

**Prospects of Kenya's Clothing Exports  
under AGOA after 2004**

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## ABSTRACT

*After unprecedented decline in Kenya's cotton-textile-apparel industry since the early 1990s, substantial interest in its revival has emerged. This interest has largely been stimulated by the market opportunity presented by the United States' African Growth and Opportunity Act (AGOA) of 2000 and the potential of the industry in poverty alleviation. Within only two years of qualifying for AGOA, Kenya's exports of clothing, and investment in the textile sector, have experienced remarkable growth.*

*This study explores the prospects of this growth continuing after 30 September 2004, when Kenya will be required to source raw materials either locally, from other AGOA eligible sub-Saharan African (SSA) countries, or from the US. Using secondary and primary production, trade and other types of data relating to the entire cotton-textile-apparel chain, this study looks at the issues involved and examines the prospects of each of the various options available to the country.*

*The study shows that none of the three options is feasible to Kenyan apparel producers as things stand now. High quality fabric and yarn are available from the US but sourcing them to make apparels will at least double the unit cost of apparels and make them uncompetitive. Kenya has a cotton-textile-apparel supply chain in place but only the garments part of it can be said to be thriving and fairly competitive. Many apparel firms are already exporting to the US, which is impressive considering the stringent requirements of that market. All the other parts of the chain, however, are very disorganized, weak and lack adequate capacity, largely due to infrastructure, market, and policy constraints. Cotton production is insufficient and the capacity to produce high quality and competitive fabrics is lacking. The option of sourcing fabric and/or yarn from other AGOA-eligible SSA countries is limited by the fact that the region does not meet the fabric requirements of its apparel sub-sector due to various supply constraints. Moreover, the fabric produced locally and regionally falls short of the variety and quality demanded by the US market.*

*For Kenya and the rest of SSA, the solution lies in sourcing fabric from the local cotton-textile industries, or the region through collaborative and strategic regional cotton-textile supply chains. For quality fabrics to be supplied locally and competitively, substantial capacity building in the lower parts of the cotton-textile chain is required. Critical inputs into this capacity building include establishment of an apex stakeholder institution to coordinate the industry and provide necessary regulation, cost-reducing interventions at all points in the chain, incentives to stimulate investment (at the ginning, spinning and fabric finishing parts of the supply chain), improved macroeconomic management, identification of niche markets, and accumulation of the necessary capital and skills.*

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## TABLE OF CONTENTS

1. Introduction.....	1
1.1 Methodology .....	3
2. African Growth and Opportunity Act (AGOA) .....	3
2.1 What the Act provides .....	4
2.2 Criticisms against AGOA .....	7
3. Overview of Kenya’s cotton-textile industry .....	9
3.1 Enter AGOA.....	12
4. Prospects with respect to locally-produced fabrics .....	14
4.1 Cotton production.....	15
4.1.1 Low yields.....	17
4.1.2 High cost of production .....	20
4.1.3 Low and declining prices .....	21
4.1.4 Gross margin analysis .....	24
4.1.5 Institutional constraints .....	25
4.2 Lint production .....	29
4.2.1 Relationship with farmers .....	31
4.2.2 Obstacles faced by ginners .....	32
4.2.3 Institutional constraints .....	33
4.3 Yarn spinning and fabric manufacturing .....	34
4.3.1 Constraints and cost drivers .....	37
4.3.2 Important institutional factors .....	42
4.4 Apparel (garment) manufacturing .....	43
4.4.1 Constraints cost drivers .....	45
4.4.2 Important institutional factors .....	46
4.5 So, Are the prospects good? .....	47
5. Prospects with respect to alternative fabrics .....	49
6. Conclusion and recommendations .....	51
6.1 Conclusion .....	51
6.2 Recommendations .....	52
References .....	55

## **Abbreviations**

AGOA	African Growth and Opportunity Act
ACP-EU	African Caribbean Pacific-European Union
ASAL	arid and semi-arid lands
CBK	Cotton Board of Kenya
CLSMB	Cotton Lint and Seed Marketing Board (Kenya)
COMESA	Common Market for Eastern and Southern Africa
EAC	East African Community
EPZs	export processing zones
FKE	Federation of Kenyan Employers
IDF	import declaration fees
KAM	Kenya Association of Manufacturers
KAMEA	Kenya Apparel Manufacturers and Exporters Association
KCGA	Kenya Cotton Ginners Association
LDC	least developed country
MUB	Manufacturing Under Bond
SADC	Southern Africa Development Cooperation

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# 1. Introduction

The Kenyan cotton-textile-apparel industry<sup>1</sup> has since the early 1990s experienced unprecedented decline to the extent that both public and private interest in the sector was substantially eroded. In the last 2-3 years, however, substantial interest in the revival of the industry has emerged. Part of the motivation has been the realization that the cotton-textile industry offers unique opportunities for increased employment, poverty reduction, rural development and generation of increased incomes in arid and semi-arid lands (ASALs). Cotton is one of the few cash crops suitable for marginal, low rainfall areas that cover about 87% of Kenya's landmass and are home to 27% of its population. The crop is additionally grown by smallscale farmers. The enormous market prospects presented by the United States' African Growth and Opportunity Act (AGOA) of 2000 and the African Caribbean Pacific-European Union (ACP-EU) Cotonou Agreement (ratified the same year) have also rekindled interest in the industry.

