

*<sup>1</sup>Conduct a value chain analysis for the sectors of your research. In addition to generic 'types' of stakeholders, add lists of organizations that will be your target for surveying or interviewing. Provide data sources for completing the list of organizations. In addition to your diagram provide accompanying text that enables the reader to see how the various actors are linked to one another. The basic input for this assignment will be your contributions to the Roundtable Workshops held in Maastricht, May 2008.*

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## **Introduction**

In my research, I focus on two firms at the centre of the some of the oldest and most established value chains in the agricultural sector in Zimbabwe: the **cotton value chain** that is led by Cotton Company of Zimbabwe (Cottco) and the **tobacco value chain** in which the lead firm is British American Tobacco Zimbabwe (BATZ). Specifically, my research will explore the link between value chain leadership styles and inter-firm cooperation and the impact on chain competitiveness. To test the hypotheses and operationalize the various components of the theoretical model, I look at the various actors in the two value chains and show how they are interrelated. Below, I offer an analysis of the two lead firms' value chains. The analysis is organized as follows:

- A brief overview of the cotton sector
- A schematic view of the Cotton Company of Zimbabwe value chain
- A brief overview of the key stakeholders, their roles and inter-linkages
- A brief overview of the tobacco sector
- A brief overview of the key stakeholders, their roles and inter-linkages
- A schematic view of the BATZ value chain
- An analysis of the gaps and opportunities in each value chain

## **Overview cotton sector**

World GDP projections suggest that world cotton consumption will continue to expand at an annual average rate of 1.7% to reach 23.6 million metric tonnes in 2010 [1]. Eight countries account for 80% of world cotton production: the USA, Brazil, China, Pakistan, India, Turkey, Australia and Uzbekistan. World cotton prices have been declining due to farm subsidies in major producing countries, increases in genetically modified cotton and cotton substitutes, especially polyester.

In Africa, cotton supports the livelihoods of millions of rural households where it is often the typical and dominant smallholder cash crop [2]. Cotton is of major macroeconomic significance in several countries in Africa, accounting for a large part of export earnings, employment and incomes.

In Zimbabwe, cotton has been grown since the early 1900s [3]. Commercial production started in 1923 and a cotton research station was set up in 1925. Ginneries were established in 1924. The textiles and garment industries soon followed and today represent some of the most established in the region [8]. Zimbabwe is currently the largest cotton producing country in southern and eastern Africa [4]. The cotton produced in Zimbabwe is renowned for its high quality uniform lint. The success of Zimbabwe's cotton is attributable to extensive crop research that is buttressed by good extension and marketing services and quality control [5].

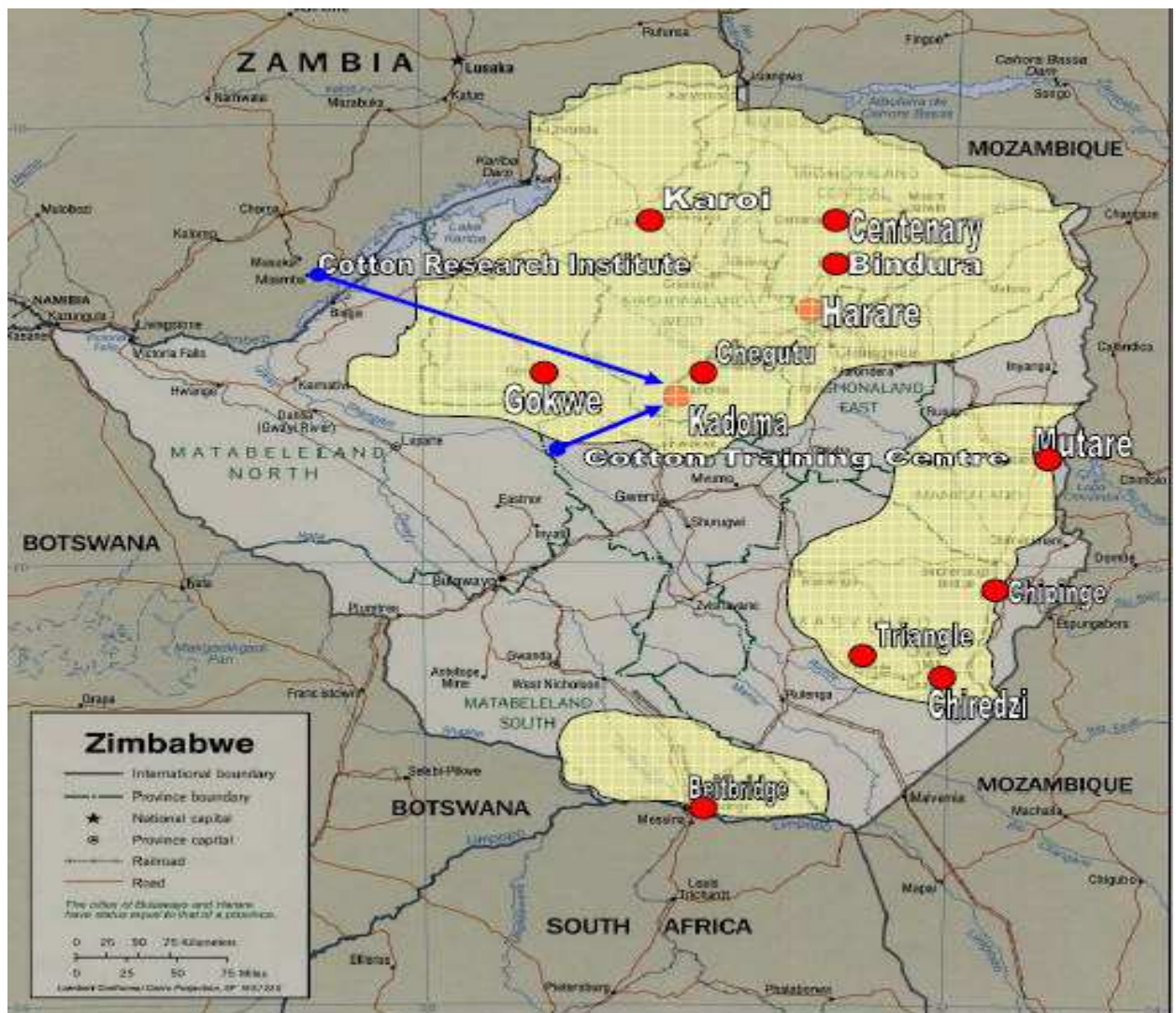
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**Innocent Mugwagwa, DBA Intake 2<sup>1</sup>**

The land reform programme embarked on in 2000 had minimal negative impact on the cotton sector as most producers were smallholder farmers. The estimated number of cotton growers in Zimbabwe in the 2006/7 agricultural season was 250,000 [6].

Within the agricultural sector in Zimbabwe, cotton is the most important crop as it supports the livelihoods of millions of rural households where it is often the sole small-holder cash crop [1]. Cotton is currently Zimbabwe's top foreign exchange earner and contributes 10% of the Gross Domestic Product. Rural smallholder farmers account for at least 90% of the total marketed crop [7].

Cotton is not a complicated crop to grow. It is labour intensive and does not require much technical knowledge to get acceptable yields. This makes the cotton a popular as a cash crop in rural communities.



Areas where cotton is grown in Zimbabwe

**MAP 1.** Cotton farming areas of Zimbabwe. **SOURCE:** Jimat Development Consultants, 2004.

### The Cotton Company of Zimbabwe

The present-day Cotton Company of Zimbabwe (Cottco) has its roots in the Cotton Marketing Board (CMB), a parastatal monopoly formed in 1952 to buy, gin and market conventional cotton. Following IMF/World Bank recommendations, the CMB was first commercialized and then privatized in 1993/1994 before the cotton industry was opened up to competition [4]. In 1997, Cottco was listed on the Zimbabwe Stock Exchange. Today, Cottco is the single largest ginner and marketer of cotton in Southern Africa [9], involved in every facet of cotton production including seed cotton production, provision of agronomic services, supply of chemicals and fertilizer to cotton growers, through to marketing lint in global markets. Through its subsidiaries, Cottco is also involved in the development, production and selling of broad acre crop seeds such as maize, soya bean, wheat and sorghum.

