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A Comparative Value Chain Analysis of Burley Tobacco in Malawi – 2003/04 and 2009/10

Martin Prowse



University
of Antwerp

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Institute of Development Policy and Management
University of Antwerp

| | |
|------------------|-------------------------|
| Postal address: | Visiting address: |
| Prinsstraat 13 | Lange Sint Annastraat 7 |
| B-2000 Antwerpen | B-2000 Antwerpen |
| Belgium | Belgium |

tel: +32 (0)3 265 57 70
fax +32 (0)3 265 57 71
e-mail: dev@ua.ac.be
www.ua.ac.be/dev

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Martin Prowse*

November 2011

* Institute of Development Policy and Management, University of Antwerp, Belgium.

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ABSTRACT

This article conducts a value chain analysis of smallholder burley tobacco production in Malawi for the 2003/04 and 2009/10 agricultural seasons. The comparison suggests in 2003/04 smallholder profits from growing burley were limited by two main factors: first, the practices of leaf merchant companies on the auction floors who operated as a cartel (and governed the burley supply thread); and secondly, by inefficient marketing arrangements. By the 2009/10 season the rents, governance and systemic efficiency within the supply thread had changed considerably: there was greater competition on the auction floors largely due to direct state intervention (which increased growers' net margins in nominal terms), improvements in marketing arrangements, tighter state regulation (including the introduction of minimum prices for grades of burley) and increased systemic efficiency (through a rapid expansion of contract farming). The article concludes by highlighting some of the opportunities and threats that this form of vertical integration poses smallholder growers.

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1. INTRODUCTION

With the unravelling of flue-cured tobacco production on estates in nearby Zimbabwe, Malawi has taken the unenviable mantle of being the world's most tobacco-reliant economy with the crop contributing roughly 60 percent of foreign exchange earnings in recent years. But in contrast to Zimbabwe before its political crisis, Malawi's tobacco production is now dominated by smallholders, not estates. Whilst the Malawi Congress Party (MCP) under President Kamuzu Banda pursued an estate-based development strategy from the late 1960s to around 1990 (when the two most lucrative types of tobacco – flue cured and burley – were reserved exclusively for the estate sub sector), since 1990 smallholders have grown an increasing proportion of burley (an air-cured tobacco, used as a cheap filler in American-blend cigarettes) (see Orr, 2000; Van Donge, 2002; Jaffee, 2003; Peters, 2006).¹ Smallholders have grasped this opportunity. By the end of the 1990s smallholders were growing 60% of national burley production (averaging about 120,000 metric tonnes), with this production concentrated in Kasungu district, Central Region, and Rumphi district, Northern Region (see Prowse, 2009).

Although the shift from estate to smallholder burley production has generated plenty of academic interest (Tobin and Knausenberger, 1998; Orr, 2000; van Donge, 2002; Jaffee, 2003; Peters, 2006; Negri and Porto, 2008), little attention has been paid to the dynamics within the burley value chain. There may be good reasons for this. For example, early academic work was precipitated by the two donor agencies who promoted burley reform in the 1990s: the World Bank and USAID (for example, see Diagne *et al* 1996; Zeller *et al* 1998). By the early 2000s most donor agencies had formally distanced themselves from the sector. It appears that the Framework Convention on Tobacco Control and tobacco's reputation as a pariah crop led donors to engage less with the industry. A good example comes from a senior DfID employee, who, when asked about the backbone of the Malawian economy, stated bluntly 'we do not *do* tobacco'.

This article uses primary research and secondary sources to conduct a value chain analysis of smallholder burley production from seed through to export (Gereffi and Korzeniewicz, 1994; Kaplinsky and Morris, 2000). The article compares the smallholder burley supply thread for the 2003/04 and 2009/10 agricultural seasons to highlight the changes to the institutional framework, rents, governance and systemic efficiency. Primary research was conducted in Lilongwe and Kasungu district between August 2002 and June 2004 utilising household surveys, participatory rural appraisal techniques, semi-structured interviews, focus group discussions and ethnography. Two further short research trips to Lilongwe were conducted in 2010.

The article consists of five further sections. The first discusses the particular value chain approach utilised. The second section offers a brief overview of smallholder burley

¹ From 1961 until 1968 (with political independence in 1964) the Malawian government's main tobacco policy was to promote smallholder production on communal land (Kydd 1984, Mkandawire 1999). In addition to being a political pay-off to the rural supporters of the MCP, the promotion of smallholder production was also a response to the increased growth of 'progressive' peasant production of cash crops in the 1950s (Kydd, 1984). Whilst the pro-peasant policies of the 1960s did elicit growth in communal land production, government was confronted by a lack of a sustained supply response (Mkandawire 1999). In 1968 Malawi faced a severe current account deficit (Baker 1962, Thomas 1975), and as nationalist hostility to the estate sub sector, so vehement in the early 1960s, began to wane (McCracken 1984), the estate sub sector began to be seen a future source of growth (see Pryor and Chipeta, 1990).

production and marketing, and introduces the key actors in the industry in 2003/04. The third section discusses the institutional framework, rents, governance and systemic efficiency of the supply thread in 2003/04. The fourth section performs the same tasks for the 2009/10 season. The fifth section compares the structure and performance of the value chain across these two time periods. The article concludes by discussing current challenges within the tobacco sector and highlights some of the opportunities and threats that contract farming poses smallholder producers.

2. APPROACH TO VALUE CHAIN ANALYSIS

Value chain analysis has become a reasonably popular, if contested, heuristic tool in the social sciences and in development studies in particular. It attempts to map the spectrum of activities in the creation of a product. Typically, value chain analysis tracks a single commodity from basic constituent materials, initial production, through primary (and perhaps further) trading and processing, to possible export and consumption. In other words, a value chain can be defined as:

“the process by which technology is combined with material and labour inputs, and then processed inputs are assembled, marketed and distributed. A single firm may consist of one link in this process, or it may be extensively vertically integrated” (Kogut, 1985 in Gereffit et al, 2005, p.79).

Within development studies, the approach has mainly been utilised by academics and practitioners to gain insights about the benefits and costs of economic restructuring associated with globalisation (see Gereffi 1999; Gereffi et al, 2005).² The key point here is that value chains have become more complex as increases in efficiency now occur not at one point in the value chain, but through increasing co-ordination of different components of the chain (Kaplinsky and Morris, 2000).³

Similar trends have occurred in many agricultural value chains. These have tended to become increasingly buyer-driven and vertically integrated due to both changing patterns of demand and supply. For example, on the demand side, population growth, income growth in emerging economies, greater urbanisation, greater female participation in the workforce, and increasingly discerning, quality-focused consumers have contributed to greater vertical integration (see Catelo and Costales, 2008; Giovanucci et al, 2008). On the supply side, the liberalisation of national marketing and international trade, the collapse of international commodity agreements, increased product differentiation due to niche market requirements, and the greater importance of public and private standards (for both product and process attributes) have led to greater levels of buyer control (see Humphrey and Memodovic, 2008; Swinnen and Maertens, 2009). Thus, agricultural commodity chains have become more integrated, globalised and consumer driven, referred to as the ‘industrialisation’ of global agriculture.⁴ Instead of supplying an array of generic, standardised commodities, agriculture now supplies highly-differentiated products fulfilling different niche requirement where lead firms exact strict demands on suppliers often through vertical co-ordination (see Daviron and Gibbon, 2002; Ponte, 2002). However, mapping the full range of activities in the production of a commodity is a complex endeavour – if one attempts to trace the origins of all components in a finished article (such as packaging, printing, and items used in processing and transportation). The next section thus outlines the particular value chain approach utilised here.

A more feasible approach than a full value chain analysis is to investigate a particular *filiere* or value thread (Sturgeon, 2001). Value threads focus on one specific ‘ingredient’ in the final commodity. It reduces the *breadth* of focus, and focuses attention on the most important ingredient – in this case, burley tobacco leaves – thus ignoring wider value threads (such as tracing agrochemicals, and materials for processing and packaging).

² Changes in trade regulations, communication technology and international finance has led to patterns of flexible accumulation with a new international division of labour and increasing complexity in terms of ownership and governance.

³ For example, manufactured products are now assembled from components that are spatially separated, leading to just-in-time production techniques, low inventory stocks and a reduced levels of capital goods for lead firms (Harvey 1990).

⁴ Reardon et al (2010) outline how this process occurred first in wholesaling, then in processing, and more recently in retailing (as seen through the increasing market power of supermarkets) over the past twenty five years.

A second important distinction relates not to *breadth*, but to *length*. In many cases it is hard to map one value thread in its entirety due to spatial or commercial reasons. Instead, it is often more straightforward to map the full value thread *minus* the activities of the lead firm in that chain – referred to as a *supply chain*. For export crops, this approach necessitates mapping the *supply chain* from seed through to landed cost in the country or region of consumption (or further processing). Of course, decapitating an agricultural value chain in this manner can ignore important actors, especially in a buyer-driven chain. It also tends to marginalise vital trade issues. However, such a *supply chain* approach draws a clear boundary around the research, limiting the focus mainly to intra-country production, marketing, processing and export.

Third, we analyse the supply thread in terms of four components: the institutional framework; rents; governance; and systemic efficiency. The *institutional framework* refers to external actors who exert influence on the chain.⁵ The central point here is that each value chain is embedded within multiple national, regional and global regulatory frameworks. At the national level, actors in supply threads are meant to adhere to government regulations regarding licensing, taxation, as well product and process standards. At each node in the value chain, actors are often agglomerated into unions or organisations which regulate membership and represent their members' interests. At the regional level and global level, actors can be seen to be subject to two regimes. First, multilateral trade agreements and frameworks (such as World Trade Organisation, European Union, or, in our example here, Common Market for Eastern and Southern Africa regulations), as well as bilateral trade reciprocity. Second, the influence of regional and global product and process standards, such as classification and grading norms, and certain 'credence' factors such as organic or fair-trade practices (or a lack of child labour) (see Giovanucci and Purcell, 2008).

Rents are the returns realised by chain actors through their involvement in the chain. The most accurate proxy for rents are the profit rates at each node, but as these are frequently difficult to calculate or access, the metric of 'value added' can be used to show the distribution of value along a supply thread (Gereffi et al 2001). The extent to which actors are able to realise rents is through their ability to insulate themselves from competition (Kaplinsky and Morris, 2000).⁶ Importantly, rents are often created through strategies that create scarcity and ensure a higher rate of return than competitors, especially through creating barriers to entry. In general, agricultural commodity chains have very low barriers to entry for production, but high barriers in processing and export segments (and later in the high-value marketing, design, branding and retail stages). There are two main channels through which barriers are created. First, innovation and upgrading.⁷ Second, through strategies to limit competition. One example is the creation of cartels in key markets. Such cartels are usually formed because of two main sets of factors: natural causes of largeness, and firm-created causes of largeness

⁵ As Raikes et al (2002) note, early value chain analysis did not systematically consider the influence of regulation on the distribution of rents in a chain, or changes to the governance structure. One exception to this is Dolan et al (1999).

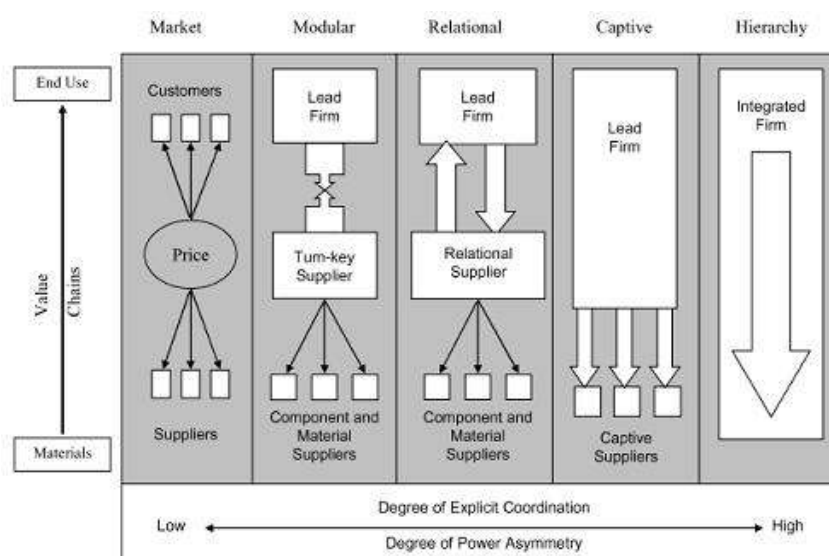
⁶ It is worthwhile highlighting four possible different sources of rent highlighted by Kaplinsky and Morris (2000). First, resource rents can be generated by accessing scarce natural resources. Second, classical rents are internal to, and can be constructed by, the farm/firm through technological, human resource, organisational or marketing superiority. Third, relational rents can be generated through improved relationships with other chain actors. And fourth, exogenous rents can be generated through the policy, infrastructure and financial environment.

⁷ Kaplinsky and Morris (2000) suggest that any attempt at categorising innovation and upgrading needs to include both intra-node changes as well as intra-segment or intra-thread changes. In this respect, four 'typical' trajectories pursued by firms/farms are highlighted (p.38): process upgrading (through increasing internal efficiency processes above those of rivals both within nodes, and within segments); product upgrading (developing new products or improving old products faster than rivals); functional upgrading (altering the sequence and nature of activities within the firm/farm, or changing activities to a higher node in the supply thread); chain upgrading (moving to a new supply thread). Any, or a mix, of these upgrading trajectories can create a degree of scarcity, and thus higher returns.

(Lipsey and Crystal, 1999).⁸ Thus, barriers to entry help to explain the extent to which rents are distributed along a value chain.

Governance is the extent to which chain actors control, co-ordinate, manage and exert power over other actors within the supply thread. In essence, governance explains the insertion of certain producers and firms in particular portions of the supply thread. Lead firms often control the abilities of subordinate actors to upgrade their own activities, and co-ordinate and allocate roles to firms below them.⁹ Early value chain analysis used a binary opposition between arms-length market relations (often for standard products which are not highly specified) versus vertically integrated chains (for bespoke products that require high degrees of co-ordination) to describe governance regimes. From these two ends of the continuum, Gereffi *et al* (2005) suggest five basic types of value chain governance (see Figure 1): *markets* (where the costs of switching to new partners is low); *modular value chains* (where a supplier takes full responsibility for meeting the requirements of a customer, often through using generic capital goods); *relational value chains* (where close mutually-beneficial linkages between firms, based on location, kinship or ethnicity, contribute to inter-dependence and asset specificity); *captive value chains* (where small suppliers are dependent on, and informally controlled by, larger buyers); and *hierarchical value chains* (in other words, vertical integration where the lead firm controls all stages of the chain).

