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**Competitive Commercial Agriculture in Sub-Saharan Africa
(CCAA) Study**

**All-Africa Review of
Experiences with Commercial Agriculture**

Case Study on Malawi Tobacco

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All-Africa Review of Experiences with Commercial Agriculture

CASE STUDY ON MALAWI TOBACCO

FOURTH DRAFT

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Tobacco in Malawi

Tobacco in Malawi is an export success story, albeit one where the benefits from success have rarely been shared equitably within Malawi. In recent years smallholder producers of burley tobacco have come to dominate the sector, which has been a positive development in many ways. However, it has also raised new challenges, most notably how to provide efficient support services and market access for these new producers. Improved institutional arrangements are essential if tobacco is to continue to contribute to Malawi's poverty reduction goals, especially given the increasing competition in the world market for tobacco leaf. This case study also highlights the difficulties facing developing country exporters of primary commodities when the international market is highly oligopsonistic.

The International Market for Tobacco Leaf

Tobacco is a high value crop. Figure 1 shows average international prices for tobacco leaf¹ as calculated from FAOSTAT². These are currently in the range US\$2500-3000 per ton.

In developed countries consumption of tobacco is being strongly discouraged by public health campaigns and bans on smoking in public places. However, demand for cigarettes is growing strongly in developing countries, especially Asia, where it is being driven by income and population growth and by concerted marketing activity on the part of global cigarette manufacturers. Indeed, developing countries now account for 70% of global cigarette consumption. We would also expect this shift in demand towards developing countries to lead to some fall in the demand for tobacco quality (see framework proposed by Tollens and Gilbert, 2003).

Figure 1 shows a steady fall in international prices between 1997 and 2002, which can be attributed to a rise in tobacco stocks following the 1997-98 East Asian economic crisis³. The fall in demand as a result of the crisis appears to have been a short-term phenomenon and it is anticipated that, public health campaigns notwithstanding, demand for cigarettes in developing countries will continue to grow steadily (at 2-3% p.a.) for the foreseeable future (Jaffee, 2003).

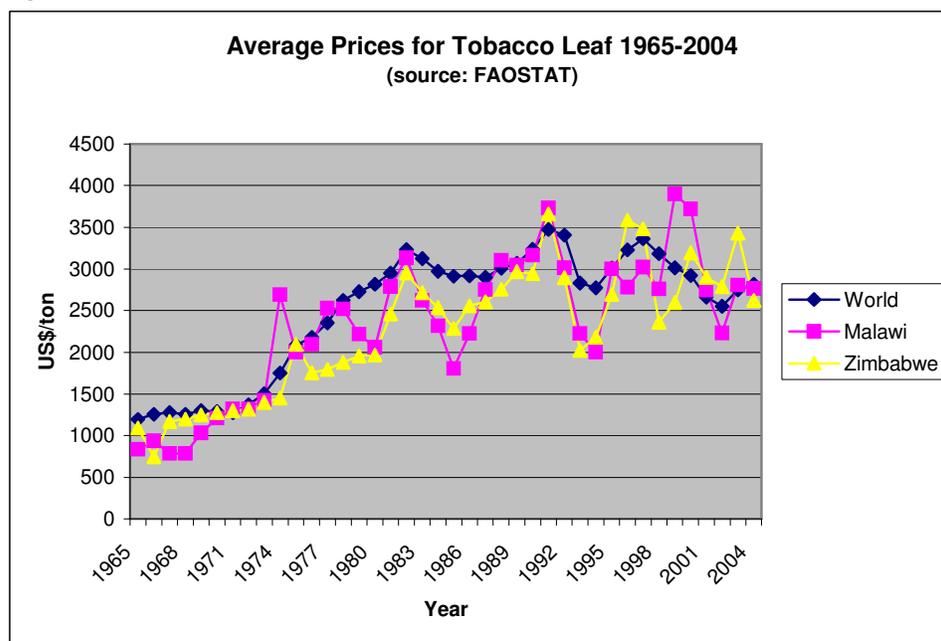
According to Jaffee, 2003, eleven countries (including Zimbabwe and Malawi) account for almost 80% of global tobacco production. China alone accounts for almost 40%, followed by India, Brazil and the US, which collectively account for a further 25%. Governments intervene to support tobacco producers in a number of the main producing countries, with price support schemes in place in India, the US, Turkey and the EU (FAO, 2003).

¹ FAOSTAT records trade data for a number of tobacco products, including tobacco leaves, cigarettes, cigars/cheroots and miscellaneous other products (smoking, chewing, snuff tobacco, homogenized or compressed tobacco, manufactured tobacco substitutes, tobacco extracts and essences). Globally, tobacco leaves have only accounted for 25-30% of the total export value of tobacco products since 1990. However, they accounted for 100% of the value of Malawi's tobacco exports during this period (indeed, since 1965) and 90-98% of Zimbabwe's tobacco exports, so we will here concentrate on tobacco leaves.

² These are derived by dividing total export values by the corresponding export volumes, thereby averaging across the large number of tobacco types and large number of grades by which each type is bought. However, the figures should be treated with considerable caution, as the actual prices paid by tobacco buyers – effectively a global oligopsony – are often shrouded in secrecy.

³ Measures were taken either to reduce production or to destroy stocks in certain countries in response to the price fall.

Figure 1



A variety of types of tobacco are produced, the most common of which are Virginia (60% of global tobacco leaf production), burley and oriental. Virginia tobacco has a strong flavour and oriental tobacco is known for its aroma. Most cigarettes contain a blend of tobacco types, with burley valued as a filler that absorbs flavour from other types within the blend. There is some substitution across tobacco types and across origins of particular types as relative prices change, but this is quite limited (FAO, 2003).

Only around 30% of tobacco production is traded internationally, as large quantities are processed for domestic markets. In 2000, the major exporters of tobacco leaf were Brazil, USA, Zimbabwe, Turkey, Malawi, Italy and Greece (Jaffee, 2003). One notable feature of the world tobacco market is that, like several other agricultural commodity markets, it is highly oligopolistic. According to Jaffee, 2003, four or five multinational corporations dominate the international cigarette manufacturing industry, whilst leaf export from individual exporter countries can also be dominated by a small number of international trading companies that supply these multinationals.