The group structure and major activities are as follows;

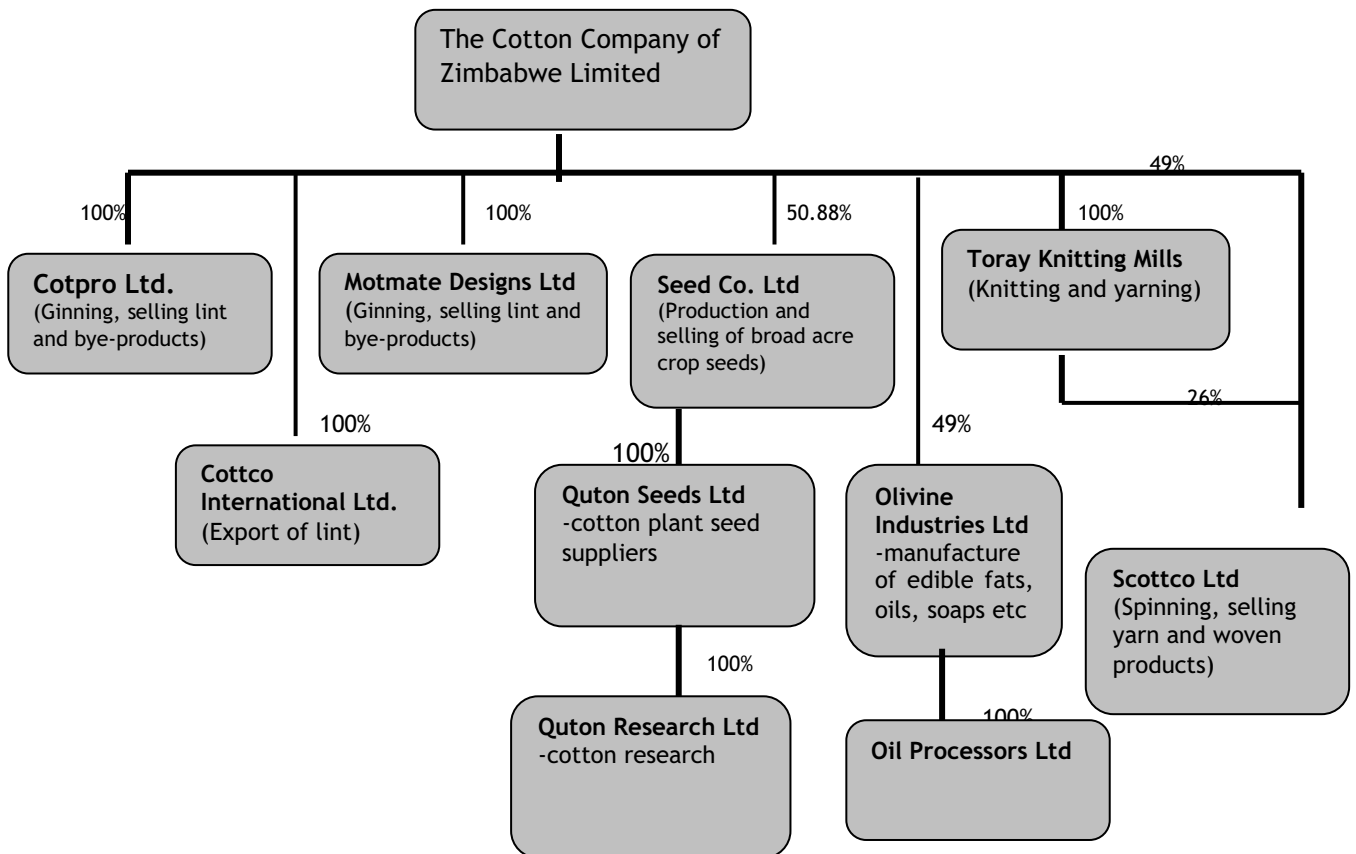


FIGURE 1. Cotton Company of Zimbabwe group structure and main activities. SOURCE: Cotton Company of Zimbabwe 2007 Annual Report.

Cottco exports 70% of cotton as raw lint [4]. The remainder is sold to local spinners, weavers and knitters who in turn manufacture for both the domestic and the export markets.

Zimbabwe is a party to a number of bilateral and multilateral trade agreements, namely;

- Zimbabwe/Malawi Bilateral Agreement
- Zimbabwe/Botswana Bilateral Agreement
- Zimbabwe/South Africa Bilateral Agreement
- Zimbabwe/Namibia Bilateral Agreement
- SADC
- COMESA
- ACP/EU Cotonou Agreement

In terms of cotton sector, the most important of these agreements has been those with South Africa, Malawi and the EU as these are the biggest destinations of Zimbabwean lint, yarns, fabrics and garments.

The Cottco value chain is shown in **Figure 2** below. Margins<sup>2</sup> are distributed as follows in the Cottco value chain:

- Input supply - 20%
- Production and processing - 40% (farmers 10%, processors 30%)
- Textile manufacturing - 25%
- Other value chains - 15%

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<sup>2</sup> Margins are calculated from the 2007 Cottco Annual Financial Results: Value Added Statements. However, input supplies and manufacturers of cooking oil and stockfeeds are subject to government price controls. Thus margins may be different in a free market environment.

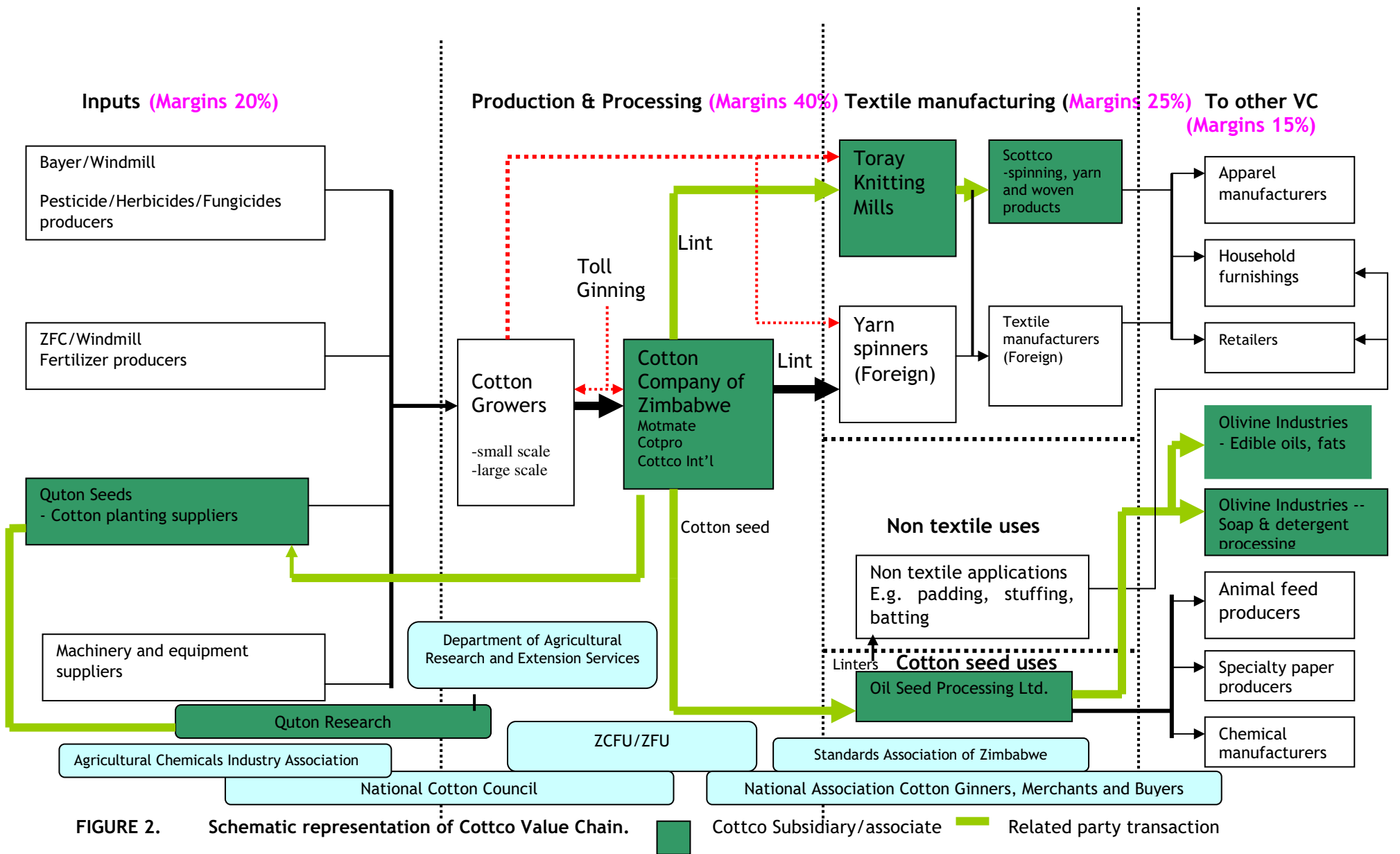


FIGURE 2. Schematic representation of Cottco Value Chain.