Indeed, since Kenya qualified for AGOA its exports to the US have expanded remarkably and so has investment in this sector. Kenya's exports to the US increased from US\$ 106.4 million in 1999 to US\$ 128.7 million in 2001. UNCTAD (2002), moreover, estimates that investment worth US\$ 13 million has already been made in Kenya due to AGOA and that this has generated 20,000 jobs. This impressive performance is largely attributed to the fact that AGOA allows Kenya and other lesser-developed sub-Saharan African (SSA) countries to source fabrics from anywhere in the world. This has enabled these countries to source very competitive fabrics from Asia and other parts of the world. This

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<sup>1</sup> Subsequently, we will use the term 'cotton-textile industry' or 'cotton-textile chain' to refer to this broader industry. Even though we use the term chain, many chains are actually involved.

provision will expire on 30 September 2004 after which fabric will have to be obtained either from the US, the local market, or from other AGOA eligible SSA countries.

The pertinent question therefore is whether there are any good prospects of Kenya continuing to enjoy the AGOA benefits after 30 September 2004. Have the lower parts of the cotton-textile chain been primed to produce the variety and quality of fabric required for the international market? What are the prospects of obtaining the required fabrics from other AGOA -eligible SSA countries? How about using US fabrics? What needs to be done to ensure Kenya continues to enjoy AGOA benefits even after 30 September 2004?

This study attempts to answer these questions by looking at the supply realities and constraints in all parts of the cotton-textile chain, including cotton production, ginning or lint production, yarn and fabric manufacturing, and apparel production. The aim is to assess the prospects of the country's apparel manufacturers obtaining competitive fabrics in terms of price and quality from the local cotton-textile industry. The study also looks at the AGOA with the objective of appraising its strengths and weaknesses, and considers the prospects of Kenya obtaining the required fabrics from other AGOA-eligible SSA countries, or from the US.

An overview of Kenya's cotton-textile industry is provided followed by a detailed analysis of the industry with a view to assessing the ability of the industry to supply quality fabrics required for the AGOA market after September 2004. Prospects with respect to the other two options of accessing fabrics are also discussed. Some conclusions are drawn and recommendations made in the last section of this paper.



## **1.1 Methodology**

Both secondary and primary data were used in this study. Secondary data were obtained from published and unpublished literature and from official statistical publications such as the *Economic Survey* and *Statistical Abstract*. Secondary data was also obtained from the Cotton Board of Kenya (CBK) and industry associations. Trade statistics were, in addition, obtained from the US's Office of Textiles and Apparel (OTEXA), <http://otexa.ita.doc.gov>. Literature on Kenya and other countries in the region or overseas was reviewed for comparative reasons. Primary data, which supports the bulk of the study, were obtained from sample surveys of the players in the cotton-textile chain. The samples were drawn as randomly as possible, given lack of sampling frames. Structured questionnaires were used and in several instances complemented with informal interviews with key informants to improve understanding of the issues.

## **2. African Growth and Opportunity Act (AGOA)**

The African Growth and Opportunity Act (AGOA) was signed into US law on 18 May 2000 after several years of struggle between the Clinton administration and the Congress. It was signed as Title 1 of the US Trade and Development Act of 2000 aimed at improving trade between the US and sub-Saharan Africa (SSA) on the one hand, and with the Caribbean on the other. The objectives of AGOA are to increase trade between SSA and the US through reduction of tariff, non-tariff and other barriers, and through negotiation of trade agreements; integrate the region into the global economy; and expand US assistance to regional integration in Africa. AGOA, in addition, proposes to use investment guarantees to mobilize private foreign investment for Africa. AGOA is also expected to eventually lead to creation of free trade areas (FTAs) between the US and interested SSA countries.