Characteristics of Tobacco Production

Jaffee, 2003 observes that, with the notable exception of Zimbabwe, tobacco production around the world is dominated by small-scale, family farms (Table 1). However, historically, tobacco production in Malawi has been concentrated on large-scale farms, too.

Table 1: Structural and Organisational Feature of Tobacco Production and Marketing in Major Producing Countries

	Brazil	China	India	Malawi	Turkey	USA	Zimbabwe
Production (000 tons)	590	2600	660	125	260	480	210
Planted Area (000ha)	330	1600	435	140	280	195	80
000s of Growers	135	8000	850	375	576	90	18
Av. Size of "Tobacco" Farm (ha)	16.8	0.4	2.5	1.0	4.9	66	300+
Av. Tobacco Planting (ha)	2.6	0.2	1.3	0.2	0.5	4.2	40
Tobacco Varieties	75% FCV, 16% burley	90% FCV, 9% burley	75% non-cigarette varieties	92% burley	95% oriental	2/3 FCV, 1/3 burley	95% FCV
Dominant Marketing Arrangement	CF	SOE monopsony	CF + market purchase	auction	SOE + market purchase	CF	auction
Secondary Marketing Arrangements	market purchase	-	auction for export varieties	-	-	auction	-

Source: Jaffee, 2003

Notes: FCV = flue-cured Virginia; CF = contract farming; SOE = State owned enterprise

Whilst the crop growing in the field does not require particular care – it is a weed! - skill and care are required in the initial raising and transplanting of seedlings. Harvesting then requires a certain degree of knowledge about which leaves to pluck when. This is a labour-intensive activity that cannot readily be mechanised. Post-harvest handling is also critical to the final quality outcome. The requirements at this stage depend on the type of tobacco. Burley tobacco (as grown in Malawi) is air cured in simple sheds or shelters (made of sticks and thatch in Malawi and allowing air to pass through freely), whilst Virginia tobacco is flue-cured and relies on plentiful supplies of wood or coal. The curing barns for Virginia tobacco in Zimbabwe show that this stage of processing can be quite capital-intensive.

Given the complexities of tobacco grading, there can also be significant returns to knowledge about buyers' preferences and requirements, especially when dealing with international buyers with very particular requirements. Where such knowledge is scarce, this creates economies of scale in management at the production level (Fafchamps, 2004)⁴. In combination with the capital required for curing barns, this explains the dominance of large-scale producers in Zimbabwe's tobacco sector. Historically, within Malawi this contributed to the so-called "visiting tenant" system for burley tobacco production, whereby large numbers

⁴ Contract farming arrangements may provide a mechanism for buyers to convey the necessary information directly to producers. However, where an auction system exists or where market purchases are the norm, there is more onus on producers to work out what buyers want.

of smallholder households were given tenancies on large (estate) landholdings and provided with both inputs and technical advice by the estate management for the production of tobacco, which was then sold to the estate owner who took it to the auction.

The complexities of tobacco grading also contribute to the concentration of tobacco export in a small number of countries. Impersonal, long-distance trade in tobacco leaf is not an option for a buyer interested in quality. Instead, they have to establish buying operations in-country. In addition to experienced personnel, this is likely to involve the construction of warehouse facilities at which tobacco leaf may be subjected to further grading after purchase and is then trimmed (removing stems and tips) so that cigarette manufacturers can feed it straight into their machines when they receive it⁵. Once a company has made such investments in a country, it is in its interest to obtain as much tobacco as possible from that country. Perhaps even more importantly, through its presence in a country, it will hope to foster a widespread understanding of its requirements as a buyer. Over time, therefore, the exporting country can build its own specific tobacco-related (knowledge) assets to mirror the specific (capital) investment made by the buyer. This process reinforces the concentration of export amongst existing supplier countries.

Tobacco Production in Malawi

Malawi is the second largest tobacco producer in SSA after Zimbabwe (Figure 2). Between them these two countries accounted for just under 70% of tobacco produced in SSA during 1965-2004 and 75% during the 1990s. Smaller producing countries grow most of their leaf for domestic cigarette production, so the share of SSA tobacco leaf exports accounted for by Zimbabwe and Malawi is even higher – 87% during 1965-2004.

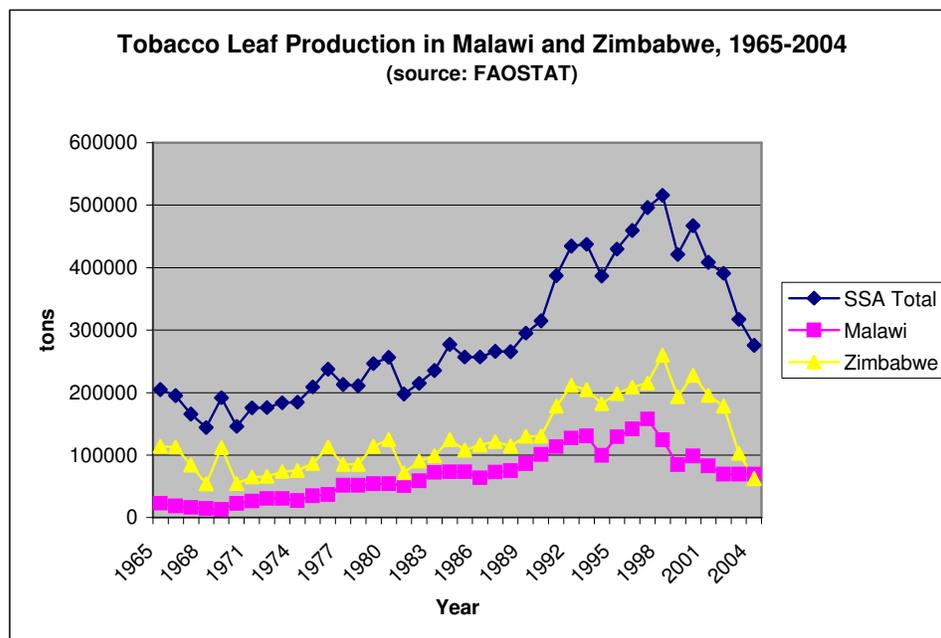
Figure 2 shows a steady growth in production since Independence in Malawi and from 1970 in Zimbabwe (after an initial drop in production after the Unilateral Declaration of Independence in 1965 and the imposition of international sanctions⁶). Production peaked in 1997 in Malawi and in 1998 in Zimbabwe. It has since collapsed in Zimbabwe following the initiation of the accelerated fast-track land reform programme in 2001. According to Jaffee, 2003, Malawi figures since 1999 are underestimated by FAOSTAT data, because large quantities of leaf have been sold informally across the border into Mozambique, to avoid costs associated with the Malawian auction system. Jaffee, 2003 estimates Malawian production at 142,000 tons in 2000 and 125,000 tons in 2001.