Figure 1 – Typology of governance regimes in value chains



Source: Gereffi et al (2005)

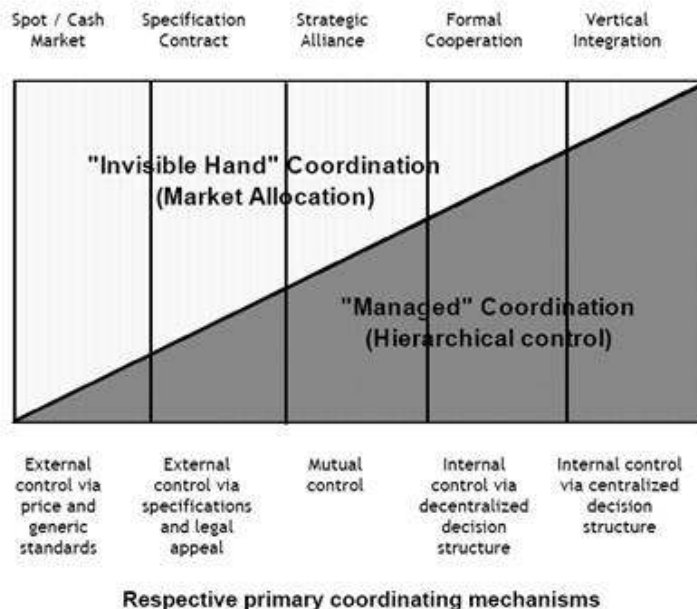
Thus, governance is closely linked to the fourth component of value chain analysis utilised here: *systemic efficiency*. As described above, due to the nature of production becoming ever more specialised, the realisation of surplus is becoming more dependent on increasing efficiency between productive processes, not within them (Kaplinsky and Morris,

⁸ Natural causes of largeness include economies of scale (where an increase in size decreases variable costs of production), a lack of competition due to the cost of capital goods to enter high-rent segments of the value chain, and third, economies of scope (where the smaller the firm, the greater the relative costs to enter key sales markets). Firm-created causes of largeness include mergers and acquisitions (in pursuit of economies of scale), aggressive pricing policies (where companies infringing on high-rent segments of a chain, or infringing on the territory of a cartel, are priced out of a market), and third, straightforward aggression, intimidation and predation (where prospective entrants to a market are threatened or have their staff poached).

⁹ There are five key parameters which are the subject of control in a value chain: *what* is to be produced, *how* it is going to be produced, *when* it is going to be produced, *how much* is going to be produced, and *price* (Humphrey and Schmidt 2001).

2000). In other words, contemporary value chains are shifting from market forms of governance towards hierarchical and vertically co-ordinated forms of governance. For example, Catelo and Costales (2008) detail five types of vertical co-ordination within agricultural value chains which loosely map onto the five types of governance outlined above.

Figure 2 – Strategic options for vertical co-ordination



Source: Catelo and Costales (2008)

Before comparing the smallholder burley supply thread in the 2003/04 and 2009/10 seasons across these four components, we offer an overview of the global burley market before describing the annual cycle of smallholder burley production in Malawi.

In line with increased global production in recent decades, the proportion of tobacco traded has increased from around one fifth in the 1980s to around one third in the early 2000s (Kabambe, 2007). However, most tobacco is still manufactured and consumed domestically. For example, whilst China is now the world's largest tobacco producer (mainly of flue cured) it mainly supplies domestic markets. Indeed, demand is such that China has moved from being a net exporter to a net importer in recent years (*ibid*). Most production in the United States (of both flue cured and burley) also meets domestic demand. In contrast, Brazil, another major producer which also grows both flue cured and burley, has rapidly increased exports from close to 150,000 metric tonnes in the early 1980s to around 500,000 in the mid-2000s (Kabambe, 2007; Moyer-Lee, 2011).

Malawi is one of the three major producers and exporters of burley tobacco alongside Brazil and the United States (Jaffee, 2003; Moyer-Lee, 2011). Despite strong international competition, demand for Malawian burley on international markets remains strong as it has a good reputation on world markets as a flavourless, clean 'filler' tobacco. Therefore, it does not compete directly with burley produced in the United States, Brazil or India (Jaffee 2003). Moreover, whilst the Framework Convention on Tobacco Control (FCTC) has focussed attention on the dangers of tobacco consumption, world demand is still increasing with developing countries now accounting for a greater proportion of both production and consumption (Jaffee 2003). We now introduce the reader to the annual cycle of smallholder burley production in Malawi.

3. ANNUAL CYCLE OF SMALLHOLDER BURLEY PRODUCTION¹⁰

The smallholder burley production cycle starts with the preparation of nursery beds in August or September long before the first rains arrive in November or December.¹¹ A small portion of *dambo* (wetland) is tilled and prepared, one metre wide and up to thirty metres long.¹² Basal fertiliser is applied prior to sowing, and mulch is added to protect the germinating seedlings.

Box 1 - Agricultural Research Extension Trust (ARET)

ARET produces high-quality tobacco seed, and commands around 90% of the domestic market in Malawi. Whilst disease-resistant varieties are distributed widely, it is still common for smallholders to recycle seed from high-yielding plants. ARET also has a number of further functions: first, offering agronomic advice to tobacco farmers (although this is limited for smallholder farmers); and, since 2006/07, completing the annual costs of production which, along with other estimates, are discussed and agreed upon by stakeholders at the annual tobacco seminar.

Sources: ARET (2004), interviews in Lilongwe.

Nursery beds are watered three times daily and after germination mulch is removed. Insecticides and fungicides are often used at this stage (dependent on capital constraints).¹³ Later a top dressing of fertiliser is applied, and seedlings are hardened through clipping and reducing the frequency of watering. In the months before the rains, land is tilled using a hand-held hoe (*kulima mizele*).¹⁴ When the first rains fall, seedlings, around 30cm tall, are transplanted into the ridges (*kudzala fodya*), preferably at 60cm intervals. Immediately after planting, basal fertiliser is applied (sourced from local traders or firms).¹⁵

Box 2 - Fertiliser companies

In the 1990s the fertiliser market in Malawi was dominated by the parastatal Optichem, Norsk Hydro, Farmers World/Agora, Rab Processors, ADMARC and a Smallholder Revolving Fund. The former two companies used to supply the estate sub sector before the fertiliser market was reformed in the mid-1990s. Farmers World/Agora and Rab Processors emerged as key private sector actors after the role of the parastatals – ADMARC and the Smallholder Revolving Fund – was scaled back. In the early 2000s, the private sector sold between 120,000 and 180,000 MT of fertiliser each year with public sector bodies selling between 20,000 and 40,000 MT. However, the proportion of fertiliser sold by ADMARC and the Smallholder Revolving Fund increased rapidly from the 2006/07 season due to the recent fertiliser subsidy programme.

Sources: Westlake, 1999; Kabambe, 2007

¹⁰ The following annual production cycle is of smallholder burley production in Kasungu district. It is based mainly on the 2003/04 season. In this example the smallholder is part of a burley 'club' and sells his/her bales on the auction floors in Lilongwe (see Negri and Porto, 2008). The description of the value chain includes the processing of burley in Malawi, and its export to Rotterdam, the Netherlands.

¹¹ Smallholder agricultural production in Malawi is mainly based on the unimodal pattern of rainfall from November/December through to March/April. The production of tobacco requires basic tools such as a hoe, sickle, watering can, axe, and knife available from trading stores.

¹² Nursery beds are rotated annually to prevent the build up of nematodes.

¹³ The insecticides and fungicides include Copper Oxchloride, Azaldrine, Seven-Seven, and Orthene.

¹⁴ Burley ridges are slightly larger than maize ridges and are roughly one metre apart with a flat top. Box ridges hinder surface run-off.

¹⁵ The recommended fertiliser for basal dressing is Super D or D Compund (Chapola 1994). Very few smallholders use these fertilisers and instead use the cheaper 23:21 fertiliser for maize. It is recommended that basal fertiliser be applied 10 cm away from the seedling and 10 cm deep. Top dressing should be 15 cm from the stem of the plant and 15 cm deep (Chapola, 1994).

Many smallholders rely on credit to purchase fertiliser. High default rates on loans for smallholders have been an on-going issue in Malawi, often resulting in the dissolution and reformation of tobacco clubs (see Box 3).

Box 3 - Smallholder credit institutions for tobacco production

In the early 1990s smallholders received credit from the Smallholder Credit Association (SACA), mainly for hybrid maize production. In 1993, due mainly to the politicisation of the credit system associated with the arrival of democracy in 1994, SACA collapsed. This led to the creation of the Malawi Rural Finance Company (MRFC), created as an autonomous government-owned company in 1993/94, and given technical advice and finance from the World Bank. Although not designed as such, MRFC became the largest lender to smallholder burley clubs, so that by the late 1990s most of the company's loans were directed to what was termed 'mixed crop' production (in other words, burley). By the late 1990s repayment rates were high, over 90% in some years. At this time, smallholders could also receive credit from other financial institutions: including the Malawi Union of Savings and Credit Cooperatives (MUSCCO), Smallholder Agricultural Credit Cooperative (SACCO), as well as commercial lenders. Repayment rates for loans declined early in the last decade, not least due to the famine of 2001/2002. In recent years further financial institutions, such as Opportunity International, have entered this market.

Sources: Jaffee (2003), Diagne and Zeller (2001).

Following the application of basal fertiliser land is weeded (*kupalila fodya*) and usually a top dressing of fertiliser is applied two weeks after planting.¹⁶ Ridges are then banked (to prevent weed growth). By January, the lower leaves of the burley plants (flyings) can be reaped (*kuthyola fodya*).¹⁷ Yellowed leaves are sewn in bunches of four using dried grass and hung on wooden poles within a curing shed (*chigaffa*).¹⁸ Flowers are removed along with suckers (to maximise leaf growth). Cured leaves, which have turned from green/yellow to a reddish brown, are stored in an enclosed part of the shed. Some weeks later cured leaves are conditioned – *kufewetsa fodya* – and are graded (*kusankha fodya*) according to size, colour and quality. Similar grades are tied into hands (*kumanga ndindi*). To make a bale of tobacco, hands of a similar grade are compressed into hessian sacking (which requires a tobacco press, two pieces of hessian, cotton twine and labels).

3.1 Burley clubs

To market tobacco on the auction floors, smallholders register their club with the Tobacco Control Commission (see Box 4). A club, usually between 12-20 people, is allocated a registration number and a marketing quota.

Box 4 - Tobacco Control Commission (TCC)

¹⁶ Most smallholders use the recommended top dressing of CAN, although Urea is used instead.

¹⁷ Reaping tobacco takes place after the morning dew has evaporated but before the day is too hot. Leaves have to be sewn and hung in barns on the day of reaping.

¹⁸ Ideally, the shed is maintained and repaired in the months prior to the onset of the rains (termite-damaged timber is replaced, new plastic sheeting for the roof is obtained, and grass – *udzu* – is used for thatching. The rate at which burley is cured can be controlled through altering the spacing between poles) on which, according to prevailing weather conditions.

The Tobacco Control Commission is a semi-autonomous organ of the Ministry of Agriculture and is charged with overseeing the smooth functioning of the tobacco industry. The TCC is responsible for tobacco crop estimates, marketing quotas, the arbitration of auction floor sales, defining classes and grades of tobacco, and the licensing of floors, buyers and graders. As the 'referee' in the industry, the TCC also withholds the proceeds from overproduction for a number of weeks. The TCC board consists of key stakeholders from the tobacco industry, as well as political appointees. In 2009/10 the neutral image of the TCC had changed. Due to considerable changes in personnel the TCC was seen to be much closer to government than other stakeholders.

Sources: Matthews et al. (1992), interview Managing Director TCC.

To transport tobacco to the auction floors, clubs are affiliated to one of two marketing channels – the Ministry of Agriculture/Tobacco Association of Malawi (TAMA) or a farmers' organisation, such as the National Smallholder Farmers' Association of Malawi (NASFAM). These differ in terms of extension advice, access to credit, and the mode of transportation.

Whilst the Ministry of Agriculture (MoA) has an extension office in each Extension Planning Area (EPA), smallholder clubs receive limited extension advice from officers. However, the MoA does facilitate access to credit institutions. MoA clubs market their tobacco via the TAMA satellite depot system. In this respect the system for MoA clubs mirrors arrangements for estate growers (see Box 5).

Box 5 - Tobacco Association of Malawi (TAMA)

TAMA represented estate tobacco growers when smallholders were excluded from growing burley tobacco, and remains an influential stakeholder in the industry. For example, in the early 2000s the President of TAMA was also the President of the International Tobacco Growers Association (ITGA), a global pro-tobacco lobbying group. TAMA operates a series of local-level depots from where tobacco is stored, and then transported to the auction floors. Smallholders are now able to use this service. TAMA tends to utilise region-based transporter associations such as the Northern Region Transporters Association, the Local Transport Association in the Central Region, and the Regional Transport Association in the South.

Source: Matthews *et al* (1992), USAID (1991a).

Most smallholders prefer to register with a farmers' organisation, the largest of which is NASFAM. Individual NASFAM clubs are joined together into local Group Action Committees (GACs), which together form district-level associations (see Box 6). These in turn are aggregated into a national body. NASFAM clubs receive extension advice from their local association, which also sells basic farm inputs and provides a marketing channel for alternative cash crops such as soya and groundnuts. The local NASFAM association also acts as an intermediary for lenders, and collectively negotiates transport rates for clubs from their local GAC storage sheds to the auction floors.¹⁹

Box 6 - National Smallholder Farmers' Association of Malawi (NASFAM)

¹⁹ NASFAM's transport charges tend to be cheaper than TAMA's as NASFAM head office invites tenders for each association, with shortlisted transporters interviewed by the local association before agreeing on a price. Each association usually chooses a number of transporters to move their bales to the floors.

NASFAM emerged from USAID's involvement with the burley reform process/ Originally set up as the Smallholder Agricultural Development Project (SADP) in 1995, the project aimed to offer independent extension advice to smallholder clubs and allow clubs to receive credit. SADP expanded rapidly and in 1997, with further USAID funding, became NASFAM. Whilst initially focussing on burley tobacco production and marketing, NASFAM has more recently encouraged crop diversification through promoting coffee, chillies, rice, soya and cotton.

Source: Riley (1997)

Bales of burley to be sold on the auction floors are first taken to a NASFAM GAC or a TAMA depot, depending on the affiliation of the club (often using an ox-cart or *matola*). Within a few days or weeks the bale is transported on a truck to the auction floors, run by AHL (see Box 7).

Box 7 - Auction Holdings Ltd (AHL)

Auction Holdings Ltd manages the auction floors in Malawi. AHL was created in 1962 with the amalgamation of the Limbe and Lilongwe floors, previously run by separate companies. In 1995 a third auction floor opened in Mzuzu. The function of the auction floors is to facilitate the smooth sale of tobacco to international exporters, and the prompt payment of growers after appropriate deductions. The main shareholder of AHL is ADMARC with 47% of stock. The remaining shares are shared between minority interests. In recent years AHL has opened district-level markets in Central and Southern Regions.