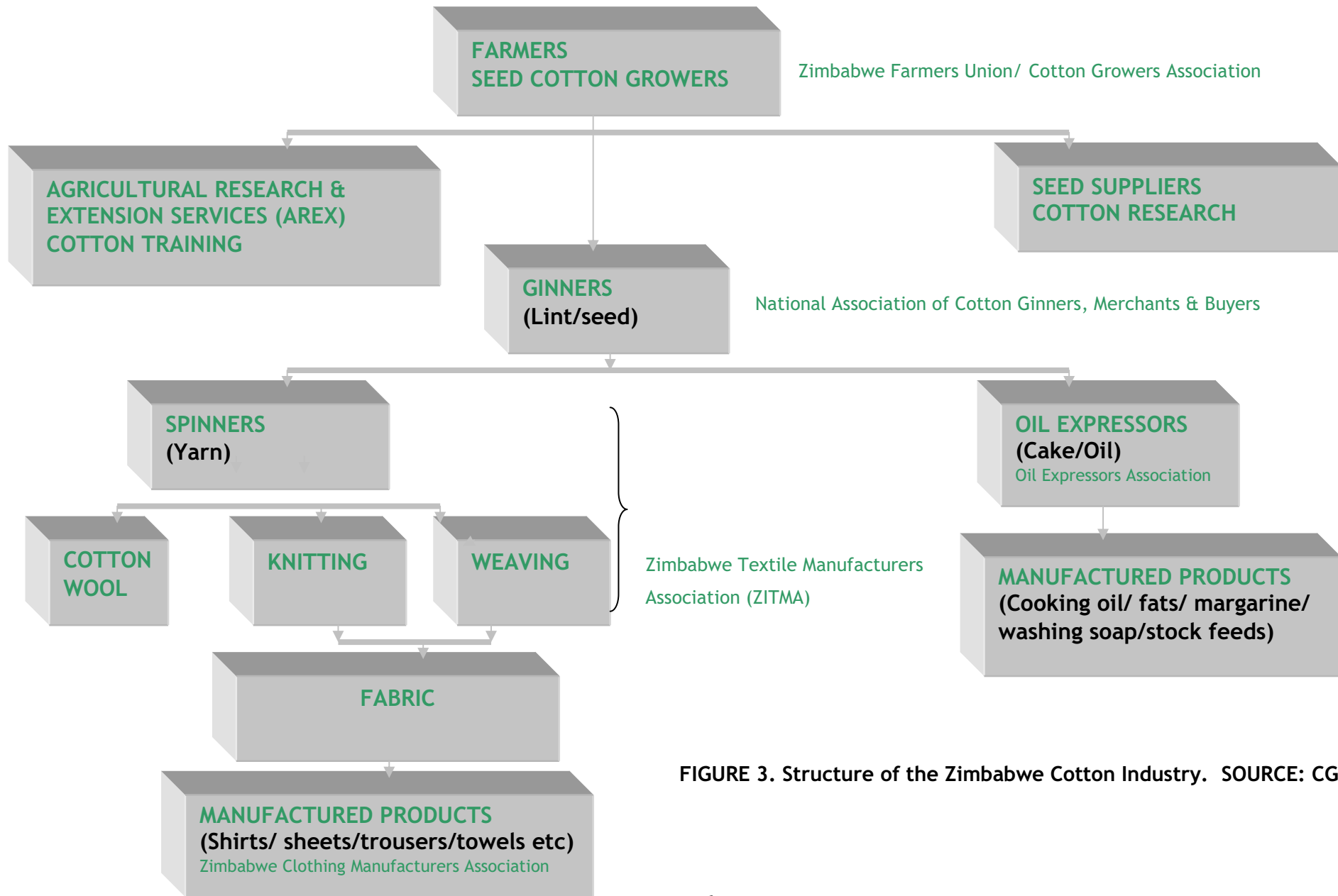


FIGURE 3. Structure of the Zimbabwe Cotton Industry. SOURCE: CGA

### **Key actors in the Zimbabwe cotton sector, their roles and linkages**

The following are the key actors that will be surveyed in my research. It is noteworthy that the research will target individual members of these associations as well as the associations as well.

a. **The Cotton Research Institute (CRI)**

The secret to the success and sustained competitiveness of the Zimbabwean cotton industry has been extensive crop research [5]. The CRI was established in 1925 and is responsible for breeding a succession of improved varieties of cotton, testing agro-chemicals and developing techniques for their use. Due to the critical input of CRI, drought and pest tolerant varieties have been developed thus leading to greater resilience. Emphasis on agronomy, breeding, pathology and entomology to meet international market requirements has been the bedrock upon which the whole industry is built [10].

b. **Quton Research (Pvt) Ltd and Quton Seeds (Pvt) Ltd**

These two organizations are 100% owned by Cottco. Quton Research (Pvt) Limited has a research programme on cotton seed varieties and is the only certified producer of certified cotton seed in Zimbabwe. Quton Research sells seeds to Quton Seeds in a related party transaction. Quton Seeds sells seeds to the farming public.

c. **Department of Agricultural Research and Extension Services (AREX)**

AREX is a government department responsible for extension services, organizing farmers, on-site training of farmers and advice on tillage, defoliation, moisture and soil conservation as well as nutrient and water requirements. AREX employs Extension Officers at every level of Zimbabwean society - national, province, district and village for monitoring of on-farm trials and technical advice to farmers. AREX offers its services free of charge and remains the largest public rural agricultural intervention agency [14]. The AREX Extension Officers work in conjunction with CRI in research issues especially as the officers have local knowledge and can monitor crop performance on a daily basis, something beyond CRI's mandate and capacity.

d. **Agriculture Chemicals Industry Association (ACIA)**

Seed and chemicals are the most commonly used non-labour inputs used in cotton production in Zimbabwe [11]. The major fertilizers used are Compound L, the nitrogenous Ammonium Nitrate (AN) and Urea, while insecticides and herbicides are the most common agro-chemicals. The major fertilizer manufacturers are the Zimbabwe Fertilizer Company (ZFC) and Windmill Zimbabwe. Sygenta, Agricura, ZFC and Windmill are the major players in the agro-chemical manufacturers. Cottco usually invites tenders from ACIA members for its input credit scheme. Individual farmers can also purchase chemicals and fertilizers directly from members of the Agriculture Chemicals Industry Association. Members of ACIA have to adhere to environmental standards to ensure that end users, communities and the local environment are protected from unsafe chemicals.

- e. **Motmate (Pvt) Ltd, Cotpro (Pvt) Ltd and Cottco International (Pvt) Ltd**  
These are Cottco subsidiaries established in export processing zones in the main cotton growing regions for the purpose of purchasing raw cotton seed, ginning and exporting of lint.
- f. **Cotton Growers Association (CGA) and Zimbabwe Farmers Union (ZFU)**  
The CGA represents large scale cotton growers while the ZFU represents small scale farmers. These producer associations represent the interests of farmers in negotiations with ginners, government, input suppliers and contractors, among others [12]. The CGA and ZFU are very important institutions in initiatives to improve cotton quality, agronomy practices, increasing production and productivity, goals that are central to the cotton value chain.
- g. **Standards Association of Zimbabwe (SAZ)**  
Given that 70% of lint produced by Cottco is exported, product certification and international standardization is essential. To that end, the Cottco production system is ISO and SAZ certified [13].
- h. **National Association of Cotton Ginners, Merchants and Buyers (NACGMB)**  
The NACGMB groups together cotton ginners, merchants and buyers and represents their interests in negotiations with government and producers. This association is especially important in regulating the behavior of cotton buyers, dealing with the opportunistic tendencies of producers and buyers and promoting fair trade within the cotton sector in Zimbabwe.
- i. **National Cotton Council (NCC)**  
The NCC is a forum for discussion among all stakeholders and to advise the Ministry of Agriculture in all questions dealing with the cotton sector. All players in the cotton industry are members of the NCC - from agro-chemical suppliers, producer associations, ginners, cotton buyers, textile manufacturers associations, stock-feed manufacturers and oil expressors [15].
- j. **Scottco (Pvt) Ltd and Toray Knitting Mills (Pvt) Limited**  
These are two Cottco subsidiaries involved in knitting and weaving and producing woven products for the local and export markets.
- k. **Oilseed Processors (Pvt) Limited and Olivine Industries**  
The two are Cottco associate companies involved in the processing of ginning bye-products. The bye-products of the process of ginning that include linters, hulls, cake/meal and oil are sold are the inputs of Oilseed Processors and Olivine Industries. Linters are used to produce pulp, felts and cotton wool which turn used in tyre cords, hoses, automobile parts, pens, pencils, explosives, candlewick, medical dressing, carpets and writing paper, among other products. Hulls are used for cattle feed, fertilizer, fuel, synthetic rubber and plastics. Cake/meal is used as flour for bakery products, animal feed and fertilizer. Oil seed is used to produce cooking oil, salad dressing, margarine, soaps, anti-freeze, putty, glycerine and fatty acids.

## Overview of the tobacco sector

World tobacco demand is expected to increase at a rate of 1% a year due to increasing incomes and population growth, especially in Asia and Africa. In the developing world, tobacco and cigarette production is also expected to increase due to lower costs of production and less restrictions on cultivation.