The rising tobacco production in Malawi (and Zimbabwe) since the 1960s has translated into an increasing share of world exports of tobacco leaf. Using FAOSTAT figures, Malawi's share of global tobacco leaf exports (by value) rose from 1.8% during 1965-74 to 3.0% during 1975-84 to 4.4% during 1985-94 and 5.1% during 1995-2004. Volume figures give very similar shares. With the gradual reduction in support for tobacco production in the US, Malawi has recently overtaken the US as the world's leading exporter of burley tobacco (Jaffee, 2003).

⁵ According to FAO, 2003, this can add 30-50% to the value of the exported product. In Malawi, the warehouses, located near the auction floors, are a major source of seasonal employment.

⁶ Production of flue-cured Virginia tobacco in Malawi received a boost from the difficulties experienced by the tobacco sector in its larger neighbour.

Figure 2



According to FAO, 2003, tobacco accounts for around 60% of total export revenue in Malawi. The same source estimates that around one million people (20% of the total labour force) are involved in the tobacco industry to some degree, either as producers, as labourers on estates or in processing factories, or as buyers or transporters. Whilst much of this engagement is part-time and/or casual, the integrated household survey (IHS) records income from tobacco sales as the main source of household (cash) income in the major growing districts in the country.

The Market for Malawi Tobacco

Agro-ecological conditions in Malawi are acceptable for tobacco production (the crop does well in sandy soil), but not outstanding. There are plenty of other places in SSA where tobacco could grow equally as well. Instead, Malawi's strong position in tobacco export is explained by two factors.

Firstly, the varieties of burley tobacco grown in Malawi are valued because they are relatively low in nicotine and also because of the low level of agrochemical use on tobacco production (indeed, agriculture in general!) in Malawi. Exports of burley tobacco from Brazil are also growing⁷, but these are (currently) only a partial substitute for Malawian burley, because the nicotine levels in Brazilian burley are higher than those in Malawian varieties. The most recent Brazilian crop had a higher nicotine content than normal and this is said to have contributed to extra demand for Malawian burley in 2007 and hence the high prices observed on the Malawi auctions (see below).

⁷ Total tobacco exports from Brazil (of which burley is just one part) have doubled over the past decade and are now four-five times as large as exports from Malawi. According to FAOSTAT, Brazil now accounts for around a quarter of all global exports of unmanufactured tobacco.

The second factor is path dependence. White settlers began growing tobacco in what is now Malawi at the turn of the twentieth century (van Donge, 2002). There was a steady growth in production until Independence in 1964. At this point, the new political elite began to invest in tobacco production. They also ensured that there was a policy environment conducive to investment by multinational tobacco buyers. Following the logic of mutually reinforcing asset specific investments set out above, this cemented Malawi's position as a major tobacco exporter.

For much of the past 40 years, Malawi's relationship with the major multinational tobacco buyers is broadly viewed as having been of benefit to both parties. However, over the past decade it has become increasingly strained.

van Donge, 2002 reports that the major buyers at Malawian tobacco auctions undertake to buy whatever leaf is brought for sale. However, they come to the auction with forward contracts already agreed with the multinational cigarette companies and, once they have fulfilled these contractual obligations, their options for selling the remainder of the crop at an attractive price are quite limited⁸. Hence, auction prices can fall precipitously when production outstrips the buyers' immediate requirements⁹. This is reinforced by the practice of the buyers' parent companies of allocating specified lines of credit to their representatives in Malawi, then paying them bonuses according to whether or not they fulfil their obligations to the cigarette companies within these budgets.

Given the highly inelastic demand curve facing Malawian producers, one would expect significant price fluctuations from year to year relative to notional "world" prices. Whilst we have already indicated that we treat the prices in Figure 1 with considerable caution, these do appear to lend some support to this view¹⁰.

The main source of contention in recent years, however, has been that the number of buyers at the auction has been falling, as international tobacco traders have merged their operations. As a result, competition at the auction, which was always fairly limited (van Donge, 2002), all but disappeared. At the turn of this century, three buyers – affiliates of Dimon, Standard Commercial and Universal Leaf (all US firms) – accounted for more than 90% of purchases made at Malawi's three tobacco auctions. A few smaller private companies plus the parastatal ADMARC accounted for the remainder. However, since then a new company, Alliance One, has been formed through the merger of Dimon and Standard Commercial. This meant that there were only two major buyers at the auctions.

⁸ FAOSTAT data on the destinations to which Malawi tobacco exports are sent show that in 2003 (the latest year for which figures are available) 45% went to Western Europe and 15% to North America. Only 12% went to Asian markets, just less than was exported to other African countries. Around 9% was sent to Eastern Europe and the former Soviet Union. These figures suggest that Malawi burley is still valued as a high quality (low nicotine) filler by higher paying markets, whilst cigarette manufacturers for Asian markets use lower quality product.

⁹ Taking a longer-term view, one can argue that volumes in Malawi have never fully satisfied the requirements of international buyers.

¹⁰ The world price series is a weighted average of the prices received by all exporting countries. It may, therefore, be smoother than the series for Zimbabwe and Malawi simply because non-synchronous price fluctuations across countries are averaged out within the aggregate figure. However, the alternative explanation is that producers in Zimbabwe and Malawi are much more dependent upon international buyers than producers in countries with a large domestic cigarette industry, the demand from which will tend to be quite stable from year to year.

In 2006 the Malawi government decided to challenge this duopsony by establishing the government-backed company Malawi Leaf to buy in competition with the multinational buyers. In 2007, as well as increasing the working capital available to Malawi Leaf, it persuaded a Brazilian firm to enter the market as an additional buyer. As noted above, prices on the Malawi auctions have jumped significantly in 2007. However, at this stage it is hard to tell to what extent this is due to the intensified competition as opposed to the nature of the Brazilian burley crop. It also remains to be seen how sustainable the operations of Malawi Leaf are.