## **2.1 What the Act Provides**

AGOA allows duty-free entry into the US market<sup>2</sup> with 1,835 new products from SSA in addition to the 4,650 products that previously enjoyed preferential access under the General System of Preferences (GSP). The preferential treatment is targeted for 8 years. AGOA-eligible product categories are textiles and apparel, animal and poultry products, arms and ammunition, aluminium and aluminium products, alcohol and non-alcohol beverages, ceramic products, cereals, cheese, chemical products, clock parts, cutlery, dairy products, dyes and coloring matter, and eggs. The Act, in section 112, has special preferential treatment with respect to certain textiles and apparel. For items made in eligible SSA countries using yarns and fabrics wholly formed in the US, AGOA grants them duty-free and quota-free access into the US market. The Act grants preferential treatment to items made using yarns and fabrics wholly formed in beneficiary SSA countries (yarn-forward African-origin rule) until 2008. This provision applies to 1.5% of all apparel articles imported into the US beginning on 1 October 2000, with it allowed to increase but not to exceed 3.5% by 30 September 2008.<sup>3</sup>

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<sup>2</sup> See Box 1 for the size and stringency details of the US market for textile and apparel products.

<sup>3</sup> The US House of Representatives voted overwhelmingly in favour of an AGOA amendment doubling this quota.

### Box 1: US Market for Garments

The US market for textiles and apparel is estimated at \$ 66 billion annually and is projected to reach \$ 100 billion soon. Relative to the EU market, the requirements of the US\$ market are very stringent and US buyers are “...notoriously fickle” (Textiles Intelligence, 2002). Comparing the experience of Mauritius and South African garment manufacturers, Gibbon (2002) shows that:

(i) Quality assessments in the US market are based on levels of accuracy as tight as 2mm. In the EU, quality is simply judged by garment appearance. In the US, the fibres must have a “soft fluffy feel rather than the new clean one liked in Europe”, requiring more direct relations between the garment maker and the textile manufactures.

(ii) Quality assurance systems in the US market use a zero defect criterion. The systems are comprehensive, process-oriented and often implemented by out-station employees.

(iii) The US market requires greater monitoring and control of producers over quality assurance, suppliers’ certification, product specification, progress reporting procedures, and procedures for resolution of contractual differences. Suppliers are required to assure adequate supplies and compliance with customs’ garment safety and labour standards. Product specifications are very detailed and developed unilaterally, unlike in the EU market where they are less detailed and negotiated. The US market, moreover, has stricter demands for reporting progress of orders. In the event of contractual differences, consignments could be rejected or litigation resorted to. In the EU, price discounts with respect to the orders not adequately satisfied often suffice. In broad terms, suppliers to the EU market are allocated more non-production functions (such as styling and product development, input sourcing, organisation and logistics like clearing and forwarding) than suppliers to the US market.

(iv) The US market has larger volume demands than the EU, with buyers like Gap or Target requiring individual suppliers to commit at least 30% of their total capacity to them.

Another special provision in AGOA (least developed country, LDC rule) targets the lesser-developed beneficiary SSA countries (defined as those whose per capita GNP in 1998 was less than US\$ 1,500). These countries are allowed to export (until 30 September 2004) apparel made from fabric made in any country, after which they will be required to meet the yarn-forward African-origin rule or source fabric from the US itself. This allows SSA countries to compensate for their weak capacity by accessing the world's most competitive fabrics.

Access to AGOA benefits is not automatic for SSA countries. Eligibility conditions include: (i) progress towards the establishment of a market-based economy with minimal government intervention, protection of private property rights, and an open rules-based trading system; (ii) maintenance of rule of law; (iii) removal of barriers to US trade and investment and 'national treatment' of US investors; (iv) poverty reduction policies; (v) anti-corruption policies, and (vi) compliance with international workers' rights (US Congress, 2000). Besides these, eligible products from eligible countries have access into the US market only if the products are not import-sensitive, that is if they do not compete with US producers.

Countries wishing to export garments into the US duty-free are required, moreover, to implement a visa system approved by the US Trade Representative. The purpose of the visa system is to ensure that the garments exported by the eligible SSA countries meet the rules of origin and are not mere transshipments of garments made in non-eligible countries.

Thirty-five SSA countries have been designated as AGOA beneficiaries.<sup>4</sup> Kenya was the first country to meet all the conditions and put in place the elaborate administrative mechanisms required for qualification. Kenya and Mauritius had its visa system approved on 18 January 2001 due to substantial delays in the approval process.