Sources: Matthews et al (1992), interview with Managing Director AHL, shareholding data from Company House, Blantyre.

On the Lilongwe auction floors, bales are stored outside on trucks until the consignment is accepted into storage.²⁰ Once the bale reaches the floors, it is auctioned and bought by a leaf merchant in US dollars. In 2003/04 there were three main buyers of burley on the auction floors – Limbe Leaf, Stancom and Dimon – and one minor buyer: Africa Leaf (see Box 8). The auction floors and system is described in detail in Box 9.

Box 8 - Leaf merchant companies in 2003/04

In 2003/04 Limbe Leaf was the dominant tobacco leaf merchant in Malawi. It was owned by the largest global leaf merchant, Universal Leaf (58%), and Press Corporation (42%), the largest limited company in Malaw. Stancom and Dimon were the two further main buyers: wholly-owned subsidiaries of US leaf companies (the second and third largest global leaf merchants, respectively). The last buyer was Africa Leaf, which was created when a previous company, Intabex Dibrell, was bought by Dimon. Limbe Leaf, Stancom and Intabex Dibrell located in Malawi in the 1960s. Limbe Leaf became the dominant leaf merchant with the withdrawal of the Imperial Tobacco Company in the early 1980s.

Sources: Shareholding data from Company House, Blantyre; Matthews et al. (1992)

Box 9 - The auction floor system in 2003/04

²⁰ In the 2003/04 delays stretched from weeks into months

The auction floor is the focal point of the main industrial area in Lilongwe known as Kanengo. The floors are squeezed between the main processing factories, with elevated conveyer belts stretching into the AHL complex. Up to 12,000 bales of tobacco can be sold each day on the floors. Tobacco money lubricates the economy during the crop marketing season, as evidenced by the bars, restaurants and pool halls bordering the floors patronised by workers (whose employer can be deduced by the colour of their shirt). This is where old friends meet, the season is discussed, and deals are struck. Inside the floors all the bales in a consignment with the same registration number are lined up together. Bales are moved around the floors by labourers using barrows. Thirty minutes prior to the start of the sale Tobacco Control Commission employees grade each bale. The bales are opened and hands of tobacco are displayed. On one side of the line of bales is the starter, the auctioneer and two ticket markers. All these actors work for Auction Holdings. On the opposite side of the bale are four leaf buyers. The first from Dimon, the second from Stancom, the third, who stands across the bale from the auctioneer, from Limbe Leaf. The last buyer was from Africa Leaf. The structure of the buying line-up reveals the power relations in the industry. The Dimon and Stancom buyers will have seen, touched, maybe smelt, the tobacco before bidding on it. The Limbe Leaf buyer has the tobacco in his hand at the point of purchase. The starter offers a price according to the grade and the auctioneers reduces then increases the price until all bids have been made. However, if the starter is not happy with the final bid, the bale can be 'bought' by the 'house' (AHL). The bale is then reoffered at a later date. With the exception of the starter, the bids are usually made using hand signals. The line-up is not stationary but constantly moves at walking pace down the lines of tobacco. Leaf company employees follow the sale to ensure their company buys their allocated percentage. These 'checkers' work in association with TCC arbitrators who confirm when a bale containing mixed grades or non-tobacco-related material (NTRM) is found. Growers' representatives also follow the sale, checking that the prices paid are acceptable. If the price paid is too low then they tear the sale ticket, and the bale is reoffered on a date some days or weeks later.

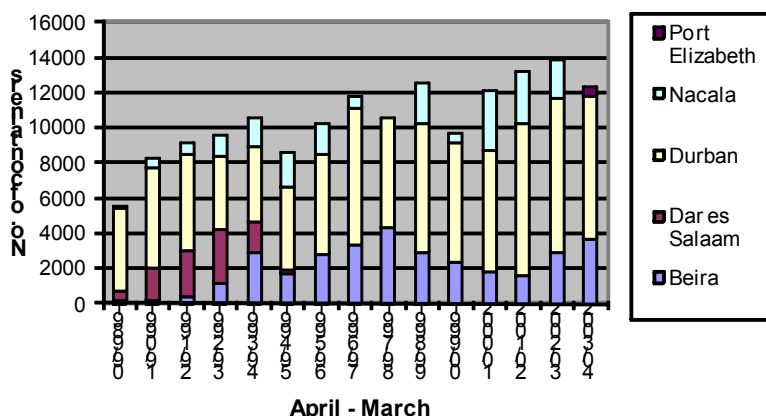
Source: Tour of auction floors, participant observation.

3.2 The tobacco factory and export

Once purchased by a leaf company, a bale is transported to an adjacent factory and stored according to grade. In due course, the bale is processed with other grades depending on the requirements of buyer. The purpose of processing burley is simple: to remove the lamina from the stalk. Hands are placed on a conveyer belt, and are cut into tips, mid-rib and butts. Tips, which contain very little stalk, are added at the end of the process. Butts are discarded. The mid-rib is conditioned with water, passed through a threshing drum, and onto a fan which blows the lighter lamina up and away from the heavier stalk (which falls to the bottom and is discarded). The residual lamina and stalk is passed through further threshers and dryers that decrease in size. Separated lamina finally goes through two dryers (to reduce moisture content to twelve percent) and the 'cut rag' is placed into cartons and compressed. Each finished carton weighs 180kgs and is stored until export. Cartons are loaded into 20 foot containers, with 48 boxes weighing roughly 8,800 kgs (including packaging) per container. These are usually exported by road to Durban and Beira (and prior to 2003 also via rail to Nacala – see Figure 3). Figure 4 shows that between 1994 and 2003 the majority of Malawian burley tobacco was exported to cigarette manufacturers in the USA, Europe and Japan.

Figure 3 - Malawi burley tobacco exports by port

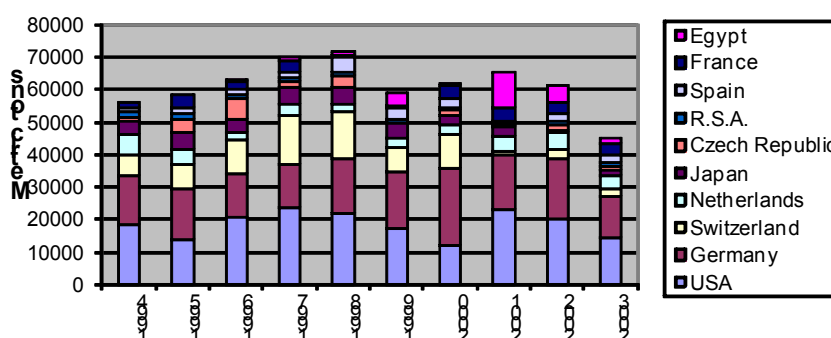
Malawi Burley Tobacco Exports - Seasonal Container Shipments by Port 1989/1990 - 2003/2004



Source: Tobacco Exporters Association of Malawi (TEAM)

Figure 4 - Malawi burley exports by country of destination 1994 - 2003

Malawi Burley Tobacco Exports Destination Countries from 1994-2003



Source: Tobacco Exporters Association of Malawi (TEAM)

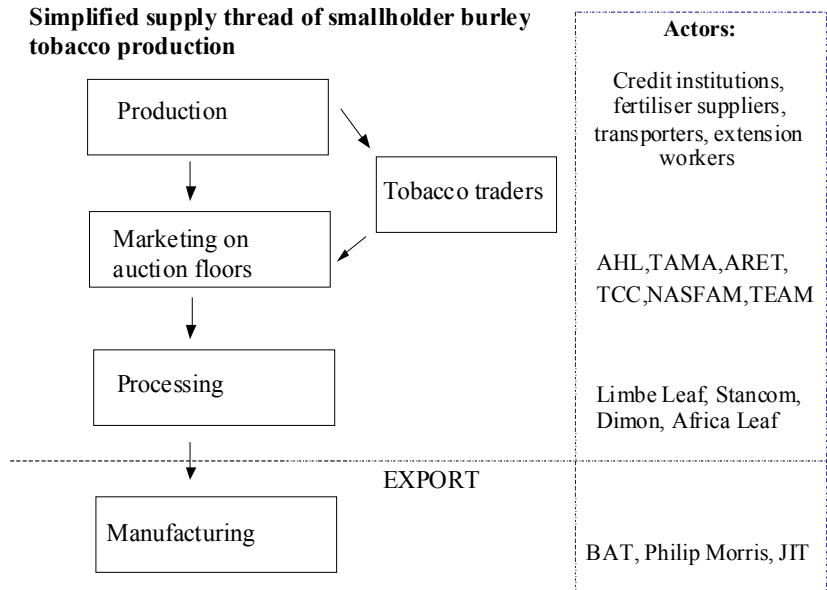
In 2003/04 the export of tobacco was monitored by the Tobacco Exporters Association of Malawi (TEAM), but information on how much tobacco was bought by particular manufacturers was very difficult to access (see Box 10). However, informants suggested that Philip Morris, British American Tobacco and Japan Tobacco International were major buyers. Figure 5 offers a simplified illustration of the institutional framework.

Box 10 - Tobacco Exporters Association of Malawi (TEAM)

TEAM was established in 1930 to oversee all matters regarding the export of tobacco. Recently this has included liaising with the Reserve Bank of Malawi, the Malawi Revenue Authority, and the Ministry of Commerce and Industry. The members of TEAM are the leaf companies and a few estate owners. TEAM vigorously opposed the introduction of smallholder burley production in the 1990s citing smallholders' lack of expertise in producing quality burley. This concern with the quality of burley is still prescient, as seen by TEAM's campaign against non-tobacco-related-material (NTRM). TEAM represents the main leaf merchants' interests in policy meetings, but by the 2009/10 season the importance of TEAM in the sector had diminished considerably.

Source: Matthews et al. (1992); interview with Managing Director, TCC.

Figure 5 – Institutional framework in 2003/04



Source: Author's illustration

This introduction to the main actors within the supply thread allows us to compare the institutional framework, rents, governance and systemic efficiency in the 2003/04 and 2009/10 seasons.

4. BURLEY TOBACCO SUPPLY THREAD 2003/04

Kabambe (2007) outlines how most countries impose border tariffs on tobacco imports, with the average level of tariff around 38%. Certain countries impose very high tariffs, including the US (68%), one of Malawi's main competitors (*ibid.*). However, as a Least Developed Country, in 2003/04 Malawi enjoyed duty-free access to US markets through the Agricultural Growth and Opportunity (AGOA) Act of 2000 (US Government, 2000). Whilst burley and flue imports were not included in the Generalised System of Preferences (GSP) programme (see US Government, 1999), AGOA included both processed and unprocessed burley under product lines 2401.1061/63 and 2401.203133. Unfortunately, the Harmonized Tariff Schedule of the US Government (2004) highlights how Malawian burley imports destined for cigarette manufacture were subject to a 12,000MT quota per annum. Kabambe (2007) also outlines how the US offers price support to domestic growers (other countries, such as China and India, also support production through subsidised inputs).

The trade regime in the EU at this time was slightly more progressive. In 2004 Malawi enjoyed preferential access to EU markets for burley tobacco under the ACP Cotonou agreement and Everything But Arms Initiative. For example, in 2002 the EU (27) imported almost €89 million of burley, which equated to around 20% market share with no tariffs (Eurostat, 2011; Stevens, 2004).²¹ In 2003 and 2004 the value of burley imports into the EU appears to have dropped to around €59 million and €37 million, respectively (apparently driven by reduced demand from Germany). In contrast to the US, during this period the EU moved to curtail price support offered to tobacco growers within the EU (*ibid.*).²²

At the national level, and as described above, the main actors in 2003/04 were regulated by the TCC which acted as a referee and ombudsman. Such a role was not straightforward. The TCC had to balance numerous competing interests, including political influences. For example, although the TCC was answerable to the Minister of Agriculture, during the UDF era (from 1994 through to 2004) government policy regarding tobacco often came from presidential directives. Moreover, key political appointees sat on the TCC board and the directors of key tobacco institutions were seen to be close to the UDF hierarchy. For example, members of the UDF political elite at this time were seen to be very close to Limbe Leaf (through their interests in Press Corporation which jointly owns this merchant along with Universal Leaf).²³ On the other hand, as the organ representing estate owners – TAMA – appeared to have closer links to the Malawi Congress Party.

In 2003/04 the sector was also subject to four standards and credence issues: methyl bromide; child labour; non tobacco-related materials (NTRM); and, most importantly, the Framework Convention on Tobacco Control (FCTC). Methyl Bromide was once widely used on burley tobacco nurseries as a pesticide (to reduce nematodes). However, its use has been restricted by the United Nations' Montreal Protocol to limit ozone-depleting gases, and has been phased out in Malawi.²⁴

Second, since the late 1990s cigarette manufacturers have become increasingly concerned with child labour. In 2000 manufacturers and growers' organisations created a global NGO – Eliminating Child Labour in Tobacco (ECLT) – as part of their corporate social

²¹ Stevens (2004) also notes how the bilateral EU–South Africa Trade, Development and Co-operation Agreement eroded the relative competitiveness of Malawian companies compared to South African tobacco exporters.

²² Through changing production-linked payments to a single-farm payment scheme.

²³ The UDF elite at this time also had particular investments in transportation and trading, including within the tobacco sector.

²⁴ Instead, farmers are encouraged to use alternative pesticides, use floating seed trays, and rotate their nurseries more frequently.

responsibility strategy.²⁵ In Malawi, leaf companies along with BAT financed the creation of an NGO – Together Ensuring Children’s Security (TECS) – which campaigned against child labour.

The third credence factor was non-tobacco-related materials (NTRM). Leaf merchants became concerned with smallholders tying leaves and hands of tobacco with polypropylene strips (from fertiliser bags) because manufacturers feared litigation.²⁶ The seriousness of this issue was illustrated in the 2004 season when Philip Morris cancelled some orders of Malawian burley due to NTRM.²⁷

The last element of the global institutional framework discussed here is the Framework Convention for Tobacco Control (FCTC).²⁸ Due to concerns over public health, this treaty has attempted to limit tobacco consumption and production. Clearly, as Malawi is dependent on tobacco, any limits on production could have serious implications. We now turn to smallholder rents in 2003/04.