The Organisation of Tobacco Production in Malawi

Whilst smallholder farmers now dominate production in Malawi (Table 1), this is a fairly recent phenomenon. As in Zimbabwe, tobacco production was pioneered by white, settler farmers. After Independence many of the country's political and economic elite invested in tobacco production, also on relatively large land holdings. However, the Special Crops Act of 1964 maintained the previous prohibition on smallholder tobacco cultivation of burley and flue-cured Virginia tobacco. The official justification for this "elite" production system was that international buyers only required a certain quantity of tobacco (of particular qualities) from Malawi and that unrestricted production would tend to generate more tobacco leaf than was required, plus a mismatch between qualities required and supplied, that would simply depress the prices that Malawian growers would receive.

In order to discern what international buyers wanted, annual meetings were held between the buyers and local stakeholders. Following on from these meetings, quotas were issued to the country's producers. As noted by Jaffee, 2003, these quotas performed two functions. The first was that they attempted to ensure that supply would roughly match perceived demand. Consideration of Figure 1 suggests that they were only partially successful in this objective. The second function of the quotas was a political one: they were a major mechanism by which President Banda distributed patronage to his political allies.

An advantage of the "elite" production system was that top politicians and policy makers had an interest in the maintenance of supportive policies for the sector. This made Malawi a relatively safe place for international investment in tobacco (e.g. in leaf handling and packaging facilities around the auction floors), despite the high poverty levels and low level of development of the country as a whole. A major disadvantage was the widespread resentment that built up amongst those who were excluded from the benefits of tobacco cultivation.

Whilst burley and flue-cured Virginia tobacco were the exclusive preserve of the estate sector in Malawi, some smallholders were assisted to grow sun air cured, oriental and dark fired tobacco. These were specialist tobaccos sold mainly to Netherlands for pipe tobacco and to West Africa respectively. The marketing parastatal ADMARC provided these smallholders with the necessary inputs and technical advice and had a monopsony on the purchase and export of the resulting produce. Kydd and Christiansen, 1982 report that ADMARC paid carefully calculated prices to these producers that enabled it to make large profits on its tobacco trading. These profits, together with other export earnings, were sufficient to cover the deficits of its domestic grain marketing operations and also to generate a surplus, much of

which was lent to large-scale tobacco estates, especially Press Holdings, which had been established by President Banda¹¹.

They furthermore argue that much of the “easy money” flowing to elite estates in the 1970s was not well used. Many of the estates created in the 1970s attracted poor managers and ran into financial trouble, despite the general picture of sectoral growth. This illustrates the importance of sound management and entrepreneurship, even where the fundamental prospects for a sector are good.

By the early 1980s the resentment at the exclusion of the majority of the population from the benefits of tobacco production had begun to constitute a threat to the stability of President Banda’s regime. Thus, the government moved to relax the rules governing access to tobacco quotas, such that a new class of producer – small “estates” of 10-20 ha created on a leasehold basis out of previously customary land – could grow burley (or flue-cured) tobacco. Around 30,000 such estates were created during the 1980s and accounted for most of the production growth observed during this period (Figure 2). The quota system was expanded to incorporate these new players, who were allowed to sell their production direct to auction.

The most fundamental change to the system, however, came after the election of 1994. With the encouragement of external donors, the new government amended the 1964 Special Crops Act so as to allow smallholders to grow burley tobacco. The intention was that smallholder tobacco growers would be organised into clubs, which would receive sales quotas. A cadre of so-called “intermediate buyers” (IBs) was also licensed to facilitate the marketing of tobacco leaf from clubs that could not readily take their own leaf to auction.

The response to this liberalisation move was rapid, with around 350,000 smallholder households involved in burley production by the time of the 1997/98 Integrated Household Survey. Many of the best estate workers and/or tenants left to farm burley on their own account, using the knowledge acquired whilst working for large-scale enterprises. Meanwhile, the Malawi Rural Finance Company (MRFC) established a large lending programme for smallholder burley growers, which financed an estimated 30-40% of the most promising producers.

During the same period, estate production experienced something of a profitability crisis (see Figure 1 for prices) due to the higher overhead costs faced by estates than by smallholder producers¹². In addition, the arrival of the IBs made it easier for “visiting tenants” to side-sell their tobacco leaf, threatening the continued viability of the visiting tenant system, whilst many of their best workers left to farm tobacco on their own account. Thus, between liberalisation in 1994 and the turn of the century, burley production on both small (customary leasehold) estates and medium-large (elite) estates fell from around 35,000 tons p.a. to around 20,000 tons p.a., whilst smallholder production grew to account for 70% of the national crop (Jaffee, 2003).

This expansion in smallholder tobacco production spread the benefits from the sector more widely than they had ever been spread before. Jaffee, 2003 argues that the smallholder

¹¹ van Donge, 2002 reports that Press Holdings owned 18 tobacco estates by the early 1970s.

¹² van Donge, 2002 notes that wood was becoming increasingly scarce as the population grew. Large-scale estates had to pay large sums to acquire wood in sufficient quantities, whereas smallholders still went out to collect it (and didn’t count this time in their profitability calculations). Curing of Virginia tobacco is much more demanding of wood than burley, where wood is basically required for the construction of barns.

tobacco boom contributed to the improvement in social and poverty indicators seen in the second half of the 1990s. However, nutrition data show that child stunting is highest in the main tobacco growing areas, even though expenditure data show that they are not the poorest (Government of Malawi and World Bank, 2006).