## **2.2 Criticisms Against AGOA**

AGOA has received substantial criticism especially from non-governmental organizations (NGOs). Some of the criticisms leveled against the Act include:

- The Act is a unilateral US provision that could be withdrawn at its whim. There are precedents: the Andean Trade Preference Expansion Act (ATPEA) was introduced in 2001 to grant duty-free access to the US market for textile and apparel exports (from Bolivia, Colombia, Ecuador and Peru) but got stuck in the US legislature. The Act vests excessive powers over trade issues to the US president. Uncertainty caused by possibility of withdrawal discourages investment, which is one of AGOA's objectives. The condition that exports into the US market will only be allowed if they do not damage US companies also creates substantial uncertainty. A study conducted by the US Congressional Budget Office in March 1999 suggested that 90% of African textiles could be 'import sensitive'.
- AGOA benefits are transient and are likely to disappear as globalization opens markets, including the American market. The gradual phasing out of the Multi Fibre Agreement (MFA) and its replacement with the Agreement on Textiles and Clothing (ATC) at

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<sup>4</sup> These are Benin, Botswana, Cameroon, Cape Verde, Central African Republic, Chad, Republic of Congo, Djibouti, Eritrea, Ethiopia, Gabon, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Madagascar, Malawi, Mali, Mauritania, Mauritius, Mozambique, Namibia, Niger, Nigeria, Rwanda, Sao Tome and Principe, Senegal, Seychelles, Sierra Leone, South Africa, Swaziland, Tanzania, Uganda, and Zambia.

the beginning of 2005, under the WTO, is expected to eliminate quotas on textile and apparel exports from all countries including China, which is a very low cost producer. In addition, LDCs in SSA are unlikely to continue benefiting from the Act after September 2004 because of their weak capacities to develop the fabrics required for the US market.

- Because of subsidization of US cotton farmers (US Farm Bill), there are hardly any benefits for SSA countries. It has been estimated that cotton producers in West and Central Africa lose US\$ 250 million annually through price declines because of these US subsidies (Badiane *et al.*, 2002).
- Product coverage is narrow, with key agricultural products excluded.
- The Act could threaten regional trade initiatives such as EAC, COMESA and SADC because only the more developed countries within these blocs have sufficient capacity to benefit from the Act.
- Eligibility conditions are not only stringent but also likely to have adverse impacts on poverty reduction in Africa (they are similar to the structural adjustment programme that failed) yet poverty alleviation is one of the Act's objectives. In addition, the Act fails to address the continent's debt and overall economic crises, supply-side constraints, and to offer new development assistance which is critical for poverty alleviation. However, the US provided US\$ 192 million in trade capacity building assistance to 31 SSA countries between 1999 and 2001 (US Government, 2002).

These criticisms and their validity notwithstanding, AGOA is a good intervention for Africa because it provides an opportunity to build capacity in textile and apparel industries. Such capacity would then serve the continent well when globalization has eroded all preferential arrangements.

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### **3. Overview of Kenya's Cotton-Textile Industry**

Kenya participates in literally all parts of the cotton-textile chain: cotton and lint production, yarn, fabric and apparel manufacturing. Different parts of the chain are in varying states of operation, as later parts of this chapter will show.

Cotton was introduced in Kenya in the 1900s by the colonial administration but it was in the early 1960s that the crop reached many parts of the country. The crop is grown in Nyanza, Western, Coast, Central, Eastern, and Rift Valley Provinces, largely under rain-fed conditions and mainly by smallscale farmers, on holdings of less than one hectare each. Cotton research started in 1950 under East Africa's Cotton Research Corporation (CRC).<sup>5</sup> In 1955, Kenya Cotton Lint and Seed Marketing Board (CLSMB)<sup>6</sup> was established under the Cotton Act to intervene in cotton production, processing, and marketing activities. The Act that established CLSMB also allowed the formation of co-operatives and unions to handle such primary cotton activities as input supply, payment for cotton, and cotton processing.

Private ginners controlled the cotton sector until independence (in 1963). Between 1963 and end of 1990, the government systematically introduced controls through CLSMB into the sector. Driven by the policy of self-sufficiency in cotton, the government helped co-operative societies purchase ginneries from private hands, controlled marketing margins, fixed producer prices, and invested heavily in textile mills.<sup>7</sup> The Cotton Board of Kenya monopolized primary purchase of seed cotton (directly or through cooperative unions and private sector agents), ginning, and sale of lint and seed. It also supplied inputs to

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<sup>5</sup> Initially known as Imperial Cotton Growing Corporation.