Over 100 countries produce tobacco in the world. However, the USA, Brazil, Zimbabwe, Malawi, India and Turkey account for 80% of world tobacco production.

Zimbabwe is one of the major tobacco exporters in the world (FAO, 2000). Zimbabwe accounts for 18% of world tobacco exports Zimbabwe, 5% of the world's flue cured tobacco production and is the largest producer of tobacco leaf in Africa. Tobacco production contributes over 50% of agricultural exports, 33% of Zimbabwe's foreign exchange earnings and 10% of GDP. [16]. Tobacco production generates considerable rural employment. According to Zimbabwe Tobacco Association (ZTA) estimates, roughly 5% of Zimbabwe's total labour-force is directly employed in tobacco production. Many other jobs also depend on the backward and forward linkages between tobacco and other parts of the economy, including input supply, transport, coal mining and other consumer services. To the extent that tobacco workers send remittances to family members on communal farms, the crop also sustains agricultural production in those areas as well. Tobacco farming is the most profitable enterprises in commercial agriculture in Zimbabwe.

Although three types of tobacco are grown, namely burley, oriental and Virginia (commonly referred to as flue cured tobacco) varieties, the latter contributes 95% of all tobacco produced in the country due to the demand for it and higher prices fetched.

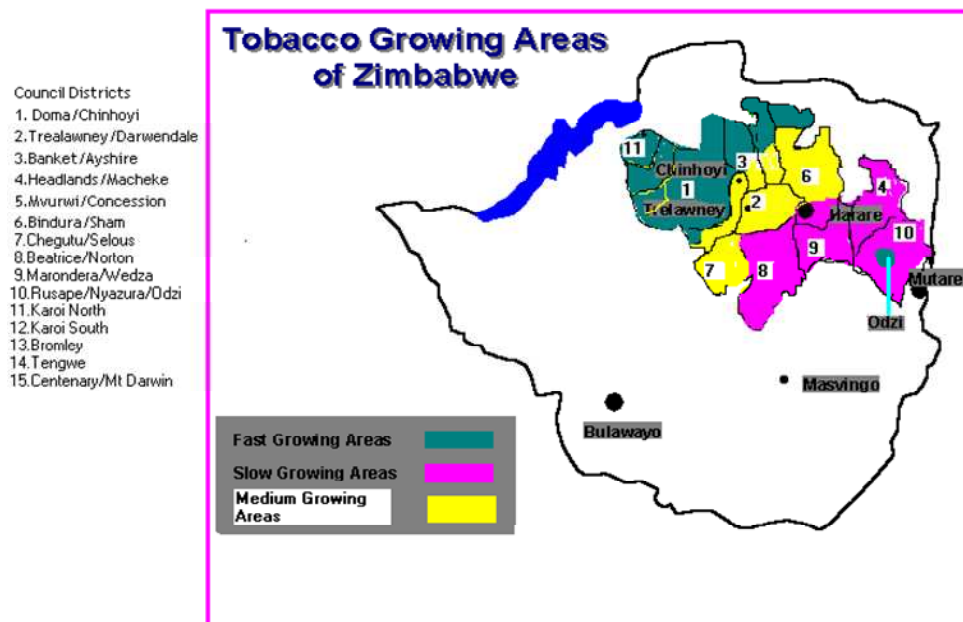
The Financial Telescope (February 1993) observed that the *"tobacco weed is commercially viable for Zimbabwe, as a hectare of tobacco in the country is 22 times more profitable than cotton, 57 times more profitable than maize and 59 times more profitable than soya beans"* (pg. 4). Keyser [17], studying the profitability of Zimbabwe tobacco compared to six other cash crops, also found the weed to be the most profitable for both large-scale and small-scale farmers; offering good financial returns even after a large drop in price or yield. He predicted that because of the profitability of tobacco, the crop would continue to be attractive to farmers 'even under progressively difficult market conditions' (pp. ix).

Before the land reforms in 2000, large scale commercial farmers dominated tobacco production. Although fewer, these producers accounted for 87% of the area planted and 95% of the total crop. Large scale commercial farmers were characterized by their use of modern machinery, overhead and drip-line irrigation and permanent labour. The majority of large scale commercial farms were under free-hold ownership by individuals, limited liability companies and large corporations.

Small scale farmers were loosely defined as indigenous farmers. These holdings were first developed by the Government of Rhodesia between 1931 and 1961. The land was under conditional freehold title. Although not as advanced as large scale commercial farmers, most small scale farmers produced at a reasonably high level and enjoyed good access to basic equipment such as ox ploughs, hand sprayers, barn space for curing tobacco and baling equipment (FAO, 2000). Tobacco is generally drought-resistant and does well in poor soils, making it popular with rural farmers.

The land reforms in Zimbabwe in 2000 affected tobacco production most profoundly. The repossession and redistribution of large scale commercial farms resulted in a marked reduction in tobacco production. From an average annual production of 158,000 metric tonnes between 1980 and 2000, average annual production has consistently fallen ever since to about 73,000 metric tones per annum.

About 98% of tobacco of tobacco produced in Zimbabwe is exported to a total of 70 countries (ZTA, 2008). The biggest market is the European Union.



**MAP 2.** Tobacco growing areas of Zimbabwe: **SOURCE:** Tobacco Research Board, 2008.

**The British American Tobacco Zimbabwe (BATZ)**

Incorporated in Zimbabwe in 1952, BATZ is listed on the Zimbabwe Stock Exchange and is in the business of manufacturing and distribution of tobacco products. BATZ is 57% owned by British American Tobacco International Holdings (UK) and 43% by Zimbabwe shareholders. In 2000, BATZ merged with Rothmans Pall Mall.

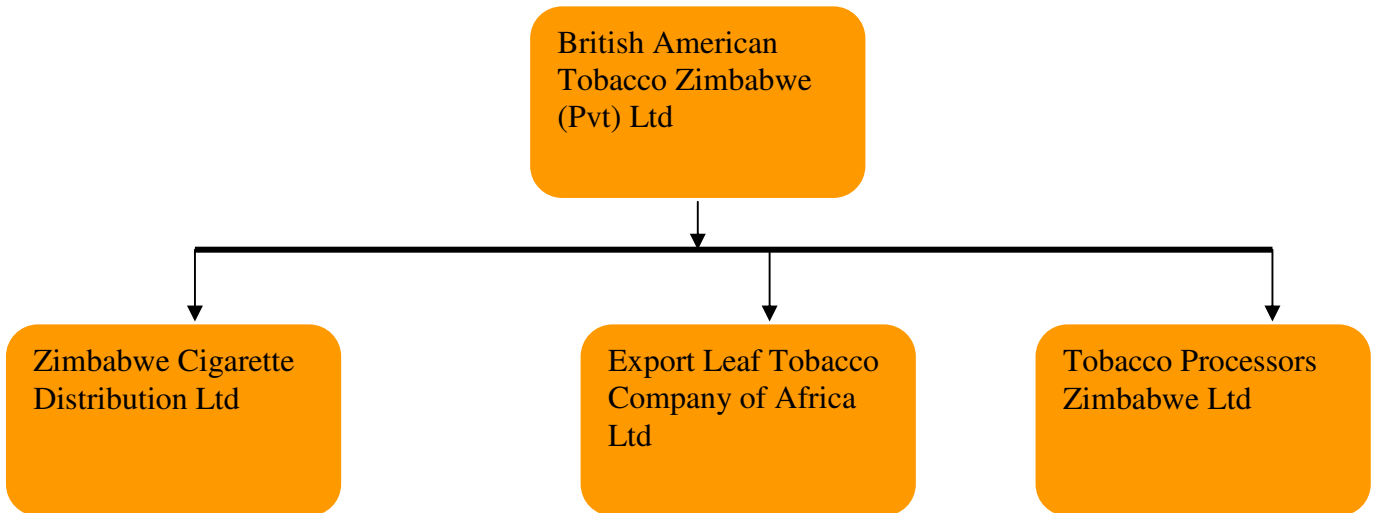
BATZ produces 5 cigarette brands for the local market. For the export market, BATZ manufactures cigarettes under license and some of its own export brands. In Zimbabwe, BATZ has 13 wholly-owned subsidiaries involved in local transport and distribution of cigarettes, tobacco marketing, export of tobacco leaf and cigarettes.

In the BATZ value chain, the margins<sup>3</sup> are distributed as follows:

<sup>3</sup> Margins are calculated from the British American Tobacco Zimbabwe Annual Report 2007: Value Added Statements. Input suppliers and distributors are subject to price controls. Margin distribution may be different in a free market environment

- Input supply - 15%
- Production and auctioning - 35% (growers 30%, auctioneers 5%)
- Cigarette manufacture - 45%
- Distribution - 5%

The BATZ group structure is shown in **Figure 3** and the value chain in **Figure 4** below.