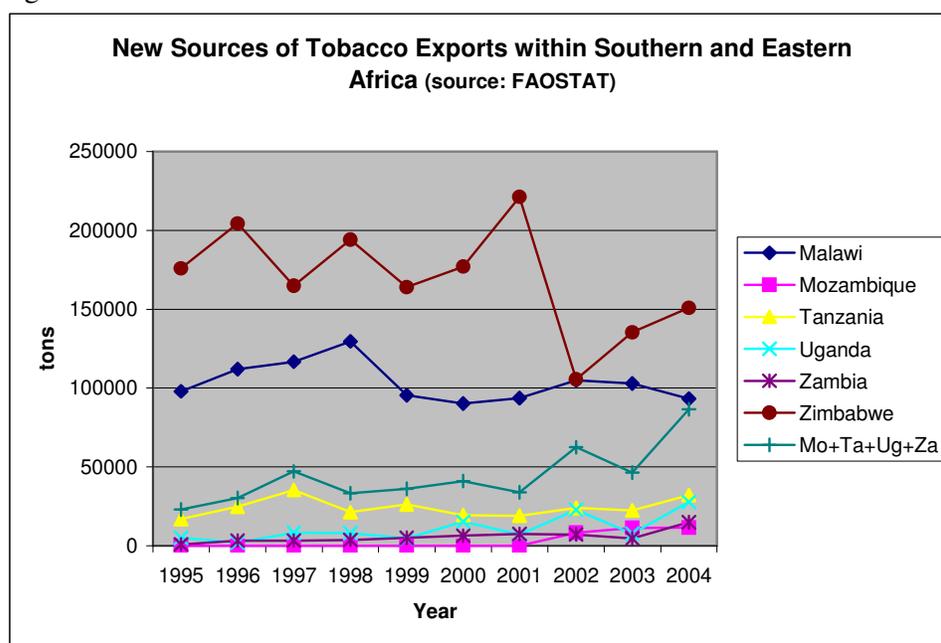
Meanwhile, there are several key challenges associated with the longer-term transformation of the sector into a successful smallholder-based one. As in many other SSA cash crop sectors, the set of institutions put in place in the early post-liberalisation years constituted, at best, a partial solution to these various challenges. So far little progress has been made in evolving a set of institutions to serve the majority of smallholder tobacco producers.

Factors Affecting the Competitiveness of the Malawi Tobacco Sector

It is in the nature of international commodity markets that new sources of competition are always arising. The most obvious competitive threat to Malawi's tobacco industry comes from Brazil. At the moment, Malawian burley is preferred by cigarette manufacturers in the higher paying markets because of its low nicotine levels. However, Brazilian researchers are working on lowering nicotine levels in their varieties.

Another potential threat comes from neighbouring countries. Figure 3 shows the results of recent efforts by international tobacco buyers to encourage new sources of supply in southern and eastern Africa. These efforts may owe as much to concerns over the future of Zimbabwe's tobacco supplies as to a desire to undercut Malawian producers. However, Mozambican burley tobacco, in particular, is similar to the Malawian product¹³.

Figure 3



¹³ If wood shortages become a major constraint in Malawi, then tobacco from Mozambique (where population densities are low and trees still plentiful) could become considerably cheaper than Malawi's.

Faced with such external threats, it is vital for the Malawi industry that it continues to evolve internally so as to be as efficient and competitive as possible. Jaffee, 2003 highlights three problems affecting the competitiveness and, therefore, profitability of the smallholder-based Malawi tobacco sector:

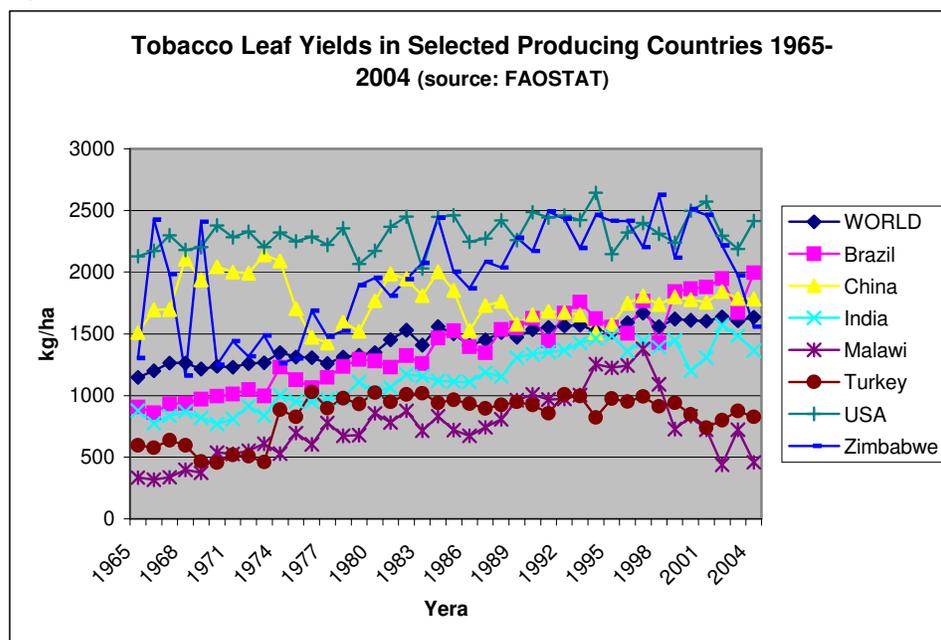
- Yields are apparently falling
- Quality is also apparently falling
- High transaction costs associated with the current marketing arrangements depress producer prices – a particular problem when world prices are low.

We consider each of these problems briefly in turn.

Yields

Figure 4 shows that Malawian yields are low by international standards, but that they were growing as fast or faster than the global average yield until 1997. According to Figure 4, the entry of customary leasehold estates in the 1980s depressed average yields within the sector, at least initially. Figure 4 also shows that yields rose quite sharply during the first years of smallholder participation, but unfortunately the data do not allow us to decompose these figures either by farm type (LSC, small-medium estate, smallholder) or tobacco type (burley, Virginia).

Figure 4



However, drawing on data from the Malawian Tobacco Control Commission, Jaffee, 2003 paints a somewhat different picture of yield trends since 1990. Thus, he states that Virginia yields, whilst higher than burley, declined precipitously during the 1990s, reflecting the financial problems faced by estates during this period. (Virginia is exclusively an estate crop in Malawi). He also states that burley yields declined steadily from 1993 onwards (i.e. once

smallholders began participating within the sector). This questions the strong upward trend in yields shown in Figure 4 for 1993-97. On the other hand, neither the figure that he quotes for Virginia yield in 2001 (973 kg/ha) nor that for burley yield in the same year (922 kg/ha) is as low as the yields shown in Figure 4 for 1999-2004. Similarly, data from the Ministry of Agriculture crop estimates surveys indicate burley yields of 828 kg/ha in 2003/04, 672 kg/ha in 2004/05 and 905 kg/ha in 2005/06.

We noted above that, since 1999, the FAOSTAT production figures have been underestimated, due to the high quantities of leaf sold informally across border into Mozambique. Given the way that FAOSTAT yield data are derived, we suggest that the yield figures for this period are similarly underestimated. Nevertheless, as Jaffee, 2003 notes, there is cause for concern that tobacco yields in Malawi are falling at a time when lower world prices make it essential for producers to be as productive as possible in order to continue to return a profit.