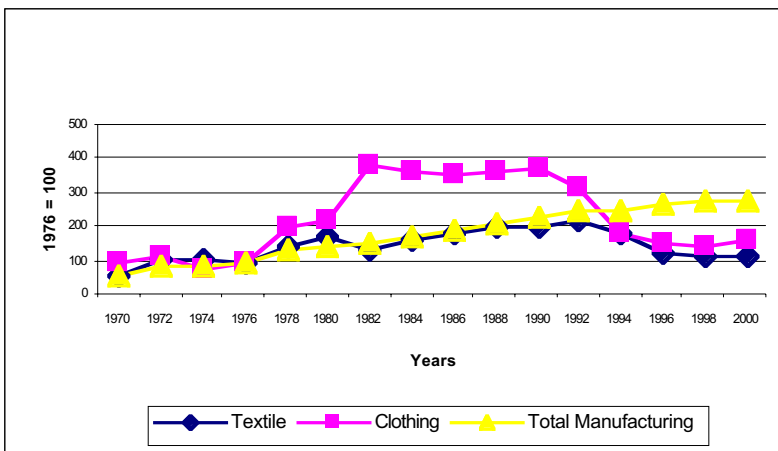
<sup>6</sup> This was later renamed the Cotton Board of Kenya (CBK).

<sup>7</sup> The textile sector has remained in private hands all along.

farmers. The industry moreover received substantial assistance from the government and donor agencies especially in the 1980s. Assistance programmes included USAID's Small Holder Credit Scheme, New Seasonal Credit Scheme, Farm Input Supply Schemes (FISS) of DANIDA, Machakos Integrated Development Programmes of the EU, and the Cotton Processing and Marketing Project of the World Bank.

Not surprisingly, production expanded substantially and between 1965/66 and 1984/85, for example, annual lint production gradually increased from 20,000 to 70,000 bales.<sup>8</sup> Local cotton production had however become globally non-competitive by 1986 because of inefficiencies in production, ginning and distribution associated with the price control regime. Declining performance was accelerated by withdrawal of government and donor assistance. By 1994/95, lint production had dropped to about 20,000 bales, a level from which it has hardly recovered from.

Figure 1: Trend in manufacturing production index: 1970-2000



Source: Economic Surveys, various issues

The dynamics of textile and clothing industries mirrored those of lint production (Figure 1). The sector grew rapidly following independence

<sup>8</sup> Each bale is equivalent to about 185kgs.



to become the country's second largest employer, after the civil service, in the 1980s. This growth was spurred by the closed market policies (import substitution) that were pursued until the 1980s. These policies led to effective rates of protection that were as high as 72-93% (McCormick *et al.*, 2001).

With the disadvantages of control and protection becoming obvious and public resources increasingly scarce, re-liberalization of the sector began in 1991. All parts of the industry were opened to the private sector and the Cotton Board of Kenya stripped of its role.<sup>9</sup> Many private agents entered the industry especially in primary purchase, sale of pesticides and other farm inputs, transportation, and ginning.

Liberalization brought more challenges than benefits. It led to enormous increases in imports of textile products and garments, led to the collapse of many local firms and unprecedented job losses. Rates of growth for imports of cotton, fabrics made from synthetic fibres, and clothing rose sharply during the 1991-1999 period following liberalization in 1993 (Table 1). Lint production remains at the pre-liberalization level of 20,000

Table 1: Annual growth rates (%) for various types of textile and garment imports (1970-1999)

Commodity	1970-1990	1991-1999	1970-1999
	%	%	%
Synthetic fibres	18.3	10.7	16.3
Cotton yarn & thread (bleached)	-2.2	13.7	5.1
Cotton piece goods (fabrics)	3.7	26.7	11.8
Fabrics of synthetic fibres	-1.8	40.6	8.8
Clothing	5.4	27.1	10.3

Source: Calculated from Central Bureau of Statistics data, *Statistical Abstracts*

<sup>9</sup> CBK is currently only a shell, with minimum staff and no mandate. The old Cotton Act remains despite liberalization.

bales yet domestic demand is 120,000-140,000 bales. The shortfall is met from the import market in the form of lint, seed cotton, yarn, fabric, and old and new clothes. Local textile manufacturing is estimated to supply only 45% of the Kenyan textiles market while imported new and used clothes account for about 37% of the market (ADEC, 1998).

Growth in the textile and clothing sectors declined so much in the 1990s that, by 1997, the production index was barely higher than its level in the mid-1970s (Figure 1). The share of the two industries in total wage employment in the manufacturing sector declined from a high of 18.6% in 1985 to 14.7% in 1997 (McCormick *et al.*, 2001).

The textile and clothing sectors suffered disproportionately from liberalization. Therefore, while the production index for the entire manufacturing sector maintained an upward trend albeit an almost flat one, those of textile and clothing dipped substantially in the first half of the 1990s.

Other factors that led to deterioration of textile and apparel sectors include failure of the country's cotton sector, increasing use of synthetic fibres (Coughlin, 1991), and a worsening operating environment in terms of high costs of and poor infrastructure services and rising insecurity, among others.