**FIGURE 4.** BATZ Ltd group structure and main activities.  
BATZ annual report 2007

**SOURCE:**

## Key actors in the tobacco sector in Zimbabwe, their roles and linkages

The following are the key actors and stakeholders I am going to interview/survey in my research. The actors are organized into associations or corporate bodies. The members of these bodies will be surveyed.

- a. **Tobacco Research Board (TRB)**  
The TRB is a statutory body primarily responsible for tobacco research. Founded in 1928, the main activities of the TRB include soil analysis, pathology, agronomy, plant breeding, crop protection, molecular biology, GMO screening, chemical analysis, microbial analysis, tissue culture and tobacco seedlings.
- b. **Agricultural Chemicals Industry Association (ACIA)**  
As in the cotton sector, the ACIA is a body representing agro-chemical suppliers to the tobacco sector. Members of ACIA have to adhere to strict environmental standards to protect communities, flora and fauna from the potentially harmful effects of agro-chemicals. Individual farmers, farmers associations and financiers can buy agro-chemicals directly from any of the ACIA members.
- c. **Export Leaf Tobacco Company of Africa (Pvt) Ltd and Tobacco Processors**  
These two companies are wholly-owned subsidiaries of BATZ involved in the purchase of tobacco at auction floors, exporting raw tobacco and cigarette manufacture. Tobacco purchased by the Export Leaf Tobacco Company of Africa is sold to Tobacco Processors for cigarette manufacture or exported in raw form to international buyers.
- d. **Zimbabwe Cigarette Distribution Ltd**  
A wholly-owned subsidiary of BATZ. The company is involved in the distribution of cigarettes on the local market.
- e. **Zimbabwe Tobacco Association (ZTA)**  
The ZTA represents flue-cured tobacco growers in Zimbabwe in every facet of production, research and sale and is responsible for the expansion and development of the grower base. The ZTA is an important farmer organization that is especially important in negotiating for better prices, growers' joint action, providing farmers with market information, negotiating contracts between contractors and farmers, enforcing contracts and counteracting opportunistic behavior and mobilizing financial support for farmers from international and local markets.
- f. **Tobacco Trade Association**  
Tobacco merchants play a critical role in the tobacco value chain. These are international buyers of tobacco who participate on the auction floors thereby creating demand for tobacco leaf. There are 23 tobacco merchant companies, registered with the Tobacco Trade Association. Of the 23 tobacco merchant companies, a third are locally owned. The rest are subsidiaries of multinational corporations.

Overseas customers place their orders through one of the 23 merchant companies. After buying the unprocessed leaf, the tobacco merchants'

contract manufacturers like British American Tobacco (BAT) who add value to the tobacco before it is exported or sold on the local market as cigarettes. The tobacco merchants use their closeness to tobacco processors/cigarette manufacturers to influence local production systems, especially with respect to quality standards. In response, BAT have funded the farmers with inputs and provided agriculture extension services.

**g. Tobacco Industry & Marketing Board (TIMB)**

The TIMB is a statutory and regulatory body responsible for the control and regulation of tobacco sales in Zimbabwe and promotion of tobacco exports from Zimbabwe. The TIMB links with the tobacco industry worldwide, representing the Zimbabwean industry on matters of mutual concern, such as the anti-smoking lobby, excise duty on tobacco and environmental concerns. The TIMB thus keeps in touch with the World Health Organization, the Tobacco Institute (Washington) and government.

The TIMB licenses all tobacco auction floors, contractors and merchants in Zimbabwe. The body is also responsible for the Tobacco Industry and Marketing Act, control of orderly marketing of tobacco and advising government on all matters relating to the tobacco industry in the country. All tobacco grown in Zimbabwe is sold on the three auction floors in Harare as unprocessed green leaf. From the auction floors, tobacco merchants engage export agents for export of raw tobacco or send it to warehouses for drying, conditioning and flavouring before it goes to BATZ for manufacturing into specific cigarette brands and cigarette exports.

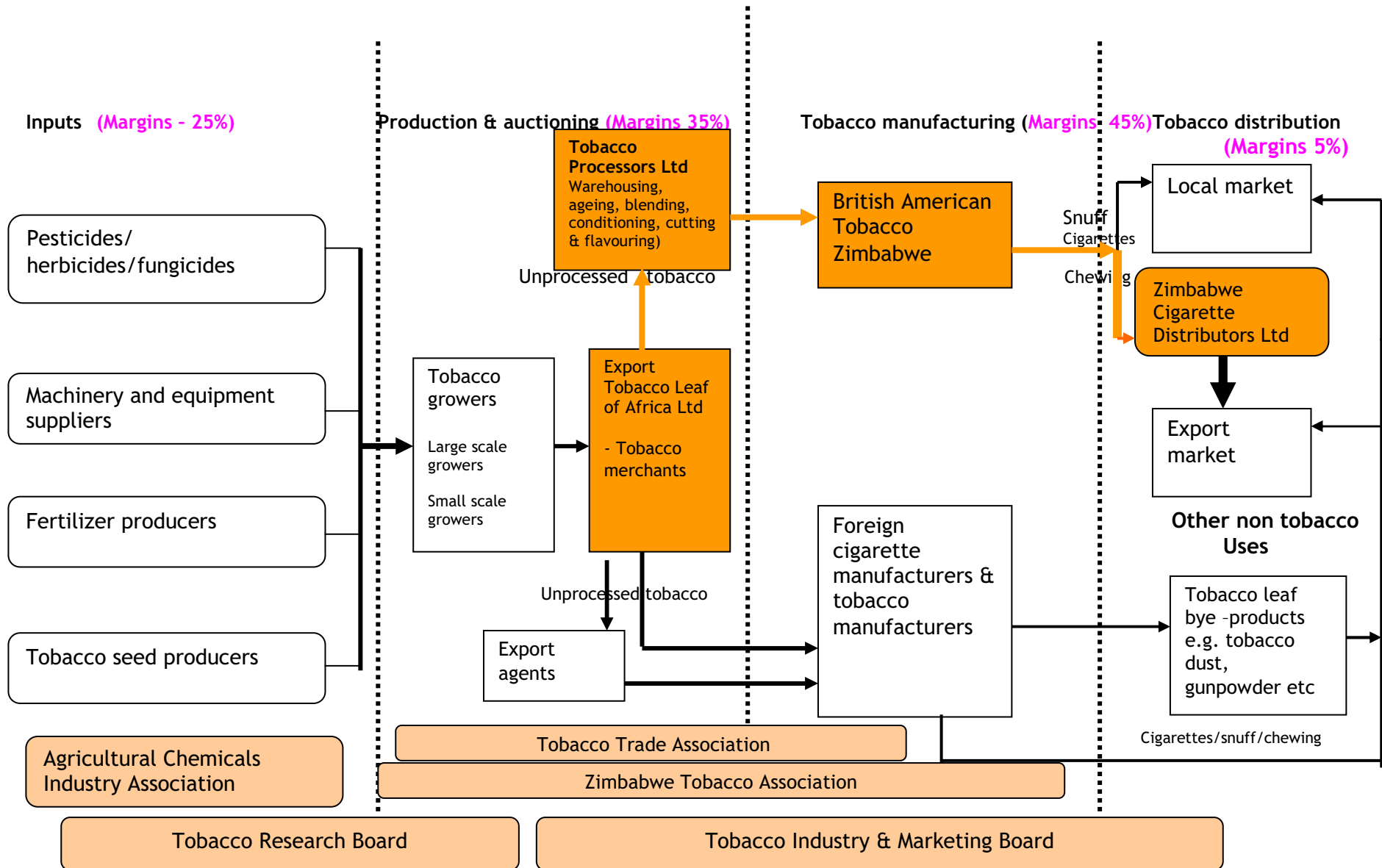


FIGURE 5. The BATZ Value Chain

→ Related party transaction

SOURCE: Author

### **Comparative analysis**

According to the Reserve Bank of Zimbabwe [18], cotton and tobacco contribute 80% of Zimbabwe's agricultural earnings, 50% of export values and together support the livelihoods of millions of rural households. In addition, the two commodities and related sub-sectors (such as warehousing and transport) also absorb over 20% of the country's workforce and through complementarities with other crops; contribute to food security [19]. Farmers choose to grow tobacco and cotton because the crops are drought resistant and do well even on poor soils.

The Cottco and BATZ value chains can be compared on:

- Market systems
- Value chain typology.
- The level of cooperation between the players in each value chain
- Organization
- Productivity
- Valorization
- Adaptation to land reforms
- Quality achieved throughout the chain,
- Availability of market information and;
- Sharing of economic gains (distribution of margins)

### **Market systems**

Cottco is a lead firm in a concentrated market system characterized by two dominant, vertically integrated players and a large number of other competing small buyers. Cottco purchases over 55% of the national seed cotton production annually. Cargill, another local buyer and ginner buys 20%, while other small buyers absorb the remainder thus creating a near-duopoly. Farmers are paid using a two tier system: a base price agreed to at the beginning of the cropping season and a price complement calculated on the actual value of lint sales to be paid at the end of the season [20]. Higher value addition of cotton seed in Zimbabwe means farmers get better value than is possible in other countries in Sub-Saharan Africa. As a result of this market system, cotton farmers in Zimbabwe get 40% of the final export price. However, in the absence of regulation, cotton farmers are vulnerable to changes in the conduct of Cottco [20].

