have no influence in changing management even when management does not maximize owners' benefits. Similar governance issues arose in the smallholder tea sector reform, leading to rejection of the

[15] Farmers attribute the transparency and accountability of management to the Chief Executive Officer, Harrison Kaluwa, an agriculturalist trained in cooperative development posted from the Ministry of Agriculture to reform the sector. With the openness in managing farmers' affairs, more farmers have been brought back into production of coffee on commercial basis.

reforms by some farmers who advocated reforms similar to the reforms in coffee as opposed to the reforms in smallholder sugar sector.

The many positive attributes of the reforms in the smallholder coffee sector have attributed to successful outcomes. The sector that was bankrupt with high debt has been brought to solvency within five years with well designed and implemented farmer management structures. Smallholder coffee farmers typically talk more positively about the reform process compared to their counterparts in smallholder sugar and tea sectors. Smallholder coffee farmers are on the path of expansion and have the motivation to take coffee farming as a business. Under the Trust arrangement farmers have now transformed themselves from unregistered associations to more legal entities, as cooperatives owned and managed by growers. On the other hand, the success of reforms in smallholder sugar and tea has been limited. Although, the smallholder sugar growers' limited company continues to be financially sound, this has come at the expense of benefits that were supposed to accrue to smallholder farmers. Smallholder farmers, particularly those under irrigation scheme, are locked in bad system with poor returns. Some of the farmers on rain-fed cultivation have broken away from the Trust and formed their own association that is linking directly with the Sugar Corporation. Chirwa et al. (2006) note that the breakaway group on rain-fed cultivation tend to have much higher returns than smallholder farmers linked to the Trust under irrigation farming. The reforms in smallholder sugar show that returns from irrigation farming are much lower than rain-fed cultivation of sugarcane, and brings questions about the viability and hence sustainability of irrigation farming in Malawi. Smallholder sugar farmers have less confidence in the management and their farmer organisation is weak, with leadership of the farmer organisation handpicked by the management of the growers' limited company. In tea, the reform agenda virtually collapsed as many farmers opposed reforms that were based on the smallholder sugar model. Many smallholder tea farmers have broken away from the Trust and the tea factory and have formed their own associations and entered into cooperating agreements with neighbouring commercial estates. The decision by smallholder farmers to abandon the Trust and the tea factory has positively impacted on farmers' welfare through providing access to better and reliable markets (commercial estates), access to inputs of higher quality, and access to extension services provided by commercial farmers.

6. Conclusions

Coffee in Malawi like other major agricultural exports such as tea and sugar is mainly produced in commercial estates. These crops are capital intensive and require a lot of fixed investments in the plantation and processing facilities. With respect to coffee and tea, due to the perennial nature of the crops, the opportunity costs of investing a perennial crop for smallholder farmers is high and they tend to be risk averse. The participation of smallholder farmers in coffee, tea and sugar was previously facilitated by state intervention through the creation of state-owned crop authorities with the responsibility of promoting the participation of smallholder farmers in the production of high value agricultural crops. However the share of smallholder production in coffee, tea and sugar remains small at less than 20 percent of total production, with about 3,200 farmers engaged in smallholder coffee production, 8,000 farmers in smallholder tea production and 300 farmers in smallholder sugar production. Nonetheless, the incomes that these farming households generate have wider livelihood implications in their local economies, particularly through the generation of local employment.

Although crop authorities did achieve successful integration of significant numbers of smallholder farmers into commercial production, the financial performance of the state-owned crop authorities was very poor. The crop authorities, particularly the STA and SCA, struggled to post an investable surplus and relied on subsidies from government. As a result, these crop authorities did not efficiently serve their smallholder farmers who from the late 1980s experienced problems that nearly led to the collapse of the sector. Smallholder farmers were neglected, due to inefficiencies in the management of crop authorities, erosion of extension services, delays in payment of proceeds, and mounting indebtedness of crop authorities.

Under the Privatization Program, government included the crop authorities in the divestiture plan, and the process of reform began in the late 1990s. The crop authorities in coffee, tea and sugar sectors have under gone similar reforms with the formation of trusts, but with different implementation modalities and levels of participation of smallholder farmers in the reform process and in running their own operations. This study finds that reforms in smallholder coffee sector were more farmer-centred, by focusing on building the capacity of smallholder farmers to run their own operations. In contrast with the tea and sugar reforms, coffee farmers themselves, with the help of farmer-friendly management, have driven the reform process. All the Trustees in SCFT were farmers themselves while in the smallholder tea and sugar the Trustees were mainly outsiders. In smallholder sugar, the doubling of Trustee in the Trust and as Board of Directors in the growers' limited company created serious governance problems, resulting in exploitation of smallholder farmers who own the company but with no voice to influence change. The reforms in the tea sector have collapsed because smallholder farmers rejected the smallholder sugar model which does not empower smallholder farmers. Smallholder tea farmers have abandoned the Trust and formed their own smallholder association which links with commercial estates in accessing input provision, extension services, tea marketing and social services.

The institutional arrangements, the level of ownership of the reform process and the relative strengths of farmers' voice have implications for successful integration of farmers into commercial agricultural activities. Smallholder farmers talk more positively about the reforms in the coffee sector than in the tea and sugar sectors, and characterise the coffee reforms as consultative, transparent and farmer-centred. The success of reforms in the coffee sector are also attributed to the quality of new management – which introduced transparent systems at all levels and demonstrated willingness to be driven by the interests of smallholder farmers. In contrast, in the sugar and tea sector, top management was recycled from the inefficient management of the crop authorities and no major changes in attitudes towards smallholder farmers had changed. The success of the reforms in the coffee sector have resulted in the resurgence of smallholder coffee production, with farmers receiving premium prices and expanding their area under coffee cultivation. In the sugar and tea sectors, the smallholder sector is struggling to expand and incentives to drive such expansion have been eroded due to lack of smallholder farmers' confidence in the systems established during the reform process.

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