### **3.1 Enter AGOA**

AGOA has created a new momentum in the industry, especially at the garments sub-sector. Kenya's trade with the US expanded significantly in 2001 (Table 2), with the country's duty-free exports under AGOA accounting for nearly half of its exports to the US. The country performed better in exports than the entire SSA. Apparels make up nearly 90% of Kenya's duty-free exports to the US under AGOA and these apparels are predominantly made from cotton fabric (Table 3).

Table 2: Trade between US and Kenya: 1999-2001 (US\$ millions)

	1999	2000	2001
Kenya's exports to the US	106.4	109.5	128.7
<i>of which, exports of textiles     and apparel under AGOA</i>	0.0	0.0	51.6
SSA's exports to the US	14,042.9	23,480.4	21,291.5
Kenya's imports from the US	189.1	238.0	577.4
SSA's imports from the US	5,568.5	5,925.8	6,963.0

Source: US Government (2002), AGOA implementation report

Table 3: Kenya's exports to the US (US\$ millions)

	2000	2001	YE7/2002	YE8/2002	YE 9/2002
<b>Total MFA</b>	<b>44.048</b>	<b>64.692</b>	<b>87.347</b>	<b>96.411</b>	<b>106.153</b>
Apparel MFA	43.831	64.584	87.205	96.280	105.829
Yarns	0.001	0.000	0.000	0.000	0.203
Fabrics	0.060	0.078	0.098	0.084	0.073
<b>Cotton Apparel</b>	<b>41.423</b>	<b>60.792</b>	<b>74.895</b>	<b>80.082</b>	<b>85.072</b>
Men/boys trousers	15.873	20.134	29.024	28.592	29.068
Women/girls slacks	19.593	36.794	38.865	42.947	46.034
Non-knit men/boys shirts	5.650	2.504	2.042	2.771	3.214
Women/girls knit blouses	0.002	0.038	2.225	2.663	3.383

Key: MFA = Multi-Fibre Agreement; YE = Year Ending

Source: US Department of Commerce: Office of Textiles and Apparel (OTEXA), <http://otexa.ita.doc.gov>

In the first year of AGOA (October 2000 to September 2001), the quota for duty-free garment exports was 246.5 million square metre equivalents (SMEs) but only 41.8 million SMEs (17% of the quota) were exported. In the second year of AGOA, 60% of the quota was utilized.

## **4. Prospects with Respect to Locally-Produced Fabrics**

This section looks at the prospects of Kenya's apparel exporters being able to source high quality and competitively-priced fabrics from the local cotton-textile industry after 30 September 2004, one of the options of maintaining AGOA eligibility. The status and operating environment of all parts of the cotton-textile chain are assessed, applying the conceptual frameworks of business systems and value chain analysis.

### ***Business Systems' Approach***

The environment in which a firm (or industry) operates critically impacts on its conduct and performance. The operating environment could be local, national, regional and/or international depending on the firm's scope of activities. It is the numerous formal and informal institutions, individually and in interaction with each other, that constitute this environment. Business systems approach examines the economic, social, and political institutions that shape individual firm (or business) behaviour, and the general organization of business activity (McCormick *et al.*, 2001). The approach is suitable for the analysis of how the cotton-textile industry is organized, the existing institutions and how the various institutions impact on the industry.

### ***Value Chain Analysis***

Value chain analysis and the closely related concepts of global value chain and global commodity chain involve the analysis of all the activities that take place from the time a product is conceived to the time it reaches the final consumer. These activities include design, sourcing of raw materials and other inputs, production, and distribution, some of which may be located in different countries (hence the term 'global') or different parts of the same country.

The nature and governance of the value chain in which a firm or industry participates in are important elements of its operating environment. Actors in a given chain may face significant control from other actors, and the actor(s) with control (or 'governing' the chain) command the lion's share of the profits generated in the chain. Many chains are governed by lead firms, which are often multinational firms, large integrated enterprises, or product buyers (Gereffi, 1994; McCormick *et al.*, 2001).

In the subsequent sub-sections, various parts of Kenya's cotton-textile supply chain (Figure 2) are appraised on supply capacity and operating environment.

#### 4.1 Cotton Production

For Kenya's apparel producers to be able to source fabrics domestically, efficient and competitive cotton production is critical. On the basis of findings of a survey carried out among 133 cotton farmers (Table 4) and their input suppliers in different parts of the country, this sub-section looks at the performance and constraints of the cotton sector.