BATZ is a monopoly in cigarette manufacturing and distribution in Zimbabwe. However, the tobacco farmers are well-organized, the Zimbabwe Tobacco Association having been formed in the 1950's and having a well-established information management system for price comparison. As a percentage of the final price of exported cigarettes, tobacco farmers get 45%. The attractive returns to farmers are due to superior organization of farmers, political pressure and better regulation of the tobacco sector.

### **Value chain typology.**

Gereffi (1999) made a distinction between two types of value chains: *buyer-driven chains* and *producer-driven chains* [21]. A buyer-driven chain is one where the lead firm is a major buyer, as often found in labour intensive industries such as in the agriculture sector. A producer-driven chain, on the other hand, is one where a key producer in the chain commands vital technologies and coordinates the various links in the chain.

The cotton sector in Zimbabwe fits the description of what Gereffi called a *buyer-driven value chain* since the lead firm, Cottco, is a major buyer of cotton seed (absorbing over 50% of national production).

In the tobacco sector in Zimbabwe, raw tobacco trading takes place on one of the three auction floors. The tobacco merchants then sell the tobacco to BATZ for cigarette manufacture. BATZ has the manufacturing technology

and uses its links to international markets to coordinate the local value chain. The tobacco sector therefore fits the description of what Gereffi called a *producer driven chain*.

#### ***Cooperation between members***

Value chains are primarily driven by market requirements. To meet market requirements, members of the value chain must cooperate. Cooperation is a process by which individuals, groups and organizations come together, interact and form psychological relationships for mutual gain or benefit [20]. Cooperation is important to obtain technology and manufacturing capabilities, gain access to specific markets, innovate and market products faster, reduce financial and political risks, achieve competitive advantage, upgrading and learning, generate economies of scale and improve bargaining power. Cooperation is a prerequisite of superior value chain performance and sustained competitiveness.

The higher level of competition in the buying of cotton seed and lack of effective regulation means that there is more temptation for opportunistic behavior on the part of cotton farmers. However, the deeper vertical integration of the Cottco value chain means there is better cooperation in the Cottco value chain than in BATZ value chain (where BATZ is a monopoly and less vertically integrated). Instead, the powerful voice of the tobacco sector is due to the better and stronger organization of farmers.

#### ***Organization of the value chain members***

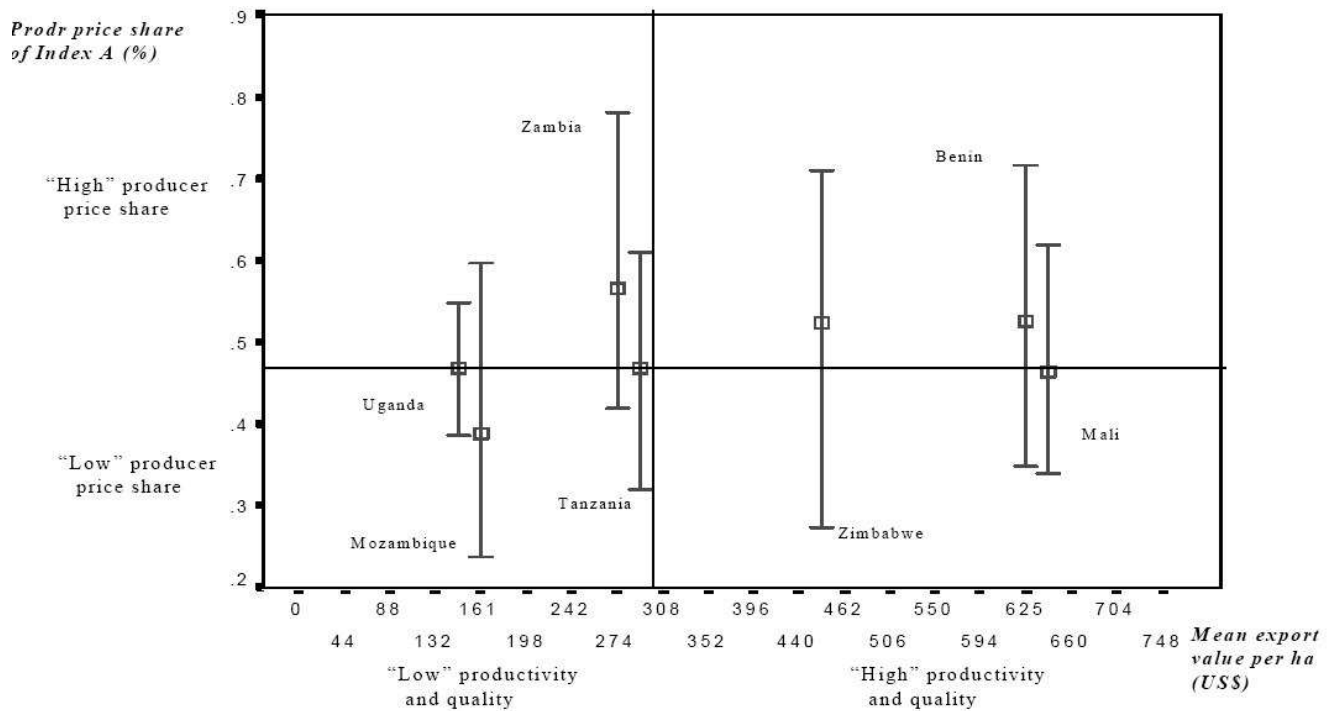
Stronger farmer organizations can be a benefit to a value chain if they allow more systematic contractual trade relationships. Stronger farmer organizations might also be better informed regarding world markets and able to negotiate a pricing approach that is tied to world prices and which recognizes world market premia for quality [20].

In Zimbabwe, cotton farmers are too many and scattered geographically. This makes it difficult to cooperate in issues like lobbying for policy change and improved prices. The fragmentation of farmers is partly to explain why toll-ginning has not been taken up by farmers [20]. The existence of the Zimbabwe Textile Manufacturers Association (ZITMA), the National Cotton Council (NCC) and the National Association of Cotton Ginners, Merchants and Buyers (NACGMB), however, means that the industry is well-organized at the other stages of the value chain. Tobacco farmers, on the other hand, are comparatively fewer. Tobacco farmers typically sell their leaf at one of the three auction floors in Harare and have consistently boycotted selling when prices were deemed too low thus showing good organization.

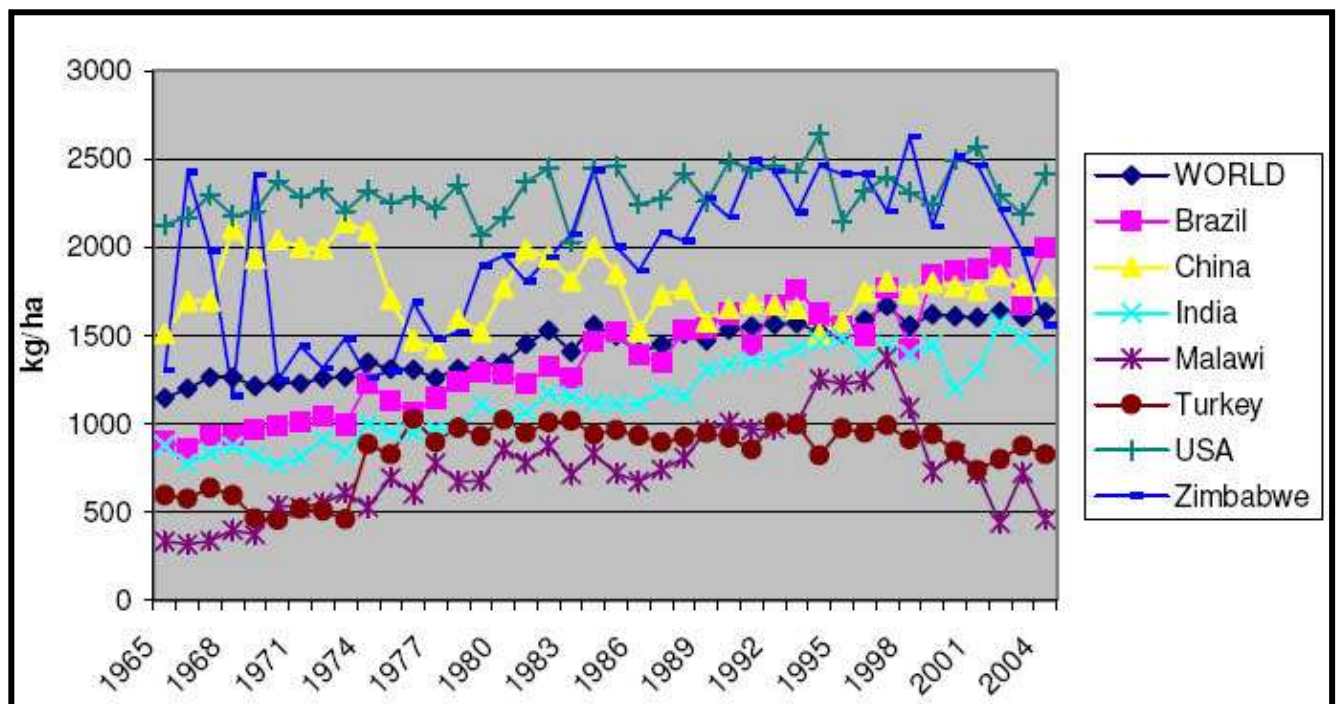
#### ***Productivity/yields***

Increasing productivity at farm level is critical to improve a value chain's overall competitiveness and to make the crop more profitable for farmers.