Conceptually, one can distinguish two different reasons for the decline in yields since 1993 (or 1997). One is simply that smallholders achieve lower yields than estates and smallholders' share of total production has been rising, even if yields within smallholder burley production have remained stable during this time. The second is that yields *within* producer categories are falling. We have reason to believe that this latter hypothesis is true for estate producers, but have been unable to find data that show the situation specifically for smallholder burley. Either way, however, the challenge is to improve service delivery – most notably, extension advice, fertiliser supplies and access to credit – to smallholder producers¹⁴.

Quality

According to Jaffee, 2003, the evidence for quality decline since 1993 is less conclusive than that for yield decline. However, there are strong *a priori* reasons to expect that smallholders, who are receiving little technical advice or feedback from the auction floor and using few purchased inputs, will achieve lower average quality than established producers. An important additional dimension to the quality story in the case of tobacco is that of post-harvest handling. Here, several of the aspects of current marketing arrangements that raise marketing costs and/or depress prices for smallholder producers (poor management of satellite depots for tobacco leaf assembly, long queues at the Lilongwe auction) also tend to reduce quality. These are considered further below.

One particular quality problem in recent years has been so-called “nesting”. Sellers presenting tobacco at the auction make sure that good quality leaf shows on the outside of the bale and hide poorer quality leaf or even other items, such as bricks or metal, inside. This is a phenomenon that has also been encountered in other African cash crops systems (e.g. cotton) where quality control procedures have been lax. Where nesting is common, buyers have to invest in additional re-grading of bales after they have been purchased from the auction. If major contamination is missed, whole consignments may be returned by overseas buyers. Nesting increased as a problem at the Malawi tobacco auctions around 2000. However, given that all tobacco has to pass through one of the three official auction floors, it was relatively

¹⁴ Many smallholder tobacco producers farm with limited expertise and using (almost) no fertiliser. Various initiatives have been taken since 1997 to provide smallholder households with free or subsidised fertiliser for maize production and it is possible that some of this fertiliser has been applied to tobacco plots. Equally, however, some fertiliser acquired through loans for tobacco production may have been applied instead on maize.

straightforward to put control mechanisms in place. New regulations were introduced at the auction floors in 2002 and the problem has now been effectively contained.

Insofar as there is a decline in quality, the big question is how seriously the major buyers of Malawi's tobacco view it. van Donge, 2002 observed that the international buyers' representatives were in favour of restricting production in the country, so as to generate higher prices for higher quality leaf. The Malawi offices of the major buying companies are charged by their head offices with disposing of surplus tobacco leaf over and above that required by the multinational cigarette manufacturers and there is little reward in this. Meanwhile, as tobacco leaf comprises a relatively small proportion of the cost of cigarettes, multinational cigarette manufacturers are arguably more sensitive to leaf quality than price.

If this is the case, one would expect buyers to be less than enthusiastic about a switch to smallholder production that increased total production, but at the expense of quality. Consistent with this, key informant interviews conducted in early 2007 indicated that the main buyers in Malawi are growing increasingly disgruntled with the country's auction system, because it is no longer delivering the quality of tobacco leaf that they require. The worst case scenario would be that buyers gradually migrate to other producing countries if these could deliver better quality leaf.

On the other hand, both van Donge, 2002 and Jaffee, 2003 note that there are powerful vested interests behind talk of a quality crisis. Estate producers emphasise the quality problems associated with smallholder production as a way of contesting the basic decision to liberalise in 1994 (or at least to say, "we told you so"!). Meanwhile, international buyers have an interest in talking up quality issues because this provides a justification for the low prices paid at the Malawian auctions – low prices that others say are the result of inadequate competition.

Jaffee, 2003, in particular, talks down the idea of a fundamental loss of competitive position as a result of quality changes. He writes: "Rather than an uncontrolled expansion of tobacco, what occurred in the late 1990s was simply the redistribution of production from estates to smallholders ... Production expanded to the level (or, more accurately, to the range) of output which the international buyers have indicated is the level of demand for the Malawi product." (p29). Consistent with this view is the fact that Alliance One is currently investing US\$1 million in new processing facilities within the country. This suggests a degree of confidence in the country's future as a major tobacco exporter.

High Transaction Costs in Marketing

There are inefficiencies in getting smallholder tobacco to auction, which we discuss in more detail below. In addition, there are significant costs and delays when the tobacco is there. For some years there have been three auction floors in the country, at Limbe, Lilongwe and Mzuzu. These are all run by a single company, Auction Holdings Ltd (AHL), which is owned jointly by the parastatal ADMARC, TAMA and some of the large tobacco growers. Smallholder growers are neither owners nor represented on AHL's board.

Jaffee, 2003 highlights two main problems with the functioning of the auctions. The first is "congestion", especially at the Lilongwe auction, as production has risen. Officially, a delivery quota system remains in operation, whereby sellers pre-book slots at the auction at which their tobacco will be sold. However, this is avoided by those with money or

connections, resulting in long queues for others looking to deliver to the auction floor. Consignments can be delayed for up to a fortnight at the height of the season. The second problem is the high charges imposed by AHL: an auction fee of 3.95% of gross revenue realised and 3% of the loan amount to apply a stop-order for a financial institution. These are much higher than the comparable charges in Zimbabwe and are in addition to several other cesses and levies collected by AHL on behalf of others¹⁵.

According to Jaffee, 2003, the increasing quantities of tobacco being exported informally across the Mozambique border then re-imported as Mozambique tobacco is testimony to the fact that the auction system is not serving Malawian growers well.

Institutional Arrangements within the Malawi Tobacco Sector: The Challenge of Serving Smallholder Producers

Current institutional arrangements within the Malawi tobacco sector are based around the auction system for tobacco marketing. These arrangements worked well until the 1980s. As production within the sector was regulated by quota, the main function of the auction system was to reward individual leaf consignments for their quality attributes (thereby also providing insight into buyers' quality requirements), rather than to provide price signals to producers to raise or reduce future production. However, in years of production shortfall, it may be that the competition at the auction did raise prices for producers (Figure 1). During these years, large-scale tobacco farms were independent businesses (more or less well run) that could access credit directly from commercial banks. Moreover, the direct interaction between their senior management / owners and the representatives of the international buyers, on the auction floor and elsewhere, meant that they developed a good understanding of what the buyers wanted. Thus, there was little need for vertical coordination or integration of the supply chain.