4.1 Smallholder rents in 2003/04

The costs of production and marketing for a smallholder credit recipient in Kasungu district for the 2003/2004 season are summarised in Table 1 (details are in Annex 1). These figures follow the annual cycle of tobacco production outlined above, and are for an intensive model of smallholder production (without imputing the cost of household labour). This model shows what better-off smallholder growers in Kasungu district were receiving.²⁹

Table 1 - Summary of costs of production and marketing using credit

| | Kwacha | Kwacha per kg | Cents per kg |
|--|------------------------|---------------------|---------------------|
| 1. PRODUCTION COSTS | | | |
| Total nursery and land cost | 12144.17 | 24.29 | 22.49 |
| Total loan costs | 3412.35 | 6.82 | 6.32 |
| Total chigaffa costs | 5670 | 11.34 | 10.50 |
| <u>Total Production Costs</u> | <u>21226.52</u> | <u>42.45</u> | <u>39.31</u> |
| 2. MARKETING COSTS | | | |
| Total marketing preparation costs | 5920 | 11.84 | 10.96 |
| Total deductions on floors | 3118.5 | 6.24 | 5.78 |
| Total other costs | 945.25 | 1.89 | 1.75 |
| <u>Total Marketing Costs</u> | <u>9983.75</u> | <u>19.97</u> | <u>18.49</u> |
| <u>TOTAL PRODUCTION AND MARKETING COSTS</u> | <u>31210.27</u> | <u>62.42</u> | <u>57.80</u> |
| GROSS PROCEEDS | 59400 | 118.80 | 110.00 |
| BASED ON 500kg / 1 acre / 5 bales / \$ 1.10 per Kg | | | |
| NET RETURN TO FARMER | 28189.73 | 56.38 | 52.20 |

²⁵ See <http://www.eclt.org/index.html>. Accessed 16/5/05

²⁶ Some fertiliser bags in Malawi are made from thin woven plastic strips which unravel easily.

²⁷ This led to the Lilongwe auction floors operating at 50 per cent capacity for some of the season.

²⁸ See http://www.fctc.org/about_FCTC/, <http://www.who.int/gb/fctc/>. Accessed: 16/05/05

²⁹ Overall, the intensive model of production employed in the costs of production assumes a smallholder yield of 500kgs per acre. This is an optimistic assumption. For example, the average smallholder burley yield in Kasungu Agricultural Development District (ADD) in 2001 was 280.4 per acre (701 per hectare) (Mwasikakata 2003), whilst a small-n survey in Kasungu district in 2004 found an average burley yield of 360kgs per acre.

Source: Author's estimates, see Annex 1 for full details

The costs of production for this intensive model (with credit) suggests a net margin of only 52.2 cents per kg. Thus, a smallholder using credit and marketing 500kgs on the auction floors would receive a net profit of around US\$261.02.³⁰

4.1.1 Marketing channels

In 2003/04 smallholders in Kasungu had three marketing channels for burley. Whilst the auction floors were the most popular channel, smallholders also utilised intermediate buyers (IBs) and a cross-border trade in burley tobacco. IBs were introduced in the 1993/1994 season and were most active in 1997 when they brought 20,000 tons – around fifteen percent of the national burley crop – to the auction floors (Jaffee 2003, Van Donge 2002b). Since then, IB activity was restricted and was banned from the 2001/2002 season. But this does not mean that the practice ended: instead, IBs marketed tobacco through their own or an associate's registration number. The cross-border trade in the first years of the past decade is hard to quantify.³¹ Jaffee (2003) suggests that in 2001 at least 10,000 tons of Malawian-produced burley was taken into adjacent countries for sale, representing eight percent of the national burley crop. Other figures suggest that the amount taken outside was much greater than this (see TEAM, 2002).

The choice of marketing channel has a large influence on profitability. Appendix 2 compares the net margins of smallholder burley production in 2003/04 when marketed through each of these channels (with auction floor sales using NASFAM transportation). The table uses the same intensive model of smallholder burley production as Annex 1, but without the use of credit (to avoid non-repayment of loans skewing the comparison). Annex 2 shows that a non-credit grower in 2003/04 could receive a net return of 59 cents per kg from the auction floors. Selling burley across the border in Zambia yielded a net margin of 41 cents per kg. However, marketing burley through an IB yielded only 2 cents per kg. This highlights three functions of IBs in the rural economy: first, they are used as an instant source of liquidity at the start of the marketing season (with smallholders subsequently using another channel); second, they are a key channel for small-scale low-intensity producers (who do not bale tobacco but sell it in hands); and third, they are a channel for low-quality leaf, such as flyings.³²

The considerable difference between the profitability of the auction floors and the CBT (around 18 cents per kg) poses the question: why did smallholders send bales to Zambia in light of the risks involved? Part of popularity of the CBT in 2003/04 was due to clubs avoiding loan repayments (which are automatically deducted by Auction Holdings from growers' gross proceeds). A further factor was liquidity. Buying stations in Zambia pay within 3-4 days. In 2003/04, payment from the auction floors took at least 3-4 weeks, if not months.

4.1.2 Levies accrued by tobacco-related institutions

Higher profit margins, the institutional structure of the industry, and path dependence have ensured that most burley tobacco is still sold on the auction floors. When a bale of tobacco is purchased numerous deductions are made on behalf of tobacco-related institutions. These are shown in Table 2 for the 2003/04 season.

³⁰ Analysis by Keyser and Lungu (1997) in the mid-1990s suggests that the only other crops in Malawi that approach this level of profitability were tomatoes and paprika

³¹ A report by Nakhumwa and Minde (1996) on informal cross-border trade fails to mention tobacco once, indicating how this practice emerged in the late 1990s.

³² Many smallholders use multiple marketing channels each season. For example, first selling to an IB to receive access money, and subsequently sending the majority of bales to the auction floors.

Table 2 - Levies and deductions on the auction floors in 2004

| | |
|------------------------------|---|
| TCC levy | 0.10 cents per kg |
| AHL levy | 3.25 percent of total proceeds |
| Hessian levy | 30 cents per bale (TAMA) |
| ARET levy | 1 percent of total proceeds |
| TAMA/NASFAM levy | 0.70 cents per kg applicable to institution members |
| Classification levy | Undertaken by TCC at no additional cost |
| Withholding Tax of 7 percent | Not applied to smallholders earning less than MK36,000. |
| Transport | Variable - From Kasungu to Lilongwe in 2003/04 season) TAMA charged 707kw per bale, and NASFAM 440 kw per bale |

Sources: Government of Malawi 2004, interviews

In 2003/04, these amounted to 6.48 cents per kg, which represents 12.4 percent of smallholders' net return. The extent to which these deductions are appropriate to the services rendered has been a matter of some contention. The structure of the industry, including the auction system, is often depicted as being over-regulated and inefficient (see World Bank 2004a, 2006). Whilst deductions by tobacco institutions were certainly excessive in the past (see SADP 1997, SADP 1999), the levies in 2003/04 appear less onerous on producers (see World Bank, 2004b).

4.1.3 Processing and export of tobacco in 2003/04

As we've seen, once a bale of burley is purchased, it is stored, processed and exported to global cigarette manufacturers. Table 3 shows the costs of processing and exporting burley, up to an estimated landed price of US \$5 per kg, paid by a cigarette manufacturer at Rotterdam in 2004. As it is extremely difficult to get price information from tobacco leaf companies, the estimate of US \$5 is an average of figures suggested by informants in the 'trade'.

Table 3 - Costs of processing and export per kg

| PROCESSING COSTS | |
|--------------------------------------|-------|
| Auction Floor Price | 110 |
| Buyer Overhead Costs | 11 |
| Short-term Storage Costs | 2 |
| Threshing Costs | 15 |
| Yield (70%) | 41.33 |
| Re-drying and Packaging | 25 |
| Materials | 11 |
| Interest (3 months at 8.5% p.a.) | 4.57 |
| <i>Total Processing Costs</i> | 109.9 |
| <i>PURCHASE AND PROCESSING COSTS</i> | 219.9 |

SHIPPING COSTS

| | |
|--|---------------|
| Transport to Durban and Port Charges | 15 |
| Insurance | 3.66 |
| Ocean Freight to Europe | 18 |
| <i>Total Shipping Costs</i> | 36.66 |
| TOTAL PURCHASE, PROCESSING AND SHIPPING COSTS | 256.56 |
| MANUFACTURERS PAYMENT FOR LANDED BURLEY | 500 |
| LEAF MERCHANT PROFIT | 243.44 |

Source: Based on Jaffee 2003, interviews

Table 3 shows that at an assumed sale price of US \$5 the leaf merchants' net margin is around 243 cents per kg. The considerable profits to be made from processing tobacco explain why the leaf merchant companies aggressively protected their segment of the supply thread.

4.2 Governance in 2003/04

The global tobacco value chain is driven by global cigarette manufacturers such as British American Tobacco (BAT), Philip Morris and JTI. At the start of each season these manufacturers jointly instruct leaf companies in Malawi the 'trade' requirements. For the 2004 season these were 135-140 million kgs of burley, 15-20 million kgs of flue-cured tobacco, and 5-7 million kgs of fire-cured tobacco (TCC 2004). The governance of the global tobacco value chain by manufacturers has led to 'obligatory contractual relations' where the security of supply, and the familiarity of suppliers, is deemed more important than an evaluation purely on price terms (and thus reflects a relational governance regime, as illustrated in Figure 1).

Within Malawi, the supply thread (i.e. minus the activities of the lead firms – the cigarette manufacturers) is itself buyer driven, by the leaf merchant companies. In 2003/04 Limbe Leaf was the dominant tobacco leaf merchant in Malawi, and was the leading actor in a cartel that allegedly depressed prices and protected high-rent segments of the thread. Interestingly, the allegation that lead companies operated as a cartel on the auction floors (Van Donge 2002; Jaffee 2003; Hayward 2004; Stanbrook 2005a, 2005b) is confirmed by key informant interviews and Auction Holdings sales figures for 2004.³³ Informants claimed that the burley market in 2004 was carved up on a daily basis with Limbe Leaf (LL) buying 46 percent of the crop and the other two main leaf companies - Stancom (S) and Dimon (D) – buying 23 percent. The smallest company, Africa Leaf, was said to purchase eight percent. Moreover, informants suggested that leaf companies frequently 'shared out' bales in a pre-determined buying sequence: LL, S, D, LL, LL, S, D, AF, LL, S, D, LL, LL, S, D, AF.

The claim that buyers purchased bales in a predetermined sequence is supported by data from Auction Holdings. The data, from June 2004, was provided by the General Manager and was randomly selected from Auction Holdings records. It only contained information on the purchase of 781 bales. Table 4 shows descriptive statistics of the number of bales bought by each company.

Table 4 – Bales bought by different leaf companies and the 'house'

³³ The alleged collusion and operation of a cartel in the tobacco market in Malawi in 2003/04 is symptomatic of the structure of the global tobacco market. Leaf merchant companies were fined by the European Commission in 2006 for collusion in both Spain and Italy.

| Company | Number of bales | % | Average price | Std. Dev. |
|------------------|-----------------|-------|---------------|-----------|
| Limbe Leaf | 305 | 39.1 | 118.17 | 17.60 |
| Stancom | 170 | 21.8 | 121.36 | 20.21 |
| Dimon | 160 | 20.5 | 120.01 | 18.80 |
| Africa | 67 | 8.6 | 120.82 | 22.73 |
| Auction Holdings | 79 | 10.1 | 135.26 | 16.41 |
| Total | 781 | 100.0 | 121.18 | 19.38 |

Source: Author's estimates from Auction Holdings' data

Table 4 shows the proportion of bales bought by each company corresponds broadly to the breakdown of purchases described above (if one reapporions the 10% of bales 'bought' by the house and sold to the four companies at a later date).³⁴ Once the Auction Holdings bales are removed from a comparison, there is no statistically significant difference between the mean prices paid by the four companies.³⁵

Importantly, however, the data allows us to investigate the order in which companies purchased tobacco. The buying sequence above suggests that three companies tended to purchase a bale of burley immediately after another company: Stancom tended to buy bales after Limbe Leaf; Dimon tended to buy bales after Stancom; and Africa Leaf tended to purchase bales after Dimon. We can test these propositions by using three simple logistic regression models. The dependent variable in each model was a dummy representing the bales the leaf company in question (namely, Stancom, Dimon and Africa Leaf) purchased. The independent variables in each model are shown in Table 5. The models for Stancom, Dimon and Africa Leaf were run in five blocks with each of the variables in Table 5 in a single block (ordered as above). The results from the full logit models are shown in Tables 6 to 8 which show a degree of similarity to the buying pattern suggested by informants.

Table 5 – Descriptive statistics for independent variables

| Variable | Description | Mean | Std. Dev. |
|-----------------|--|----------|-----------|
| PRICE | Price at which bale was purchased for | 121.1769 | 19.38495 |
| P1LL_dummy | Whether Limbe Leaf bought the previous bale | .3905 | .48818 |
| P1Stancom_dummy | Whether Stancom bought the previous bale | .2177 | .41293 |
| P1Dimon_dummy | Whether Dimon bought the previous bale | .2049 | .40386 |
| P1Africa_dummy | Whether Africa Leaf bought the previous bale | .0858 | .28023 |

Source: Author's estimates from Auction Holdings' data

Table 6 – Coefficients from Stancom model

| | B | S.E. | Wald | df | Sig. | Exp(B) |
|-----------------|-------|------|--------|----|------|--------|
| Step 1 price | .004 | .005 | .801 | 1 | .371 | 1.004 |
| P1LL_dummy | 1.112 | .338 | 10.822 | 1 | .001 | 3.040 |
| P1Stancom_dummy | -.339 | .397 | .728 | 1 | .394 | .713 |
| P1Dimon_dummy | .001 | .384 | .000 | 1 | .999 | 1.001 |
| P1Africa_dummy | -.006 | .465 | .000 | 1 | .989 | .994 |

³⁴ The higher prices 'paid' by Auction Holdings simply reflects the reserve price.