Table 4: Distribution of the farmers interviewed (by province)

Province	Number of Farmers	Percent of Total Number
Nyanza	23	17.3
Western	10	7.5
Rift Valley	21	15.8
Central	6	4.5
Eastern	20	15.0
Coast	53	39.9
<b>Total</b>	<b>133</b>	<b>100.0</b>

Source: Author's survey, 2001

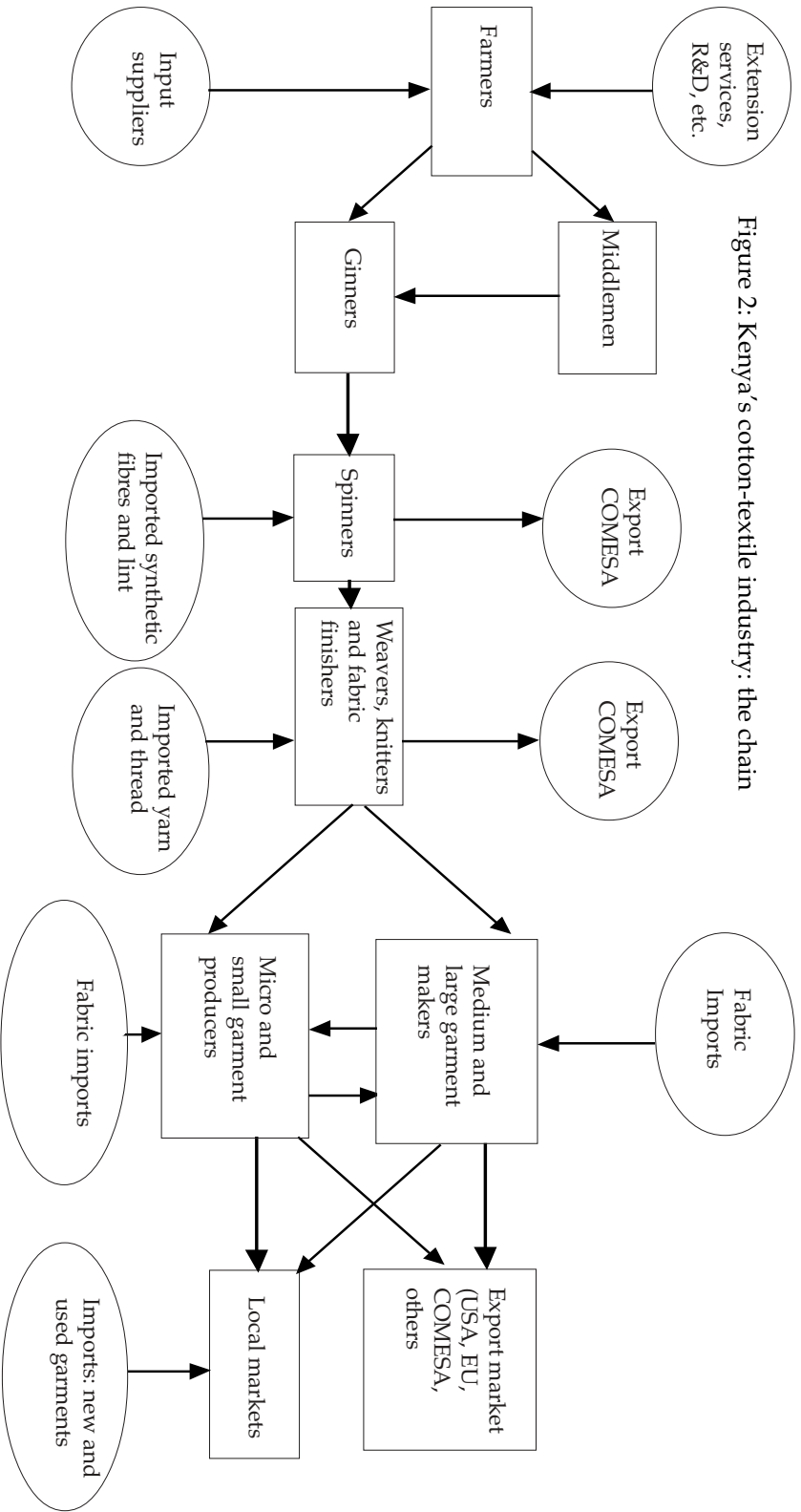


Figure 2: Kenya's cotton-textile industry: the chain

Note: This figure depicts only one product from ginning, lint, not seed. Some of the seed is stored for planting in the following season, and the rest is used directly to feed animals or crushed to make cotton seed cake, an animal feed.

Cotton farming is smallscale, with average land size under the crop slightly less than an hectare (Table 5), or about 35% of the average land holding. Cotton production is still very low and ginneries have very low capacity utilization levels. The bottlenecks facing cotton production in the country are principally low yields, high cost of production, and low and declining prices.