More recently, the same formal arrangements have not worked so well. Few smallholder producers personally attend the auction, so intermediate institutions are needed to:

- Offer them efficient ways of getting their tobacco to auction
- Provide them with reliable information on buyers' quality requirements.

Institutional arrangements are also required for the delivery of pre-harvest services (finance, extension advice, input supply) to enable smallholders to respond to the demands and requirements of buyers, as well as to raise their productivity and returns from tobacco production. Whilst efficient arrangements are in place for a minority of smallholder producers, the remainder produce tobacco with little or no support.

There have been three ways that smallholder producers could get their tobacco to auction since liberalisation in 1994. For some years intermediate buyers (IBs) bought leaf from producers at the farm gate. By 1997 around 4000 such buyers were registered, although they never accounted for much more than 10% of the total crop sold at auction. However, the scheme proved controversial for three reasons:

- Some IBs lacked expertise in tobacco grading and handling, so their activities were alleged to undermine the quality incentives faced by producers;

¹⁵ The reason for this is not entirely clear. One would expect both the large growers and possibly also TAMA to use their shareholdings and/or management representation to keep fees at competitive levels. The "congestion" problem may be most acute for smallholder growers, but it also reflects wider problems in the tobacco marketing system as a whole.

- There were allegations that IBs paid unjustifiably low prices to growers;
- The scheme was disliked by estate owners as it was claimed to encourage side-selling by visiting tenants. (According to van Donge, 2002, the original stipulation that tobacco could only be sold at official auction floors was introduced to protect landlords with visiting tenants from the activities of an earlier generation of peripatetic buyers).

Jaffee, 2003 argues that most of the allegations levelled at IBs as a whole were unfounded, although they may have been true for individuals. Arguably, with time, the IB system could have evolved to provide the market information and extension services – if not the inputs and credit - that smallholder tobacco producers need. However, faced by concerted opposition from other sector stakeholders, the scheme was terminated in 2000.

Since 2000, producers have been able to take their leaf to one of 88 designated depots where it is stored until it can be transported (with sufficient other consignments) to the auction. Effectively, this is the current default option for smallholder tobacco growers. The depots are owned and managed by individuals, typically people associated with the Tobacco Association of Malawi (TAMA). Transportation of tobacco from the depots to the auctions is done at set transport rates negotiated by TAMA. However, as with IBs, performance of depot managers is at best uneven. For example, tobacco may be allowed to deteriorate in quality whilst in storage. Meanwhile, NASFAM-negotiated transport rates demonstrate that TAMA rates are not as competitive as they could be.

Unlike the IB system, the current system lacks competition. Competition can be a double-edged sword within African cash crop systems. However, in this case the incentives facing the managers of designated depots are not conducive to high quality service or information provision.

The third way that some smallholder producers have been able to take their tobacco to auction since liberalisation is through organised clubs, most notably those affiliated to NASFAM. Formally, since the early 1990s most smallholder tobacco growers have been organised into clubs, the idea being that these clubs should receive sales quotas¹⁶. However, in practice the importance of the quota system as a means of regulating production volumes has declined over the past decade. Initially, a USAID-funded Smallholder Agribusiness Development Project (SADP) worked to build the capacity of tobacco growers' clubs, many of which had previously focused on maize production¹⁷. SADP-supported clubs have subsequently formed the basis of the National Association of Smallholder Farmers of Malawi (NASFAM), which works in several commodity systems beyond tobacco. An effective club structure can facilitate provision of extension advice (either through links with government extension staff or in-house), improve access to fertiliser supplies through bulk ordering and create an environment in which seasonal credit is repaid. NASFAM also negotiates its own transport rates with transporters, which can be considerably lower than those paid by other producers. Members of NASFAM-affiliated clubs, therefore, tend to pursue more intensive tobacco production practices than other producers¹⁸.

¹⁶ There are around 20,000 clubs registered with the Tobacco Control Commission. These are thought to have on average around 15 members each.

¹⁷ USAID began supporting the establishment of smallholder tobacco clubs even before the formal liberalisation of the sector (van Donge, 2002).

¹⁸ The experience of Kilicafe in the Tanzania coffee sector is similar to that of NASFAM in Malawi tobacco: with a strong farmers' organisation to provide pre-harvest services and to assist with output marketing,

However, NASFAM-affiliated clubs only comprise about 20% of smallholder tobacco growers' clubs in Malawi. NASFAM continues to expand, but there are limits to how fast new groups can be formed and trained if they are to develop into strong, independent organisations (Chirwa *et al.*, 2005).

If tobacco production in Malawi is to continue to contribute to poverty reduction goals within the country, institutional arrangements need to be found to extend the level of service provision (and preferably also organisation and understanding) enjoyed by NASFAM-affiliated clubs to a larger proportion of smallholder tobacco producers. Jaffee, 2003 notes that no effort was made by the government extension system to increase its support to the country's tobacco producers when hundreds of thousands of smallholder households began growing the crop. Meanwhile, the Malawi Rural Finance Company (MRFC) has encountered repayment problems in recent years, as world tobacco prices have fallen, and is having to scale down its lending to the sector.

One option is to encourage contract farming relationships between international buyers and smallholder tobacco producers. These would provide a mechanism by which technical advice, inputs and finance could be delivered to participating farmers. Buyers could also communicate their quality and other requirements to their contract farmers and would typically also handle the marketing of the tobacco beyond the farm gate.

Since 2003/04 contract farming has been used to revive the production of flue-cured tobacco within the country, following the decline of commercial tobacco production. This experiment is considered a success. Production of flue-cured tobacco has returned to its 1980s levels (15-18,000 tons p.a.) and credit repayment rates have been in excess of 90%.

Experience with contract farming schemes in the cotton sectors of Zimbabwe and Zambia suggests that such schemes could reach more than the 30-40% of smallholder tobacco farmers so far served by MRFC, but that this might require some regulatory restrictions on competition for tobacco leaf around harvest time¹⁹. However, contract farming schemes would seek to work first with the "top end" producers, possibly including many of those currently with NASFAM²⁰. One can well imagine the types of conditions that would be applied to those wishing to participate in a contract farming scheme (e.g. manage your own seed bed, be able to part-finance your fertiliser requirements) that would effectively exclude most of the poorer households amongst the current producers²¹.

smallholder producers can do well in an auction-based system and even successfully engage in direct export marketing. However, like NASFAM, Kilicafe only serves a fraction of the coffee producers in Tanzania.