³⁵ An analysis of variance produces an F-ratio of 1.173 and a significance figure of 0.319.

| | | B | S.E. | Wald | df | Sig. | Exp(B) |
|--------|-----------------|--------|------|--------|----|------|--------|
| Step 1 | price | .004 | .005 | .801 | 1 | .371 | 1.004 |
| | P1LL_dummy | 1.112 | .338 | 10.822 | 1 | .001 | 3.040 |
| | P1Stancom_dummy | -.339 | .397 | .728 | 1 | .394 | .713 |
| | P1Dimon_dummy | .001 | .384 | .000 | 1 | .999 | 1.001 |
| | P1Africa_dummy | -.006 | .465 | .000 | 1 | .989 | .994 |
| | Constant | -2.247 | .670 | 11.257 | 1 | .001 | .106 |

-2 Log likelihood = 769.20
 Model chi-squared = 48.71
 Degrees of freedom = 5
 Model significance = 0.000
 Cox & Snell R Square = 0.061
 Nagelkerke R Square = 0.093

Source: Author's estimates from Auction Holdings' data

Table 7 – Coefficients from Dimon model

| | | B | S.E. | Wald | df | Sig. | Exp(B) |
|--------|-----------------|--------|------|-------|----|------|--------|
| Step 1 | price | -.004 | .005 | .820 | 1 | .365 | .996 |
| | P1LL_dummy | .149 | .339 | .194 | 1 | .660 | 1.161 |
| | P1Stancom_dummy | .899 | .345 | 6.796 | 1 | .009 | 2.458 |
| | P1Dimon_dummy | -.078 | .374 | .043 | 1 | .835 | .925 |
| | P1Africa_dummy | -.390 | .484 | .649 | 1 | .421 | .677 |
| | Constant | -1.088 | .664 | 2.681 | 1 | .102 | .337 |

-2 Log likelihood = 769.32
 Model Chi-squared = 22.28
 Degrees of freedom = 5
 Model significance = 0.000
 Cox & Snell R Square = 0.028
 Nagelkerke R Square = 0.044

Source: Author's estimates from Auction Holdings' data

Table 8 – Coefficients from Africa leaf model

| | | B | S.E. | Wald | df | Sig. | Exp(B) |
|--------|-----------------|--------|------|-------|----|------|--------|
| Step 1 | price | .000 | .007 | .004 | 1 | .949 | 1.000 |
| | P1LL_dummy | .600 | .553 | 1.175 | 1 | .278 | 1.822 |
| | P1Stancom_dummy | .157 | .608 | .067 | 1 | .796 | 1.170 |
| | P1Dimon_dummy | 1.040 | .565 | 3.391 | 1 | .066 | 2.828 |
| | P1Africa_dummy | .412 | .693 | .353 | 1 | .552 | 1.510 |
| | Constant | -2.877 | .988 | 8.479 | 1 | .004 | .056 |

-2 Log likelihood = 449.96
 Model = 7.026
 Degrees of freedom = 5
 Model significance = .219
 Cox & Snell R Square = 0.009
 Nagelkerke R Square = 0.020

Source: Author's estimates from Auction Holdings' data

For example, Table 6, which assesses whether there is a pattern to Stancom purchases on the auction floors, shows only one variable is statistically significant: the dummy

variable which represents if Limbe Leaf bought the previous bale (at the 99% level). The strength of this relationship, that Stancom tended to buy bales immediately after Limbe Leaf, accounts for practically all the predictive power of the model (which is significant at the 99.9% level). The odds ratios show that with all else constant, Limbe Leaf buying the previous bale makes Stancom more than three times more likely to purchase a bale.³⁶

Table 7, which assesses Dimon purchases, again shows only one statistically significant variable. But this time it's not Limbe Leaf buying the previous bale that is significant, but just as informants suggested, it's Stancom (at the 99% level). Again, the strength of this relationship accounts for almost all of the predictive power of the model (significant at the 99% level). In this model the odds ratios show us that with all else held constant, Stancom buying the previous bale makes Dimon two and a half times more likely to purchase a bale.³⁷

Table 8, which assesses Africa Leaf purchases, once again shows results which concur with claims of a buying sequence. In this variable, only one variable significant at the 90% level: the Dimon dummy. However, the strength of this relationship was not sufficient to contribute to a statistically significant model (shown by model significance of 0.219). Thus, the first two logit models provide some statistical evidence to support claims that the leaf buyers operated a buying sequence on the auction floors in the 2004 season.

Informants also claimed that in 2003/04 Limbe Leaf set price bands to ensure price stability, and ensured compliance through pricing other companies out of the market if bands were broken. It was also claimed that the cartel stymied the emergence of new firms in the industry. Leaf companies' control over the capital goods for processing tobacco limited new entrants into the sector and attempts other stakeholders in the sector to gain experience in exporting tobacco were consistently blocked (see Box 11).

Box 11- Liberalising the export of tobacco

In 2002 the Government of Malawi issued a directive to liberalise the export of tobacco. This was welcomed by the IMF, and the Tobacco Control Commission investigated how the modalities of export liberalisation would function in light of the need to ensure the integrity of exports, and to ensure the repatriation of foreign exchange earnings. The tobacco leaf companies were less enthusiastic about the policy development. At the annual tobacco seminar in 2002, the discussion of export liberalisation led the CEO of Limbe Leaf to demand that all the leaf company employees boycott the session, which they duly did. To push the reform agenda along, the World Bank funded a consultancy on the issue. However, the study never took place. The \$40,000 which had been released to the Ministry of Agriculture disappeared. The Ministry of Agriculture still proceeded to submit proposed regulations to the World Bank. These were agreed in principle, and with the modalities in place, a pilot phase of export liberalisation was announced to the 2003 tobacco seminar. The reaction of the leaf companies was immediate. The CEO of Limbe Leaf threatened that such a move could lead to a withdrawal of their capital investments from Malawi, and a possible shift to neighbouring countries. Such a threat was not idle as Limbe Leaf had invested in a new large-scale tobacco processing facility in Tete, Mozambique.

Source: Interviews

Whilst there is a good evidence that a buying cartel did operate in 2003/04, the operation of this cartel needs to be put in context: the leaf companies also maintained an 'obligation' to growers as they guaranteed to purchase the entire tobacco crop. The strength of these 'obligations' were much greater prior to the liberalisation of burley, as leaf companies

³⁶ Wald statistic 10.822, Sig. 0.001, Exp (B) 3.04.

³⁷ Wald statistic 6.796, Sig. 0.009, Exp (B) 2.46.

agreed to buy all types of burley within a clear price band of between US\$1 and US\$1.50 a kg (Van Donge, 2002). In 2003/04, this price band did not hold, and low-quality burley received very low prices (but leaf merchants did still purchase *all* tobacco presented on the floors).³⁸

4.3 Systemic efficiency in 2003/04

Systemic efficiency leads to much greater governance of the value chain by lead firms. In our case here it mainly involves vertical integration through contract farming. The last two decades has seen a significant increase in contract farming by leaf merchant companies – such as Universal Leaf – and also by cigarette manufacturers, such as BAT, across Southern and Eastern Africa. However, contract farming has only emerged relatively recently in Malawi.

Large-scale contract farming of tobacco (defined here as when a firm lends inputs, such as seed, fertiliser, credit, and extension, to a farmer in exchange for exclusive purchasing rights over the resultant crop) started in Malawi in the 2001/02 season when Stancom arranged a credit facility of US \$3million through Citibank to provide finance for inputs on Press Agriculture Estates.³⁹ By the 2002/03 season Limbe Leaf had asserted their dominance. They displaced Stancom and signed a five-year deal with Press Agriculture to produce flue-cured on 65 estates to substitute for the loss of flue-cured production in Zimbabwe. Importantly, Limbe Leaf received special dispensation from President Muluzi to bypass the auction floors and take the flue-cured leaf straight from Press Agriculture estates to their processing factories.

Soon most large-scale estates in the country, both ‘public’ and private, were contracted by leaf merchants, and all firms were allowed to take ‘their’ tobacco straight to processing factories. Due to concerns that the leaf companies were under-declaring tobacco production to avoid liabilities, this practice was prohibited from the 2003/04 season and ‘financed’ tobacco was marketed through a ‘silent auction’ system on the floors.⁴⁰ In the ‘silent auction’ system, prices for contracted tobacco are fixed by a neutral party according to pre-determined grades (TCC 2004).

The leaf merchants also started contracting smallholders. The precedent here is Limbe Leaf’s purchase of Kasungu Flue-cured Tobacco Authority (KFCTA) in 2000. From 2001/02 Limbe Leaf contracted 900 smallholder farmers on KFCTA land in Kasungu district to produce flue-cured tobacco (land which has now reverted to communal status – see Matemba and Charman, 2002). Since the 2002/03 season Dimon started contracting 2,500 smallholders in Kasungu, Lilongwe, south Mzimba and Rumphu. Such contracted tobacco also passed through the ‘silent auction’ system. We now shift forward six years assess the institutional framework, rents, governance and systemic efficiency in the 2009/10 season.

³⁸ The prevalence of ‘obligation contractual relations’ in the tobacco value chain and the burley tobacco supply thread distinguishes them from some agricultural buyer-driven value chains which rely on arms-length market relations to exert power over suppliers (see Dolan et al 1999, Barrientos et al 2003).

³⁹ Press Agriculture was at the centre of the large-scale estate expansion of tobacco hectareage in the 1970s. Through the late 1990s Press Agriculture became less profitable until 2000 when tobacco production on the hundred or more estates faltered (Lynx Associates 2002, O&M Associates 2001).

⁴⁰ For example, the WTO (2010) highlights how export surrender requirements of 40% of foreign exchange receipts are in place for tobacco exports. Moreover, tobacco exports have been subject to direct taxation by government in recent years.

5. BURLEY TOBACCO SUPPLY THREAD 2009/10

Overall, tobacco's share of total exports in Malawi increased from 49% to 67% by value from 2004 to 2008 (due to both higher prices and production) (WTO, 2010). WTO figures for total agricultural exports suggest that increased imports by the EU accounts for some of this increase. The data from the TCC on exports in 2009 supports this interpretation, and shows that Belgium was the main export destination (with almost 32,000 MT, followed by the Russia and the US with just under 10,000 MT each).

However, there are indications that Malawi is exporting less processed tobacco leaf. For example, figures from Eurostat (2011) suggest that imports of stripped burley leaf into the EU declined from 38 million in 2004 to just over 10 million in 2008. These figures suggest that a much greater proportion of Malawian burley has been imported unprocessed in recent years. Moreover, the WTO (2010) also highlights how 73% of total Malawian tobacco exports (by value) in 2008 was unprocessed. Naturally, exporting unprocessed leaf leaves much less value in Malawi. As these figures do not correspond with the breakdown burley exports in the 2009 season reported by the TCC, which shows that 86% of exports (by weight) were stripped burley leaf and 14% was unprocessed (scraps, stems and leaves), this issue clearly requires further investigation. Just as in 2003/04, whilst Malawi qualified for duty-free access to the United States under AGOA in 2009/10, the Harmonized Tariff Schedule of the US Government (2010) highlights how burley destined for cigarette manufacture was still subject to a 12,000MT quota per annum. It is also possible that American burley producers still rely on direct government price support.

In addition to trade issues, the major changes to the institutional framework concerned the four credence factors. First, in 2009/10 the ILO was still lobbying hard on child labour issues. For example, the ILO initiative Eliminating Child Labour in Tobacco was active in Malawi with Philip Morris working with this initiative. Second, non tobacco-related materials (NTRM), such as the inclusion of plastic in tobacco, was still causing manufacturers concerns. Moreover, a piece of legislation in Canada – the CC32 bill – was posing a threat to the burley industry. This bill aims to ban all chemical additives in tobaccos and is aimed mainly at flavourings. However, it also affects burley as this type of tobacco is treated by chemical additives during manufacturing. Third, whilst Malawi is not a signatory to the Framework Convention on Tobacco Control, there are now voices within government that argue that the country should sign and lobby within the Convention. Lastly, green tobacco sickness has become an important issue. Whilst this condition is not so prevalent in Malawi compared to Brazil (which has higher humidity levels and thus a greater propensity for nicotine absorption through the skin), a campaign by Plan International has raised the profile of this issue in Malawi

The national level institutional framework has also changed considerably in the six year period. The first major change has been the introduction of district markets. In 2009/10 there were two district markets, one in Kasungu district at Chinkhoma and one in the Southern Region at Ngodi. The second major change has been the introduction of minimum prices. Based on costs of production created by ARET, since the 2007/08 season government has set minimum prices each season for the 86 grades of burley. Buyers are now required to sign a contract with government each season with the minimum prices enforced by the TCC. Government claims the process is transparent with minimum prices set at the annual tobacco seminar. The aim of the policy is to increase producer prices and prevent price disputes halting sales on the auction floors. Government intends smallholders to realise a 30% net margin on tobacco production.

However, in 2008 and 2009 the leaf companies did not meet the terms of their contract. For example, the average target price in 2009 was \$2.03, but the leaf merchant companies only paid an average of \$1.60. The result was that senior managers of the leaf

companies had their work permits revoked. For example, in 2009 the CEOs of the main leaf companies were deported. In addition, President Mutharika named individuals within the industry who were 'exploiting' the country (including figures in the TCC who were seen to be too close to the leaf companies). Some statements had strong racial connotations (as company managers are often white South Africans, Zimbabweans or Malawians). Further changes to the institutional framework included new producer organisations and credit providers, and that the provision of hessian has been liberalised (so is no longer controlled by TAMA).

5.1 Smallholder rents in 2009/10

We now consider smallholder rents in the 2009/10 season. Table 9 shows that the net margin in 2009/10 for smallholders using credit increased from 52.20 cents per kg to 63.59 cents per kg. This is mainly due to the increase in auction floor prices from \$1.10 to \$1.80 compensating for the substantial increases in smallholders costs of production. For example, the six-year period has shown a doubling (in dollar terms) of nursery and land costs, loan costs (where lower interest rates have been offset by an increase in fertiliser costs by a factor of 2.3), and *chigaffa* costs. Marketing preparation costs have increased (in dollar terms) by a factor of 2.4. We find that smallholders' net margins were indeed in the region of 30% (as assumed in the costs of production that informed the minimum prices on the auction floors).⁴¹ Overall, then, in nominal terms, we find smallholder margins have increased by 11.39 cents per kg. However, in real terms, when we use the rural consumer price index to deflate smallholder earnings in 2009/10, we find a loss of purchasing power of 14.3% from net burley income between 2003/04 and 2009/10 (equivalent to 8.04 kwacha per kg).⁴²

Table 9 – Smallholder rents in the 2009/10 season

SMALLHOLDER BURLEY COSTS OF PRODUCTION 2009/2010 SEASON KASUNGU

BASED ON 500kg / 1 acre / 5 bales / \$ 1.80 per Kg
150 kwacha = 1 US \$

| | Kwacha | Kwacha per kg | Cents per kg |
|--|------------------------|----------------------|----------------------|
| 1. PRODUCTION COSTS | | | |
| Total nursery and land cost | 37586.67 | 75.17 | 50.12 |
| Total loan costs | 8962.41 | 17.92 | 11.95 |
| Total chigaffa costs | 15100 | 30.20 | 20.13 |
| <u>Total Production Costs</u> | <u>61649.08</u> | <u>123.30</u> | <u>82.20</u> |
| 2. MARKETING COSTS | | | |
| Total marketing preparation Costs | 18325 | 36.65 | 24.43 |
| Total deductions on floors | 6022.5 | 12.05 | 8.03 |
| Total other costs | 1312.85 | 2.63 | 1.75 |
| <u>Total Marketing Costs</u> | <u>25660.35</u> | <u>51.32</u> | <u>34.21</u> |
| <u>TOTAL PRODUCTION AND MARKETING COSTS (1+2)</u> | <u>87309.43</u> | <u>174.62</u> | <u>116.41</u> |

⁴¹ Fertiliser subsidies were not provided for cash crop production in the 2009/10 season.