Zimbabwe compares favourably on yields and productivity with its major competitors on both crops.



**FIGURE 6.** Plot of mean cotton export value/ha against mean producer price share for seven countries of Sub-Saharan Africa, harvest years 1995 - 2002. **SOURCE:** Boughton et al (2003)



**FIGURE 7.** Tobacco yields in selected major producing countries, 1965-2004. **SOURCE:** Jaffee, 2003.

### Valorization

The ginning process separates the cotton lint (fibre) from the seeds. Like in most cotton-producing countries in Africa, ginning companies buy the raw cotton and own both the lint and the seed. In most countries but Zimbabwe, ginners treat a small proportion (typically less than 10%) of the seeds and pack them for distribution back to farmers as planting seed. Ginners sell the remainder for processing into oil and cake or, in a few cases, are processed directly by the ginning company.

	Average national seed cotton production (in tons) 2001-06	Cottonseed oil production as % of national oil consumption <sup>a</sup>
Benin	339,500	53%
Burkina	557,833	57%
Cameroon	242,966	18%
Mali	488,281	50%
Mozambique	72,178	6% (potential)
Tanzania	235,000	8%
Uganda	78,410	4%
Zambia	160,000	20%
Zimbabwe	246,350	27%

FIGURE 8. Valorization of cotton by-products SOURCE: Tschirley *et al* (2007)

In the cotton sector in Zimbabwe, 70% of the cotton is exported as lint while the remainder is for the domestic textile industry and other cotton and ginning by-products.

By comparison, 98% of tobacco produced in Zimbabwe is exported, mainly as raw leaf. There is a 30-50% valorization in the tobacco sector in Zimbabwe [22].

### Adaptation to land reforms

In 2000, the government of Zimbabwe embarked on land reforms that essentially changed the land ownership structure in Zimbabwe. The cotton and tobacco sectors were affected differently



Figure 9. Cotton and tobacco national production comparison 1997-2008. SOURCE: Cotton Growers Association 2008.

Save for drought-induced effects on production, the cotton sector has adapted better to the land reforms than tobacco. This is mainly because cotton has traditionally been a small-holder crop while tobacco has always been a commercial farm crop in Zimbabwe. The land reform programme affected large scale farms, therefore tobacco production.

**Quality**

Zimbabwe cotton is hand picked and is therefore less contaminated. Strict quality control systems at ginning level mean Zimbabwe cotton enjoys higher premiums than many other producers in Africa [20].

**PREMIUM FOR TOP TYPE (2006/07)**

Average quotation minus Cotlook A Index (US cts/lb)

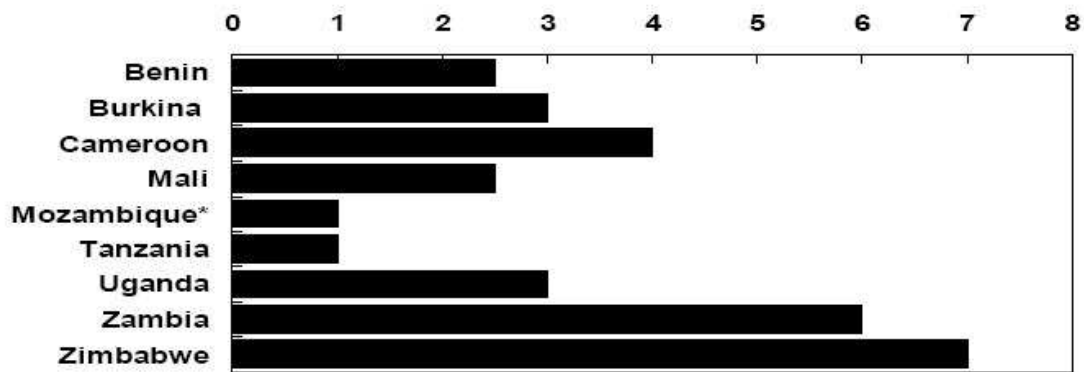
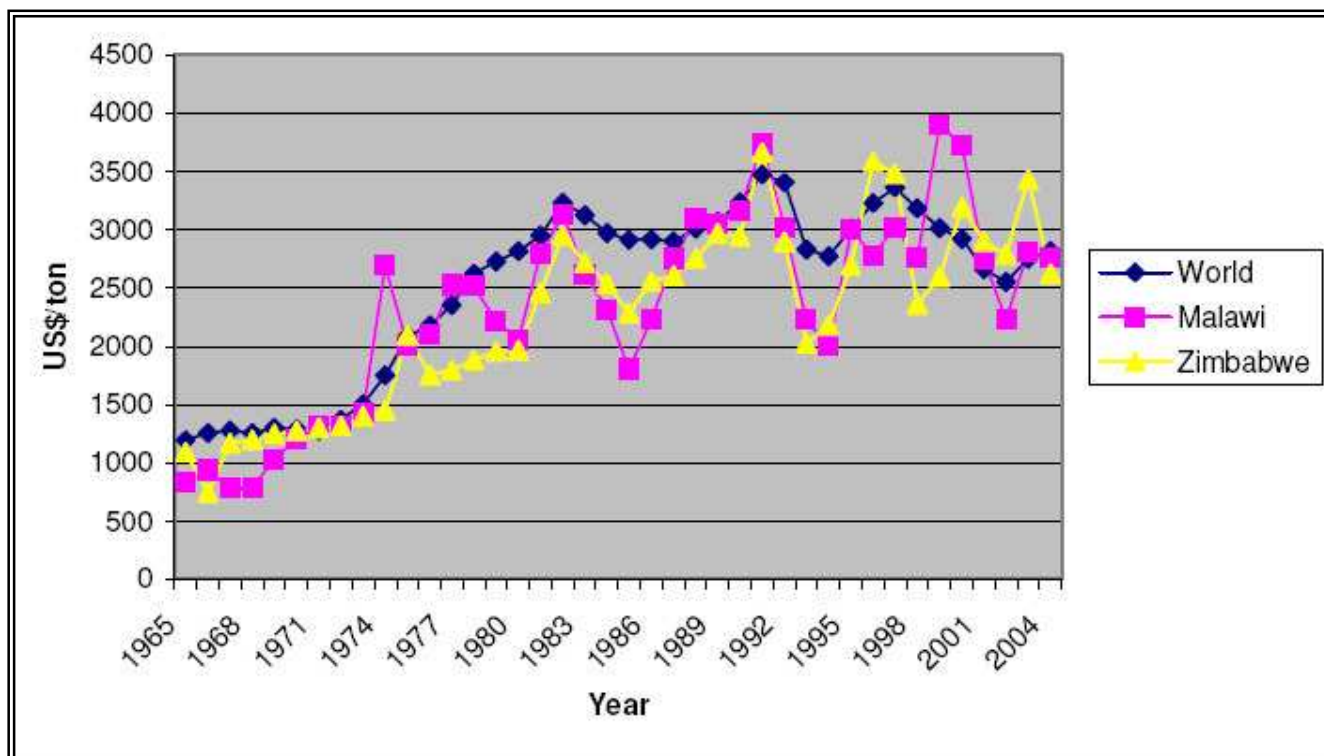


FIGURE 10. Premiums paid for lint in 2006/2007 SOURCE: Tschirley *et al* (2007)

Zimbabwe tobacco fetches internationally competitive prices, thus indicating the high quality standards, even after the land reforms (Figure 8).



**FIGURE 11. Average prices for tobacco leaf 1965-2004. SOURCE: FAOSTAT**

***Availability of market information***

Availability, timeliness and accuracy of information are crucial for farmers to maximize the returns they get from their crops. Access to quality information depends on the organization of farmers and the marketing system in place.