¹⁹ In other words, the prohibition on IBs would probably have to stay in place to minimise the problem of side-selling.

²⁰ NASFAM clubs could enter collectively into such arrangements. However, their bargaining position within such arrangements would be influenced by whether or not there remained a vibrant auction system that they could return to if they were unhappy with the terms offered to them as contract farmers. Unfortunately, promotion of contract farming would almost certainly come at the expense of the vitality of the auctions.

²¹ Note that these are not necessarily the poorest households within their communities. Indeed, many of the poorest do not engage in tobacco production at all because, given their tiny land allocations and minimal capital, their priority is to grow as much maize as they can for home consumption (Peters and Herrera, 1994).

Furthermore, for international buyers to invest in contract farming schemes, the resulting produce would have to be exempt from the auction system²². If the schemes proved successful, this could mark the end of the auction system, as there would then be insufficient interest in the residual production to justify an auction and insufficient volumes to support the auction infrastructure. Instead, producers who were not accepted as contract farmers, but who still produced some tobacco using their own resources, would have to make direct sales to the contract farming companies. This was how the Zimbabwean cotton sector worked until the current (2006/07) season.

A variant on contract farming would be for any remaining high performing tobacco estates to turn themselves into “core” estates engaged in their own production, but also providing nearby smallholder (out)growers with both pre- and post-harvest services (inputs on credit or input credit guarantees, technical advice, assistance with grading and marketing). We are not sure why this has not happened already since liberalisation, but note that it could be an astute political move for estates to make²³.

The Future of the Auction System

The auction system served the Malawi tobacco sector well when the sector was dominated by large-scale producers with independent means. However, given the absence of intermediate institutions to link the majority of smallholder producers to the auction system and to enable them to respond to any (hypothetical) price or quality signals transmitted by the auction, the suitability of current arrangements is open to question. Contract farming seems the most viable alternative for assisting smallholder tobacco production. Unfortunately, contract farming on any sizeable scale is not compatible with the continuation of the auction.

What would the sector lose by giving up the auction (assuming that the functioning of the auctions themselves could be improved so as to reduce both the delays faced by many suppliers of tobacco and the costs of selling tobacco through auction)? Hypothetically, an auction system should generate a degree of price competition between buyers, at least in years when supplies are limited. It should also generate scarce public information about prices paid for different grades, which may encourage additional entry into the market (albeit short-term and opportunistic) if prices fall too low. Given the large number of grades of tobacco, information on comparative prices over time and space is otherwise very difficult to obtain. In contrast to an auction-based system, pricing within contract farming systems is rarely fully transparent²⁴.

These, however, are hypothetical advantages of an auction system. As noted above, the decline over time in the number of major buyers at the Malawian auctions mean that the auction system has not been delivering these benefits in practice. Malawi Leaf and the new Brazilian buyer have injected some additional competition over the past two seasons, but prior

²² To comply with current regulations, the flue-cured tobacco produced under contract farming arrangements since 2003/04 has been taken to the auction floors. However, it has been handled in a separate area from other consignments and there has been no open competition for it. Effectively, it has changed hands at prices agreed between seller and buyer in advance.

²³ The fact that large-scale commercial farms in Zimbabwe did not develop such arrangements in the first two decades after 1980 is argued by some to have increased their vulnerability to the land invasions that began in 2001.

²⁴ There is also greater scope within vertically integrated supply chains for transfer pricing practices that reduce national foreign currency receipts.

to that prices were considered unremunerative, particularly by estate producers, and price differentials between grades had ceased to provide adequate incentives for producers to seek to produce high quality tobacco.

Moreover, it is understood that the Brazilians actually want to establish a contract farming scheme in the country. (This is how they are used to operating in Brazil – Table 1). We also understand that other buyers would be keen to do this. It, therefore, appears that the days of the auction system could be numbered.

If this is the case, then, whatever the views of the government on the desirability of continuing with the auctions, its best strategy would be to move voluntarily towards what the buyers want. However, it should do so pro-actively in a way that allows Malawi to dictate some of the terms on which the new system works. The most obvious way to do this is to give companies time-bound, but renewable concessions to operate tobacco contract farming systems in the country. If the criteria on which applications for renewal were to be assessed included the numbers of smallholders serviced and the foreign exchange revenues generated, this would align the incentives facing the companies more closely with the Malawian national interest.

A difficulty with this suggestion is that the government's relationship with the more established buying companies is currently highly adversarial. Contracting with these same companies to have a greater role in the future development of the sector would require a certain change of political direction.

Lessons from the Malawi Tobacco Case

Historically, Malawi's tobacco sector has achieved a controlled expansion, producing a high value, labour-intensive crop and building good relationships with key international buyers. Over time, the focus of production shifted from large-scale estates, first encompassing smaller (customary leasehold) estates in the 1980s, then moving decisively towards smallholder production during the 1990s. This latter shift was excellent for spreading the gains from sectoral expansion during the 1990s, but at the same time has thrown up considerable challenges in terms of how to provide effective pre- and post-harvest services to numerous, dispersed smallholder producers. The majority of smallholder producers do not currently receive such services, which limits the contribution that the tobacco sector can make to national poverty reduction goals.

The key lesson from the Malawi tobacco case, therefore, is that appropriate institutional arrangements are required if a competitive and profitable export industry is to be built on a smallholder production base.

This case study also highlights the challenges involved in developing an export sector where the international market is highly concentrated. For many years, the Malawian elite maintained close relationships (many would say, too close) with the major international tobacco buyers. This helped to establish Malawi as a major tobacco exporting nation, but gradually the costs in terms of limited price competition became more apparent. The hypothetical advantages of an auction system, therefore, ceased to be realised, whilst other challenges arose with the switch towards a smallholder production base. Recently the government has challenged the dominance of the major multinational buyers. However,

unless it can quickly devise its own ways of delivering pre- and post-harvest services to numerous smallholder tobacco producers, it is likely to have to work closely with them once again to reorganise the sector around a contract farming model in place of the current auction system.

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