⁴² We used the national Rural Consumer Price Index supplied by the National Statistics Office, Zomba, and included only 6 months inflation for both 2004 and 2010 (reflecting the timing of payments during the marketing season).

| | | | |
|---|-------------------|--------|--------|
| <i>GROSS PROCEEDS</i> | <u>135,000.00</u> | 270.00 | 180.00 |
| <i>BASED ON 500kg / 1 acre / 5 bales / \$ 1.80 per Kg</i> | | | |
| <i>NET RETURN TO FARMER</i> | 47690.57 | 95.38 | 63.59 |

Source: Author's estimates, see Annex 3 for full details

5.1.1 Marketing channels

In 2009/10 the marketing channels for burley included the auction floors, district markets and IBs. District markets are run by AHL and have operated as a mini auction floor since 2006/07. The rationale for opening district-level markets was to reduce farmers' transport costs, reduce the expensive and lengthy delays at the three main auction floors, increase the speed that farmers access income (reducing the interest some pay), and, importantly to reduce the attraction of the cross-border trade. For example, in the 2008/09 season Alliance One operated a 'silent auction' for contracted tobacco at Chinkhoma. In 2009/10 all the major leaf merchants did so.

Just as in 2003/04, the choice of marketing channels alters smallholder profitability considerably. Annex 4 compares the net margins of smallholder burley production in 2009/10 when marketed through the three channels: the auction floors; district markets; and IBs. Just as with the 2003/04 comparison, Annex 4 uses the same intensive model of smallholder burley production as Annex 3 but without the use of credit.

Annex 4 suggests that a non-credit grower in 2009/10 receives a net return of 76 cents per kg from the auction floors (compared to 59 cents per kg in 2003/04). However, selling burley at a district market (Chinkhoma) improves the return to 88 cents per kg through a considerable reduction in transport costs (from 13.47 cents per kg to 1 cent per kg). The overall higher prices on the auction floors (from \$1.10 to \$1.80) also allow IBs to pay higher prices (90 cents per kg up from 37 cents in 2003/04) to farmers who desire instant access to cash or a convenient channel to sell low grade leaf.

Overall, then, in nominal terms, a non-credit grower using the auction floors improved their net margin by 17 cents per kg between 2003/04 and 2009/10. Growers using the cross-border trade/district markets improved theirs by 45.77 cents per kg, and those utilising IBs by 14.22 cents, during this time period. These substantial differences in the change in nominal profit between the different channels are reflected in the extent to which each channel provided a real terms gain or loss: a non-credit grower using the auction floors realised a 4.1% loss in purchasing power from burley income (equivalent to 2.61 kwacha per kg); those using the cross-border trade/district markets realised a 48.9% gain in purchasing power (equivalent to 48.83 kwacha per kg); whilst those using IBs realised a real terms gain of 20.28 kwacha per kg.

5.1.2 Levies for tobacco-related institutions in 2009/10

Table 10 illustrates the levies and deductions on the auction floors in the 2009/10 season. It shows that the Auction Holdings levy has reduced from 3.25% of gross proceeds to 2.5%, but that this has been offset by a TCC classification levy (as this institution now performs this function). We notice that the TCC's core levy, the Hessian Levy (now collected by TAMA), the ARET levy and the Growers' Organisation (TAMA/NASFAM) levy have all stayed the same.

Table 10 - Levies and deductions on the auction floors in 2010

| | |
|----------------------------------|---|
| TCC levy | 0.10 cents per kg |
| AHL levy | 2.5% of gross proceeds |
| Hessian levy (collected by TAMA) | 0.30 cents per bale |
| ARET levy | 1% of gross proceeds |
| TAMA/NASFAM levy | 0.70 cents per kg |
| TCC classification levy | 0.35 cents per kg |
| Withholding Tax of 7 percent | Not applied to smallholders |
| Transport | Variable - In 2009/10 NASFAM charged Kw1870 per bale from Kasungu to Lilongwe |

Source: Tobacco Control Commission, interviews

In 2009/10 these deductions amounted to 8.03 cents per kg, which represents 12.63 percent of the smallholder's net return, almost identical to the 12.4 percent in the 2003/04 season. Unfortunately, the research was unable to elicit information regarding the rents accrued by leaf merchants through the processing and exporting burley tobacco in 2009/10.

5.2 Governance in 2009/10

We find substantial changes in the governance of the supply thread in 2009/10. First, Stancom and Dimon – the second and third largest leaf merchants globally – merged in 2006, creating Alliance One. In Malawi, this created a tussle at the top of the tobacco tree. As we've seen, previously Limbe Leaf controlled the cartel on the auction floors, but in the 2007 season Alliance One took over this role by pricing Limbe Leaf out of the market. Prices went as high as US\$9.50 per kg. In addition, three further players have entered the market. First, government, through Auction Holdings, created a purchasing company – Malawi Leaf – to try and increase competition on the floors. In the first few days the company bought up to 26% of the tobacco sold on the auction floors at higher prices than Limbe Leaf and Alliance One. In the following weeks this market share slumped to less than 1%. Malawi Leaf encountered two major problems: processing and export markets. Malawi Leaf had to rent processing capacity off Alliance One. This was expensive and can cause substantial delays. Malawi Leaf also exported some of its tobacco to Egypt. As Van Donge (2002) highlights, the Egyptian market is mainly for low-quality burley tobacco, and companies there have a reputation for not honouring contracts. The second new player on the floors – Premium TAMA – is a subsidiary of the Tobacco Association of Malawi (TAMA). This new entrant started construction of its own processing plant (to overcome larger firms' control of capital goods). And third, a long-standing agricultural input company – ATC – started to buy burley on the floors.⁴³

Whilst the new players have increased competition, buying tobacco in Malawi remains a structured affair. Informants suggest that the new share out is 30% AO, 29% LL, 14% AL, 14% Premium/TAMA, 10% Malawi Leaf, and 3% ATC. However, informants suggest there is now greater competition, with smaller firms able to increase their market share each day without being reprimanded and intimidated by the larger companies. This was not the case in 2003/04. Finally, all three international merchants are now strongly connected to global manufacturers: Alliance One supplies Philip Morris; Limbe Leaf supplies BAT; and Africa Leaf is

⁴³ Two further small companies in the 2009/10 season were the Associated Tobacco Company and RWJ Wallace

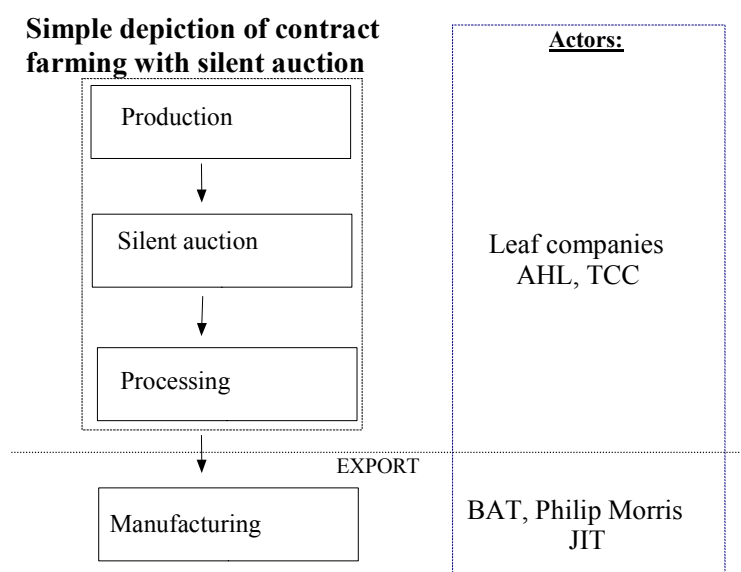
now owned by Japan International Tobacco (which may have been the case in 2003/04 as well).

5.3 Systemic efficiency in 2009/10

The final component of the 2009/10 season is systemic efficiency. Here we find a substantial increase in the amount of smallholder burley now produced through contract farming. For example, in 2008 and 2009 40 and 60 million kgs of burley were produced through contract farming, respectively (representing roughly 30% of total burley production). In 2010, this dropped back to 40 million kgs (20% of the crop). Part of this expansion has been due to the merger of Dimon and Stancom in 2005. Alliance One took over contracting NASFAM farmers and expanded operations into Ntchisi, Zomba and Namwera. More recently, Alliance One broke their tie-up with NASFAM and now use their own clubs with extension workers and credit supplied through tripartite agreements with Opportunity International and the National Bank.

Contract farming has become a sensitive issue within the industry. Leaf merchants wish to further expand contract farming, but this is being resisted by the Ministry of Agriculture and TCC. As the simple diagram in Figure 6 suggests, a complete shift to direct contracting has repercussions for numerous ancillary industries – such as fertiliser suppliers, transporters, and commercial graders. Moreover, pressure to disband the floors underestimates their role in facilitating the operation of the industry in a highly capital-constrained context. Auction Holdings recovers the costs of goods and services from growers’ gross proceeds on behalf of institutions via the centralised system of sales. Liberalising the auction floor system may circumscribe the ability of independent credit, input and transport providers to offer services to smallholders (thus limiting competition, but creating further market opportunities for the leaf companies). Moreover, it is understandable if government is reticent about contract farming becoming the main mode of tobacco marketing due to the alleged smuggling that took place when companies were contracting large-scale estates.

Figure 6 – Depiction of contract farming with a ‘silent’ auction



Source: Author’s illustration

Nevertheless, there are signs that an increasing proportion of smallholder burley will be contract farmed. For example, all buyers now operate silent auctions at the new district markets.

Moreover, if there is a disagreement on price with contracted tobacco, the TCC is not involved – only the buyer and grower meet to resolve the problem which, growers claim, is much faster and more efficient. There are also two further reasons why contract farming is set to increase. First, that contracted burley has been receiving higher prices as the quality of the crop is better. And most importantly, it allows leaf companies full traceability of the crop (especially important for Philip Morris who require considerable oversight in terms of chemicals, NTRM and child labour). A summary of the major changes in the supply thread between 2003/04 and 2009/10 is shown in Table 11.

Table 11 – Summary of major changes in supply thread 2003/04 to 2009/10

| | |
|--------------------------------|--|
| Institutional framework | <p>Creation of district markets</p> <p>Introduction of minimum prices and greater government intervention</p> <p>More credence concerns (CC32 bill, green tobacco sickness)</p> |
| Rents | <p>The net margin of growers using credit and the auction floors increased by 11.39 cents per kg in nominal terms. This represents a real terms loss of purchasing power of 8.04 kwacha per kg.</p> <p>The net margin of growers not using credit but using the auction floors increased by 17 cents per kg in nominal terms. This represents a real terms loss of purchasing power of 2.61 kwacha per kg.</p> <p>The net margin of growers not using credit and using the cross-border trade / district markets increased by 45.77 cents in nominal terms. This represents a real terms gain in purchasing power of 48.83 kwacha per kg.</p> <p>The net margin of growers using intermediate buyers increased by 14.22 cents in nominal terms. This represents a real terms gain in purchasing power of 20.28 kwacha per kg.</p> <p>Institutional levies remain broadly similar (at around 12.5% of smallholders net margins)</p> |
| Governance | <p>Alliance One is now the dominant leaf buyer</p> <p>New leaf buyers have increased competition on the auction floors</p> <p>Greater conflict in the industry between government and leaf merchants</p> |
| Systemic efficiency | <p>Increasing amounts of smallholder burley produced through contract farming (with implications for auction floors and ancillary industries)</p> |

6. CONCLUSION

Despite considerable changes in the structure of the smallholder burley tobacco supply thread in recent years, little academic attention has focused on the dynamics between international leaf merchants and government, both of whom claim to have the best interests of Malawi's smallholder growers at heart. The comparison here suggests that government efforts contributed to a 63% increase in smallholder producer prices on the auction floors between 2003/04 and 2009/10 (considerably higher than the 15% increase in producer prices in neighbouring Mozambique over this time period - FAO, 2011). Due to increased production costs this only led to a 22% increase in net margins for smallholder growers using credit and the auction floors. And when we deflate the 2009/10 kwacha figures using the Rural Consumer Price Index, we find this represents a loss of purchasing power from burley income of 14.3%. In contrast, growers not using credit and utilising the CBT / districts markets, and IBs, saw a real terms increases in purchasing power (of 48.83 and 20.29 kwacha per kg, respectively).

Moreover, government action in tackling the cartel on the auction floors has led to considerable conflict within the industry. Whilst these efforts have led to a slight increase in competition (and a slight reduction in the companies' control over capital goods), it remains to be seen whether such a confrontational stance with the main leaf merchants will bear fruit in the longer term. The trust and open communication channels between actors evident in the 2003/04 season no longer exist.⁴⁴

The most significant structural change in the sector over the period considered here has been the rapid shift towards contract farming. Thus, the burley supply thread in Malawi is increasingly a *captive value chain*. However, this is not so say that smallholders won't be able to benefit substantially from such arrangements (for a detailed discussion of the opportunities and risks from contract farming see Prowse, 2010). Contract farming can allow access to a reliable market, can provide guaranteed and stable pricing structures, and most importantly can provide access to credit, inputs, production and marketing services (seed, fertiliser, training, extension, transport, even land preparation). On a wider note, it can also transfer technology and skills (particularly for higher-risk crops which resource-poor farmers might avoid), and can support farmers in meeting vital standards. Most importantly, contract farming can provide higher incomes. But just as there are numerous opportunities from contract farming, there are also numerous direct and indirect risks for small-scale producers (and, in some cases, non participants – see Prowse, 2010).

The position this article takes is that successful contract farming arrangements often rely not just on technical expertise, an appropriate choice of scheme, and good contractual design, but the explicit involvement of numerous third parties. Such actors can arbitrate contract design and implementation schedules, provide quality assurance of inputs, and ensure that product characteristics, and payment schedules are fair. In essence, contract farming is a relationship that can be improved and enhanced through open, frank dialogue, and through advice, encouragement, and, in some cases, the oversight of authorised third parties. Trust and goodwill in a relationship can easily be replaced by doubt and mistrust. Third parties can provide services and support to make a breakdown in communication and possible conflict less likely. The extent to which third parties can play this role in Malawi is currently very uncertain: all contracted tobacco still has to pass over the floors in a 'silent' auction. Moreover, government's attempts to 'discipline' firms only seems to be antagonising companies who now appear to be reneging on their long-standing 'obligation' to purchase all the tobacco Malawi can produce (thus contributing to worse balance of payments deficits). Put simply, there appears to be a need for an independent institutional broker, trusted by both sides, to repair the damage caused to the industry. The memorable title of Jaffee's (2003) paper – Standing on One Strong

⁴⁴ Furthermore, considerable challenges for the industry remain regarding credence factors and the Framework Convention on Tobacco Control.

Leg is Better Than on None – is prescient here, as, at least in the short term, without tobacco Malawi will fall.