In the cotton sector in Zimbabwe, farmers or their unions have no information on international cotton prices and market requirements. This is so because cotton buyers and ginners often enter into forward contracts with overseas lint buyers thus obtaining prices that are different from the ruling market prices on the international market. The extent to which cotton farmers get an internationally competitive price for their crop therefore largely depends on the transparency of the ginner. The Cottco value chain is therefore characterized by information asymmetry.

In the tobacco sector, farmers have access to information on prices obtaining on each auction floor in Zimbabwe because it is a statutory requirement that such information is availed to the Tobacco Industry Marketing Board. In addition, farmers have information on prices obtaining in other major producing countries such as USA, Brazil and Malawi. To that extent, farmers can bargain and do obtain internationally competitive prices for their leaf (Figure 8). The BATZ value chain is therefore characterized by information symmetry. This is possible in the BATZ value chain because the lead firm has no obvious conflict of interest, unlike in the Cottco value chain.

***Distribution of economic gains***

In the Cottco value chain, the highest margins are at the production and processing stages of the value chain. In the BATZ value chain, the highest margins are earned at the manufacturing stage where BATZ brands its cigarette products, has high-tech cigarette manufacturing technology and therefore high entry barriers.

## **Gaps and opportunities**

Gaps and opportunities in the Cottco and BATZ value chains can be identified at each stage of the value chains.

### ***INPUT SUPPLY***

The hyperinflation in Zimbabwe affects farmers and input suppliers in the Cottco and BATZ value chains most profoundly. Access to seasonal finance from banks has been curtailed as the financial institutions have tightened their inflation and credit risk management strategies in response to high inflation. Traditionally, commercial farmers have used land as collateral for bank borrowings. This avenue has been closed due to the land resettlement exercise. In response, Cottco and BATZ have developed and implemented a credit input scheme under which they provide inputs, cash and transport to farmers contracted to them.

In the Cottco value chain, there is poor regulation and a lot of side marketing since there are a number of buyers. In the BATZ value chain, a stronger regulatory environment and a monopoly situation has helped matters somewhat. However, the higher upfront input costs for the tobacco crop means even financiers have not been able to meet the demand for financing, thus curtailing national production [17].

Opportunities exist in the BATZ value chain for seed multiplication and financing of the crop and infrastructure such as barns and transportation. The difficulties faced by farmers in getting adequate financing means there is opportunity of creating a second option to auction sales: contract farming. With the necessary regulatory safeguards, contract farming can potentially create win-win situations for farmers and investors since tobacco farmers are paid in foreign currency.

In the Cottco value chain, opportunities exist in financing. With the necessary regulatory framework in place, investors can finance the crop and gin in Zimbabwe dollars and export lint and add value to the seed cotton. The depreciating Zimbabwe dollar will mean that exporters are cushioned against currency losses.

### ***PRODUCTION AND PROCESSING***

The biggest gap in the Cottco value chain is one of regulation. The entry of many small buyers in the cotton market has opened room for opportunistic behavior. Some buyers do not invest in the production of the crop like Cottco does. They appear during harvesting and offer farmers irresistible prices, whatever the quality of the crop. This has the effect of short-changing those institutions who have invested pre-season financing and technical expertise in the production of the crop. The practice also drags standards down. The key challenge for concentrated sectors, like Zimbabwe's cotton sector, therefore, is to develop a flexible and commercially supportive regulatory regime that understands the strengths and weaknesses of the concentrated model. Specifically concentrated sectors need barriers to entry (licensing rules that specify strict capabilities and conduct of firms wishing to participate in the sector) to defend the ability of firms within the sector to coordinate on input supply, extension and quality control [20].

Concentrated sectors must retain some contestability to provide incumbents with an incentive to maintain attractive seed cotton prices. As in the case of local monopolies, it is important for those in charge of policy for the sector to form a clear idea of the types of company that they wish to allow into the sector, so as to be able to formulate rules accordingly. Given these sectors' tendency to slide towards unrestrained competition and credit default crises, a strong commitment to raising farmer productivity and improving quality within the chain should be given high priority in the selection criteria.

Given the problems of relying entirely on the threat of entry to discipline incumbent firms within concentrated sectors, it may also be desirable to develop

price setting mechanisms that are more formalized than the price leadership that has prevailed in concentrated systems so far. As piloted in West Africa cotton sectors, farmer organizations have a potentially very important role to play within such mechanisms. However, this role needs to be informed by a solid understanding of world markets to avoid the problems so far seen in West Africa.

In the Cottco value chain, options exist for the ginner to improve marketing performance. Forward sales, the most common marketing method in the cotton business, are the easiest and most effective marketing strategy to cover risks. The flexibility and effectiveness of such sales can be enhanced if they are supplemented by the use of market instruments such as futures and options [20].

Cottco can also spread their risk by committing proportions of the total production to different marketing options: cash sales after ginning and other options requiring commitment prior to harvest: forward sales at fixed price, 'on call' at price-to-be-fixed contracts, and minimum guaranteed price contracts. Direct sales from Cottco to spinners through commissioned agents can save the cost of intermediation by merchants while improving the quantity and quality of market knowledge available to the organization.

To realize improvements such as the ones recommended above, Cottco needs to be more informed and trained to better understand the world cotton market and prices, master cotton trade rule and regulations, and understand how to use risk management techniques based on futures and options contracts [20].

Opportunities exist in the Cottco value chain for financial institutions and commodity brokers to design instruments such as options, futures contracts and such other financial tools suited to the Zimbabwe environment.

For processing, Cottco uses saw and roller ginning. Cottco has a ginning outturn of 41% lint per unit of seed cotton, way above the 35% world average. This is mainly because of the country's highly developed seed breeding and multiplication system that ensures that farmers use good gene stock [17]. However, there is criticism that conventional cotton uses a lot of chemicals that damage the environment. This is a gap that can be addressed through the cultivation of organic cotton and the adoption of transgenic or genetically modified organisms cotton. These opportunities have not been exploited yet in Zimbabwe.

In the BATZ value chain, opportunities exist for an alternative marketing arrangement. While the auction system is transparent, contract farming should co-exist with it so that those farmers who have borrowed are protected from unscrupulous lenders. There has not been an attempt at growing organic tobacco in Zimbabwe. This is an opportunity that can be exploited in this era of growing emphasis on environmental conservation.

### ***Farmers Unions***

Stronger farmer organizations can also work to the advantage of the sector if they allow more systematic contractual trade relationships between the two parties. Examples could include more formalized contract farming relationships which specify pre-determined volumes of seed cotton to buy/sell and with precise quality specifications (such as zero contamination). Stronger farmer organizations might also be better informed regarding world markets and able to negotiate a pricing approach that is tied to world prices and which recognizes world market premia for quality. Considerable institutional strengthening and training will be required first to reinforce producer organizations.

Another potential tool for improving the marketing of cotton is electronic trading. E-trade platforms can be a very effective means of transparent price discovery brought about by real time multilateral bids and offers and online contracting can reduce transaction costs.

Cotton ginning is not by nature a heavy industry. Hence there are numerous examples of farmers grouped in associations, as well as farm-based agribusinesses that are engaged in cotton production and ginning in some of the major exporting countries such as the US, Australia and Brazil. There are similar cases in Africa such as SICOSA in Cote d'Ivoire, the ginning company established by a cotton farmers union (URECOS-CI) at the end of the 1990s [20]. In other cases, ginning is a service provided on a fee basis (toll ginning) to farmers, who retain ownership of the final products (lint and seeds).

By the same token, tobacco farmers in Zimbabwe can upgrade to auctioning and cigarette manufacturing, areas where returns are higher due to high entry barriers.

### **MANUFACTURING**

Zimbabwe exports 70% of cotton produced as lint and 98% of tobacco as raw leaf. Therefore there is tremendous room for local value addition on both value chains, especially given the high regard its lint and leaf is held internationally. The monopoly situation in the tobacco sector also presents further opportunities for investment in cigarette manufacturing in Zimbabwe.

#### ***Oil processing***

The performance of the oil and cake sectors is clearly important and, for two major reasons, is something that requires more attention than it has received before so far. First, judging by world standards the industry in Zimbabwe is generally lagging behind in terms of capturing the full market value of cotton seed by-products. Second, these markets are changing fast due to the increased demand for edible oil and animal feed related to competitive pressures on alternative uses of cereals and raw materials for biofuel production. The combination of these two factors is likely to create new market opportunities for seed cotton companies in the future. Improving the valorization of cotton seed has a number of important policy implications, and can take different forms. For example movement toward open and transparent market-based systems may be able to deliver better prices for the seeds and better outcomes through increased competition (such as improved investment climate, selection of professional investors, and stronger enforcement of the rules and regulations on imported oil, etc.). Focused efforts to develop strategies with stakeholders for cotton oil and cake are also important. Despite the economic weight of these activities and strategic importance, Zimbabwe has not developed a strategy for cotton seed industries to attract investment.

#### ***Cigarette manufacture***

Zimbabwe has low labour costs. Opportunities exist in cigarette contract or toll manufacture.

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