REFERENCES

Agricultural Research and Extension Trust (ARET). 2004. A Word Of Advice. *Modern Farming*. Lilongwe, Malawi: Agricultural Research and Extension Trust

Barrientos, S., C. Dolan, *et al.* 2003. A Gendered Value Chain Approach To Codes Of Conduct In African Horticulture. *World Development* 31:9, 1511-1526.

Catelo, M, O. and A. Costales. 2008. Contract Farming and Other Market Institutions as Mechanisms for Integrating Smallholder Livestock Producers in the Growth and Development of the Livestock Sector in Developing Countries. *PPLPI Working Paper 45*. Rome, Italy : Food and Agricultural Organisation.

Chapola, G. 1994. *Malawi Burley Tobacco Handbook*. Lilongwe, Malawi : Tobacco Research Institute of Malawi (TRIM).

Daviron, B. and P. Gibbon. 2002. Global Commodity Chains and African Export Agriculture. *Journal of Agrarian Change* 2:2, 137-161.

Diagne, A., M. Zeller and C. Mataya (1996) Rural Financial Markets and Household Food Security: Impacts of Access to Credit on the Socio-Economic Situation of Rural Households in Malawi. Lilongwe / Washington D.C. : Rural Development Department, Bunda College of Agriculture, University of Malawi / International Food Policy Research Institute.

Diagne, A. and M. Zeller. 2001. Access To Credit And Its Impact On Welfare In Malawi. *IFPRI Research Report 116*. Washington, D.C. : International Food Policy Research Institute.

Dolan, C., J. Humphrey, *et al.* 1999. Horticulture commodity chains : the impact of the UK market on the African fresh vegetable industry. *IDS Working Paper 96*. Brighton, UK : Institute of Development Studies, University of Sussex.

Eurostat (2011) 'Statistical database – External trade detailed data'
http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database

FAO (2011) 'FAOSTAT – Agriculture'
http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database

Gereffi, G. 1999. International trade and industrial upgrading in the apparel commodity chain. *Journal of International Economics* 48, pp. 37–70

Gereffi, G., J. Humphrey, and T. Sturgeon. 2005. The governance of global value chains. *Review of International Political Economy* 12:1, 78–104.

Gereffi, G. 2001. Beyond the Producer-driven/Buyer-driven Dichotomy: The Evolution of Global Value Chains in the Internet Era. *IDS Bulletin* 32:3, 30-40.

Gereffi, G. and M. Korzeniewicz. 1994. *Commodity chains and global capitalism*. London : Praeger.

Gereffi, G., J. Humphrey, *et al.* 2001. Introduction: Globalisation, Value Chains and Development. *IDS Bulletin* 32:3, p. 1-8.

Giovannucci, D. and T. Purcell. 2008. Standards and Agricultural Trade in Asia. *ADB Discussion Paper 107*, Tokyo, Japan : Asian Development Bank Institute.

Harvey, D. 1990. *The Condition Of Postmodernity : An Enquiry Into The Origins Of Cultural Change*. Oxford : Basil Blackwell Ltd.

Hayward, N. 2004. *Malawi Tobacco - Preliminary Stakeholder Analysis*. Washington D.C. : World Bank.

Humphrey, J. and O. Memedovic. 2009. *Global Value Chains in the Agrifood Sector. UNIDO Working Paper*, United Nations Industrial Development Organization (UNIDO) : Vienna, Austria.

Humphrey, J. and H. Schmitz. 2001. *Governance in Global Value Chains. IDS Bulletin 32 : 3, 19-29.*

Jaffee, S., 1997. *Malawi Agriculture: Recent Structural Transformation And Future Prospects - Background Paper For The Malawi Growth Prospects Study*. Washington D.C. : East and Southern Africa Agriculture Division, World Bank.

Kabambe, S. D. 2007. *An Economic Analysis Of The Impacts Of International Trade Liberalisation On Smallholder Export Crop Supply Chains And Producers In Malawi. Unpublished Ph.D. thesis*, Imperial College, University Of London.

Kaplinsky, R. and M. Morris. 2000. *Spreading the gains from globalisation : what can be learned from value chain analysis? IDS Working Paper 110*. Brighton, UK : Institute of Development Studies, University of Sussex.

Keyser, J. and V. Lungu. 1997. *Malawi - Agricultural Comparative Advantage*. Washington D.C. : East and Southern Africa Agriculture Division, World Bank.

Kydd, J., 1984. 'Malawi In The 1970s - Development Policies And Economic Change'. In *Malawi : An Alternative Pattern Of Development*, Conference Proceedings, Centre for African Studies, University of Edinburgh.

Lipsey, R.G. and A. Crystal. 1999. *Principles of Economics*. Ninth Edition, Oxford University Press : Oxford.

Lynx Associates. 2002. *Press Agriculture Limited Consultancy - Situation Analysis Market Assessment and Options Study*. Lilongwe, Malawi : Lynx Associates/Malawi Institute of Management.

Matemba, S. R. and A.J.E. Charman. 2002. *Agricultural service provision by the private sector in Malawi. Case study of the partnership between Limbe Leaf Tobacco Company and the Kasungu Tobacco Farmers Trust, 2001/2002 June 2006*. Lilongwe, Malawi : Gesellschaft für Technische Zusammenarbeit (GTZ).

Matthews, A., C. Wilshaw, *et al.* 1992. *Fodya : The Malawi Tobacco Handbook*. Blantyre, Malawi : Central Africana Limited.

Milner, J. 2005. *Agricultural and Rural Development in Malawi: The Role of Policies and Policy Processes*. in Takane, T. (ed.) *Agricultural and Rural Development in Malawi: Macro and Micro Perspectives A. R. Series No. 11 / 2005*, Zomba, Malawi : Centre for Social Research, University of Malawi.

Mkandawire, M. L. C. and S. Trust, 1999. *Poverty, Democracy and Macro Economic*

Management : The Case Of Malawi. Harare : SAPES Books.

Moyer-Lee, J. 2011. *The Tobacco Global Value Chain*. Unpublished review, Department of Economics, School of Oriental and African Studies, University of London.

Mwasikakata, M. 2003 Tobacco: An Economic Lifeline? The Case of Tobacco Farming in the Kasungu Agricultural Development Division, Malawi. *Sectoral Activities Programme Working Paper 184*, Geneva, Switzerland : International Labour Office.

Nakhumwa, T. and I. Minde (1996). *Informal Cross Border Trade In Malawi*. Lilongwe, Malawi : Agricultural Policy Research Unit, Bunda College of Agriculture, University of Malawi.

Negri, M. and G. G. Porto. 2008. Burley Tobacco Clubs in Malawi: Nonmarket Institutions For Exports. *Policy Research Working Paper 4561*, Washington, D.C. : The Development Research Group, Trade Team, World Bank.

O&M Associates. 2001. Final report in financial and operational review of Press Agriculture Ltd. Blantyre, Malawi : O&M Associates Ltd.

Orr, A., 2000. 'Green Gold? Burley Tobacco, Smallholder Agriculture, and Poverty Alleviation in Malawi'. *World Development* 28(2): 347-363.

Peters, P., 2006. 'The Differential Effects on Rural Income and Poverty of a Decade of Radical Change in Malawi, 1986-97'. *Journal of Development Studies*, 42 (2), 322-345.

Ponte, S. 2002. Brewing A Bitter Cup? Deregulation, Quality And The Re-Organization Of Coffee Marketing In East Africa. *Journal of Agrarian Change* 2 : 2, 248-272.

Prowse, M. 2009. 'Becoming a Bwana and Burley Tobacco in the Central Region of Malawi'. *Journal of Modern African Studies*, 47:4, 575-602.

Prowse, M. 2010. *Contract farming and donor interventions in developing countries: a review*. Report for Agence Française de Développement (AFD), October 2010.

Reardon, T. C. B. Barrett, J. A. Berdegue, J. F.M. Swinnen (2009) Agrifood Industry Transformation and Small Farmers in Developing Countries, *World Development* Vol. 37, No. 11, pp. 1717-1727.

Riley, B., 1997. *Mid-Project Review - Smallholder Agribusiness Development Project*. Washington DC, USA : Agricultural Cooperative Development International.

Smallholder Agribusiness Development Project (SADP) 1997. Past, Present and Future Performance of the Smallholder Tobacco Farmer in Malawi 1994-2000 - A Case For Continued Institutional Support. Lilongwe, Malawi: Smallholder Agribusiness Development Project.

Smallholder Agribusiness Development Project (SADP). 1999. The squeeze of the market system: Improving the profit margin between production costs and sales - reducing marketing costs is the immediate best bet. Lilongwe, Malawi: Smallholder Agribusiness Development Project.

Stanbrook, C. (2005b) *Preliminary note on Tobacco Sales in Malawi* Unpublished note, 23 May 2005, Brussels, Belgium.

Stanbrook, C. (2005a) *The Auction Floors and The Buyers Cartel* Note for TAMA Press

Conference, 8 August 2005, Lilongwe, Malawi.

Stevens, C. 2001. Value Chains and Trade Policy: The Case of Agriculture. *IDS Bulletin* 32 : 3, 46-59.

Stevens, C. 2004. *Agriculture in the Doha Round and EPA Negotiations: A Review of the Issues for COMESA/SADC*. Paper prepared for FAO Clarification Workshop COMESA / SADC 13–16 December 2004, Brighton, UK : Institute of Development Studies, University of Sussex.

Sturgeon, T. J. 2001. How Do We Define Value Chains and Production Networks. *IDS Bulletin* 32 : 3, 9-18.

Swinnen J. and Maertens, M. 2007. Globalization, Privatization, and Vertical Coordination in Food Value Chains in Developing and Transition Countries. *Agricultural Economics*. 37 : 2, 89-102.

Tobacco Control Commission (TCC). 2004. *Season Review 2004*. Tobacco Control Commission presentation at Annual Tobacco Seminar, Mangochi, Malawi.

Tobacco Exporters Association of Malawi (TEAM). 2002. *Cross Border Trade: Task Force Recommendations Lilongwe*, Lilongwe, Malawi : Tobacco Exporters Association of Malawi.

Tobin, R. J. and W. I. Knausenberger (1998). Dilemmas Of Development: Burley Tobacco, The Environment And Economic Growth In Malawi. *Journal of Southern African Studies* 24 : 2, 405-424.

US Government. 2004. Harmonized Tariff Schedule of the United States, 2004, Annotated for Statistical Reporting Purposes - Chapter 24 Tobacco And Manufactured Tobacco Substitutes. Washington, D.C. : United States Trade Representative, Executive Office of the President.

US Government. 2000. *Trade and Development Act of 2000 - Public Law 106–200*. Washington, D.C. : US Congress.

US Government. 1999. *U.S. Generalized System Of Preferences Guidebook*. Washington, D.C. : United States Trade Representative, Executive Office of the President.

US Government. 2010. Harmonized Tariff Schedule of the United States, 2004, Annotated for Statistical Reporting Purposes - Chapter 24 Tobacco And Manufactured Tobacco Substitutes. Washington, D.C. : United States Trade Representative, Executive Office of the President.

USAID, 1991a. Agricultural Sector Assistance Program (ASAP) Vol. I: Program Assistance Approval Document. Lilongwe, Malawi : USAID.

Van Donge, J. K., 2002a. 'Disordering the Market: The Liberalisation of Burley Tobacco in Malawi in the 1990s'. *Journal of Southern African Studies* 28 : 1, 89-115.

Van Donge, J.K. 2002b. The fate of an African *chaebol*: Malawi's Press Corporation after. Democratisation. *Journal of Modern African Studies* 40 : 4, 651-83.

World Bank. 2004a. Proposal for Additional Bank Budget for Poverty and Social Impact Analysis - Malawi: Reform of Tobacco Marketing. Unpublished, D. Chitale and A. Nucifora. Washington D.C. : World Bank.

World Bank. 2004b. *Proposed Structural Adjustment Credit Policy Matrix*. Unpublished, Lilongwe, Malawi : World Bank.

World Trade Organisation. 2010. Trade Policy Review - Report by the Secretariat *Malawi*. Geneva, Switzerland : WTO Secretariat, World Trade Organisation.

Zeller, M., A. Diagne and C. Mataya. 1998. Market Access by Smallholder Farmers in Malawi - Implications for Technology Adoption, Agricultural Productivity and Crop Income. *Agricultural Economics* 19, 219-229.

Annex 1 – Smallholder Burley Tobacco Cost Of Production 2003/2004 - Kasungu District

SMALLHOLDER BURLEY TOBACCO COST OF PRODUCTION 2003/2004 - KASUNGU

BASED ON 500kg / 1 acre / 5 bales / \$ 1.10 per Kg 108 kwacha = 1 US \$

| DESCRIPTION | COST | QUANTITY | DEPRECIATION | ANNUAL TOTAL |
|---|--------|----------|--------------|------------------|
| 1. PRODUCTION COSTS | | | | |
| INPUTS (various depreciation on tools) | | | | |
| Nursery | | | | |
| Basal dressing for nursery | 45 | 4 | | 180.00 |
| Top dressing for nursery | 35 | 4 | | 140.00 |
| From NASFAM / TAMA | 50 | 1 | | 50.00 |
| To trim seedlings | 90 | 1 | 3 | 30.00 |
| Pesticide | 800 | 1 | 4 | 200.00 |
| Pesticide | 950 | 1 | 3 | 316.67 |
| For nursery | 225 | 2 | 3 | 150.00 |
| Land | | | | |
| To clear land / make ridges | 195 | 1 | 2 | 97.50 |
| Basal dressing | 1960 | 3 | | 5,880.00 |
| Top dressing | 1700 | 3 | | 5,100.00 |
| <u>Total nursery, labour, land cost</u> | | | | <u>12,144.17</u> |
| | | | | K 24.29 |
| LOAN INTEREST | | | | |
| Loan principal K 7320 | 10900 | | | |
| Interest 8 months | 41.00% | 2976.35 | | 2976.35 |
| 1% Bank arrangement | 1% | 109 | | 109 |
| 3% AHL charge | 3% | 327.00 | | 327.00 |
| <u>Total loan costs</u> | | | | <u>3,412.35</u> |
| | | | | K |
| CHIGAFFA / BARN (3 year depreciation on barn) | | | | |
| 100m barn | | | | |
| Vertical strong poles | 195 | 20 | 3 | 1300 |
| Horizontal blue gum beams | 42 | 10 | 3 | 140 |
| Horizontal shelves | 5 | 520 | 3 | 866.67 |
| Sticks on which tobacco hangs | 1 | 3400 | 3 | 1133.33 |
| Roof | 300 | 5 | | 1500 |
| Roof | 65 | 10 | | 650 |
| To make chigaffa | 150 | 1 | 5 | 30.00 |
| To make chigaffa | 150 | 1 | 3 | 50.00 |
| <u>Total chigaffa costs</u> | | | | <u>5670.00</u> |
| | | | | K |
| TOTAL PRODUCTION COST | | | | 21226.52 |
| | | | | K 42.45 |

2 MARKETING COSTS

| | | | | | | |
|---------------------------|--|--|--|--|--|-----------------|
| Preparing tobacco | | | | | | 1,650.00 |
| To hold tobacco | | | | | | 420.00 |
| To sew bales together | | | | | | 25.00 |
| Registration number | | | | | | 250.00 |
| NASFAM - Fairmgate to GAC | | | | | | 2,000.00 |
| NASFAM - GAC to Floor | | | | | | 200.00 |
| Weigh each bale | | | | | | 625.00 |
| For baling | | | | | | 750.00 |
| To separate grades | | | | | | |
| <u>Total prep costs</u> | | | | | | <u>5,920.00</u> |
| | | | | | | K |

Auction Floor Deductions

| | | | | | | | |
|-----------------------------------|--|--|--|--|--|-----------------|---|
| Gross proceeds | | | | | | | |
| Tobacco Control Commission | | | | | | 0.50 | |
| Auction floors | | | | | | 17.88 | |
| Research and extension body | | | | | | 5.50 | |
| For members | | | | | | 3.50 | |
| TAMA now manages hessian fund | | | | | | 1.50 | |
| Smallholders are now exempt | | | | | | - | |
| <u>Total deductions on floors</u> | | | | | | <u>28.88</u> | |
| | | | | | | | K |
| | | | | | | <u>3,118.50</u> | |

Other costs

| | | | | | | | |
|----------------------------|--|--|--|----|------|-----------------|-----------|
| Registration Costs | | | | 15 | 0.06 | \$0.88 | Kw per kg |
| Registration \$15 per club | | | | | | \$7.87 | |
| Miscellaneous bank charges | | | | | | 8.75 | |
| <u>Total other costs</u> | | | | | | <u>945.25</u> | |
| | | | | | | | K |
| | | | | | | <u>9,983.75</u> | 19.97 |

TOTAL MARKETING COST

| | | | | | | | |
|--|--|--|--|--|--|---|-----------|
| | | | | | | K | 31,210.27 |
|--|--|--|--|--|--|---|-----------|

TOTAL COST (PRODUCTION AND MARKETING)

| | | | | | | | |
|--|--|--|--|--|--|---|-------|
| | | | | | | K | 62.42 |
|--|--|--|--|--|--|---|-------|

SUMMARY OF NET PROCEEDS

| | | | | | Kw per kg | \$ | \$ | \$ per kg |
|----------------|-------------------------|--|--|--|-----------|------------------|-----------|-----------|
| GROSS PROCEEDS | 500 kg x \$1.10 = \$550 | | | | 118.80 | \$ 550.00 | \$ | 1.10 |
| TOTAL COSTS | | | | | | | | |
| | | | | | | <u>31,210.27</u> | | |
| | | | | | | | | |
| NET RETURN | | | | | | <u>28,189.73</u> | \$ 261.02 | \$ 0.5220 |

Annex 2 - Smallholder Burley Tobacco Marketing Channels 2003/2004 - Kasungu District

SMALLHOLDER BURLEY COSTS OF PRODUCTION 2003/2004 SEASON KASUNGU

BASED ON 500kg / 1 acre / 5 bales

108 kwacha = 1 US \$

| | AUCTION FLOORS | | CROSS-BORDER TRADE | | CROSS-BORDER TRADE | | TRADER/IB | | TRADE/IB | |
|---|-----------------|--------------------|--------------------|-----------------|--------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| | Kwacha | Kwacha per bale | Kwacha | Kwacha per bale | Kwacha | Kwacha per bale | Kwacha | Kwacha per bale | Kwacha | Kwacha per bale |
| 1. PRODUCTION COSTS | | | | | | | | | | |
| Total nursery and land cost | 12144.17 | 2428.83 | 12144.17 | 2428.83 | 12144.17 | 2428.83 | 12144.17 | 2428.83 | 12144.17 | 2428.83 |
| Total chigafia costs | 5670 | 1134.00 | 5670 | 1134.00 | 5670 | 1134.00 | 5670 | 1134.00 | 5670 | 1134.00 |
| <u>Total Production Costs</u> | <u>17814.17</u> | <u>3562.83</u> | <u>17814.17</u> | <u>3562.83</u> | <u>17814.17</u> | <u>3562.83</u> | <u>17814.17</u> | <u>3562.83</u> | <u>17814.17</u> | <u>3562.83</u> |
| 2. MARKETING COSTS | | | | | | | | | | |
| Total Marketing Preparation Costs | 5920 | 1184 | 4920.00 | 984.00 | 1000.00 | 200 | 1000.00 | 200 | 1000.00 | 200 |
| Total deductions on floors | 3118.5 | 623.7 | 0.00 | 0.00 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 |
| Total other costs | 945.25 | 189.0508235 | 0.00 | 0.00 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 |
| <u>Total Marketing Costs</u> | <u>9983.75</u> | <u>1996.750824</u> | <u>4920.00</u> | <u>984.00</u> | <u>1000.00</u> | <u>200</u> | <u>1000.00</u> | <u>200</u> | <u>1000.00</u> | <u>200</u> |
| <u>TOTAL PRODUCTION AND MARKETING COSTS</u> | <u>27797.92</u> | <u>5559.58</u> | <u>22734.17</u> | <u>4546.83</u> | <u>18814.17</u> | <u>3762.83</u> | <u>18814.17</u> | <u>3762.83</u> | <u>18814.17</u> | <u>3762.83</u> |
| 3. PRICE | | | | | | | | | | |
| Price per kg in US cents | 110.00 | 110.00 | 83.33 | 83.33 | 37.00 | 37.00 | 37.00 | 37.00 | 37.00 | 37.00 |
| Price per kg in kwacha | 118.80 | 118.80 | 90.00 | 90.00 | 40.00 | 40.00 | 40.00 | 40.00 | 40.00 | 40.00 |
| <u>GROSS PROCEEDS</u> | <u>59400</u> | <u>11880</u> | <u>45000</u> | <u>9000</u> | <u>20000</u> | <u>4000</u> | <u>20000</u> | <u>4000</u> | <u>20000</u> | <u>4000</u> |
| BASED ON 500kg / 1 acre / 5 bales / | | | | | | | | | | |
| NET RETURN TO FARMER (KW) | 31602.08 | 6320.42 | 22265.83 | 4453.17 | 1185.83 | 237.17 | 1185.83 | 237.17 | 1185.83 | 237.17 |
| PER KG (KW) | 63.20 | 44.53 | 44.53 | 44.53 | 2.37 | 2.37 | 2.37 | 2.37 | 2.37 | 2.37 |
| NET RETURN TO FARMER (US\$) | 292.61 | 58.52 | 206.17 | 41.23 | 10.98 | 2.20 | 10.98 | 2.20 | 10.98 | 2.20 |
| PER KG (CENTS) | 0.59 | 0.59 | 0.41 | 0.41 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |

Annex 3 – Smallholder Burley Tobacco Costs Of Production 2009/2010 - Kasungu District

SMALLHOLDER BURLEY TOBACCO COST OF PRODUCTION 2003/2004 - KASUNGU
 BASED ON 500kg / 1 acre / 5 bales / \$ 1.80 per Kg 150 kwacha = 1 US \$

| DESCRIPTION | COST | QUANTITY | DEPRECIATION | ANNUAL TOTAL |
|---|--------|----------|--------------|------------------|
| 1. PRODUCTION COSTS | | | | |
| INPUTS (various depreciation on tools) | | | | |
| Nursery | | | | |
| Basal dressing for nursery | 130 | 4 | | 520.00 |
| Top dressing for nursery | 100 | 4 | | 400.00 |
| From NASFAM / TAMA | 250 | 1 | | 250.00 |
| To trim seedlings | 200 | 1 | 3 | 66.67 |
| Pesticide | 1800 | 1 | 4 | 450.00 |
| Azaldrine | 1800 | 1 | 3 | 600.00 |
| For nursery | 600 | 2 | 3 | 400.00 |
| Watering can | | | | |
| Land | | | | |
| To clear land / make ridges | 800 | 1 | 2 | 400.00 |
| Basal dressing | 6500 | 3 | | 19,500.00 |
| Top dressing | 5000 | 3 | | 15,000.00 |
| Total nursery and land costs | | | | 37,586.67 |
| | | | | K |
| LOAN INTEREST | | | | |
| Loan principal K 34500 | 34500 | 7582.41 | | 7582.41 |
| Interest 8 months | 33.00% | 345 | | 345 |
| 1% Bank arrangement | 1% | 1035.00 | | 1,035.00 |
| 3% AHL charge | 3% | | | |
| Total loan costs | | | | 8,962.41 |
| | | | | K |
| CHIGAFFA / BARN (3 year depreciation on barn) | | | | |
| 100m barn | | | | |
| Vertical strong poles | 200 | 20 | 3 | 1333.333333 |
| Horizontal blue gum beams | 25 | 10 | 3 | 83.33333333 |
| Horizontal shelves | 20 | 520 | 3 | 3466.67 |
| Sticks on which tobacco hangs | 4 | 3400 | 3 | 4533.33 |
| Roof | 900 | 5 | | 4500 |
| Roof | 100 | 10 | | 1000 |
| To make chigaffa | 500 | 1 | 5 | 100.00 |
| To make chigaffa | 250 | 1 | 3 | 83.33 |
| Total chigaffa costs | | | | 15100.00 |
| | | | | K |
| TOTAL PRODUCTION COST | | | | 61649.08 |
| | | | | K |
| | | | | 123.30 |
| | | | | Kw per kg |

2 MARKETING COSTS

Preparing tobacco
To hold tobacco
To sew bales together
Registration number
NASFAM - Fairmgate to GAC
NASFAM - GAC to Floor
Weigh each bale
For baling
To separate grades
Total prep costs

MARKETING
Hessian 250 10 2,500.00
16mt cotton twine 350 2 700.00
Labels 5 5 25.00
Local transport - ox cart 150 5 750.00
Regional transport - 30t truck 1870 5 9,350.00
Scale (rental) 200 5 1,000.00
Baling jack (rental) 300 5 1,500.00
Hire an experienced grader 500 5 2,500.00
K 18,325.00

Auction Floor Deductions

Gross proceeds
Tobacco Control Commission
TCC Classification levy
Auction floors
Research and extension body
For members
TAMA now manages hessian fund
Smallholders are now exempt
Total deductions on floors

AHL
Price = \$1.80 500kg x \$1.80= \$900
TCC levy 0.10c/kg 500 \$ 0.50
TCC Class levy 0.35c/kg 900 \$ 3.15
AHL levy 2.5% of total proceeds 900 \$ 22.50
ARET levy 1% of total proceeds 900 \$ 9.00
TAMA/NASFAM levy 0.7c/kg 500 \$ 3.50
Hessian levy 30c/bale 5 \$ 1.50
Withholding tax 7% of total proceeds \$ -
\$ 40.15
K 6,022.50

Other costs

Registration Costs
Registration \$15 per club
Miscellaneous bank charges

15 0.06 \$0.88
\$7.87
\$ 8.75
K 1,312.85

Total other costs

K 25,660.35 51.32
Kw per kg

TOTAL COST (PRODUCTION AND MARKETING)

K 87,309.43 174.62
K

SUMMARY OF NET PROCEEDS

| | Kw per kg | \$ | \$ per kg |
|----------------|-------------------|-----------|-----------|
| GROSS PROCEEDS | 270.00 | \$ 900.00 | 1.80 |
| | <u>135,000.00</u> | | |
| | <u>87,309.43</u> | | |
| | <u>47,690.57</u> | | |
| NET RETURN | 95.38 | \$ 317.94 | 0.64 |

Annex 4 - Smallholder Burley Tobacco Marketing Channels 2009/2010 - Kasungu District

SMALLHOLDER BURLEY COSTS OF PRODUCTION 2009/2010 SEASON CHULU, KASUNGU

BASED ON 500kg / 1 acre / 5 bales

1. PRODUCTION COSTS

| | AUCTION FLOORS Kwacha | AUCTION FLOORS Kwacha per bale | DISTRICT MARKETS Kwacha | DISTRICT MARKETS Kwacha per bale | IB Kwacha | IB Kwacha per bale |
|-------------------------------|--------------------------|-----------------------------------|----------------------------|-------------------------------------|-----------------|-----------------------|
| Total nursery and land cost | 37586.67 | 7517.33 | 37586.67 | 7517.33 | 37586.67 | 7517.33 |
| Total chigaffa costs | 15100 | 3020.00 | 15100 | 3020.00 | 15100 | 3020.00 |
| <u>Total Production Costs</u> | <u>52686.67</u> | <u>10537.33</u> | <u>52686.67</u> | <u>10537.33</u> | <u>52686.67</u> | <u>10537.33</u> |

2. MARKETING COSTS

| | | | | | | |
|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Total marketing preparation costs | 18325 | 3665.00 | 9725 | 1945.00 | 2500.00 | 500 |
| Total deductions on floors | 6022.5 | 1204.50 | 6022.5 | 1204.50 | 0.00 | 0 |
| Total other costs | 1312.85 | 262.57 | 1312.85 | 262.57 | 0.00 | 0 |
| <u>Total Marketing Costs</u> | <u>25660.35</u> | <u>5132.07</u> | <u>17060.35</u> | <u>3412.07</u> | <u>2500.00</u> | <u>500</u> |
| <u>TOTAL PRODUCTION AND MARKETING COSTS</u> | <u>78347.02</u> | <u>15669.40</u> | <u>69747.02</u> | <u>13949.40</u> | <u>55186.67</u> | <u>11037.33</u> |

3. PRICE

| | | | | | | |
|---|---------------|--------------|---------------|--------------|--------------|--------------|
| Price per kg in US cents | 180.00 | 180.00 | 180.00 | 180.00 | 90.00 | 90.00 |
| Price per kg in kwacha | 270.00 | 270.00 | 270.00 | 270.00 | 135.00 | 135.00 |
| <u>GROSS PROCEEDS</u> | <u>135000</u> | <u>27000</u> | <u>135000</u> | <u>27000</u> | <u>67500</u> | <u>13500</u> |
| BASED ON 500kg / 1 acre / 5 bales / | | | | | | |
| NET RETURN TO FARMER PER KG (KW) | 56652.98 | 11330.60 | 65252.98 | 13050.60 | 12313.33 | 2462.67 |
| | 113.31 | | 130.51 | | 24.63 | |
| NET RETURN TO FARMER (US\$) PER KG (CENTS) | 377.69 | 75.54 | 435.02 | 87.00 | 82.09 | 16.42 |
| | <u>75.54</u> | | <u>87.00</u> | | <u>16.42</u> | |



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