Table 5: Yield and land under cotton by province

<b>Province</b>	<b>Yield, Kg/ha</b>	<b>Size of land under cotton (ha)</b>	<b>Proportion of land under cotton</b>
Western	625.0	0.40	0.13
Nyanza	350.0	0.93	0.40
Rift Valley	800.0	0.78	0.27
Central	372.5	0.68	0.23
Eastern	403.5	1.20	0.38
Coast	657.7	1.10	0.35
Overall	572.5	0.95	0.35

Source: Author’s survey, 2001

#### 4.1.1 Low Yields

The average yield for the sampled farms was 572kg/ha of seed cotton or 191 Kg/ha of lint. Substantial variation in yield was observed across provinces, from 800 kg/ha of seed cotton in Rift Valley to 350 kg/ha in Nyanza Province (Table 5). This yield has not only dropped from the estimate of a few years ago (250 kg of lint per ha reported by ADEC, 1998) but is also very low compared with those of West and Central Africa (1000-12000 kg/ha), Africa (300-370 kg/ha), Pakistan (500 kg/ha), Mexico (1,000 kg/ha), Israel (1,400 kg/ha), and the world average (589 kg/ha in 2000/01).

The varieties available in the country (HART 89M and KSA 81M) have a higher yield potential (2500 kg/ha of seed cotton) than is being realized. The low productivity is attributed to low producer prices, high

cost of purchased inputs (and therefore low input usage), poor seed quality, erratic weather, lack of credit, and inter-cropping (Table 6). These factors reinforce or interact with each other. Low producer prices and lack of credit, for instance, translate into low input usage. Inter-cropping cotton with tall crops such as maize shades the cotton plant, with the effect of not only delaying the time of flowering but also reducing the number of flowers formed. The proportion of farmers who inter-cropped varied from 52% in Nyanza to 83% in Central Province.

Table 6: Factors responsible for low cotton yields (according to farmers)

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<b>Causes of low yields</b>	<b>Proportion of farmers citing</b>	<b>Ranking</b>
Low price of seed cotton	90	1
Cost of purchased inputs	86	2
Weather	77	3
Poor quality of seed	96	3
Lack of credit	50	4
Inter-cropping	50	4

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Source: Author's survey, 2001

Late planting, often resulting from competition for labour between cotton and other enterprises, also contributes to low yields. In Siaya District, for example, farmers sow beans at the onset of the rainy season (around March), the ideal time for planting, delaying sowing of cotton until after the first weeding of the beans when labour becomes available, mainly as an inter-crop. By this time, the rains are often over.

Another factor determining farm yield is the quality of seed for planting. Cotton seed is the basic input that has the most effect on plant stand and ultimately on yield and quality of the fibre. Following liberalization and neglect of the cotton sector, the cotton seed supply system in Kenya has been characterized by lack of certification, poor organization and



coordination, late distribution to farmers, improper separation of varieties during ginning, and poor quality seeds mainly due to long periods of storage (even 5 years) under inappropriate moisture conditions. The seed distributed free by the government to farmers often failed to germinate or recorded low germination rates in several parts of the country. In the 2000/01 season, germination rates were as low as 30% in some parts of Coast Province and there was almost total loss in places like Kilifi District where farmers tried up to 3 plantings before receiving modest success. This seriously drains the meager resources of the farmers, whose incomes can hardly withstand such shocks. The little that grew was late, further aggravating the yield situation.

This poor seed distribution system in Kenya when compared with that of neighbouring countries like Uganda puts Kenyan farmers at a disadvantage. In Uganda, the responsibility of multiplying and supplying seeds (and also pesticides) lies with the Cotton Development Organization (CDO). The farmers are provided with certified seeds, packed conveniently in quantities adequate for an acre, and on credit which is recovered during marketing.

Weeding and thinning are also important determinants of cotton yield and quality. Quality grades result from clean fields. The quality of cotton from grassy and weedy fields, and that characterized by poor harvesting practices, is poor. In addition, timely weeding is important to avoid competition between the cotton and weeds. Thinning, normally carried out within the first month after sowing, maximizes the quality of the bolls. In inter-cropped fields, thinning can be compromised, as was the case in most of the farms visited. Most of the fields were overgrown with weeds even at the harvesting time .

Timely harvesting is important for preservation of fibre quality, as field weathering weakens and discolours the fibre. Cotton possesses its highest fibre quality and best potential for spinning when the bolls are mature and freshly opened which is therefore the best time for

harvesting. Harvesting practices were found to be poor among most of the farmers, as there were delays in picking open balls. At times, cotton was stored in open piles on the ground, further increasing chances of contamination with foreign particles. Farmers mainly use nylon or sisal sacks for storage of the harvested seed cotton, leading to contamination with polypropylene and sisal which destroy spins.

#### **4.1.2 High cost of production**

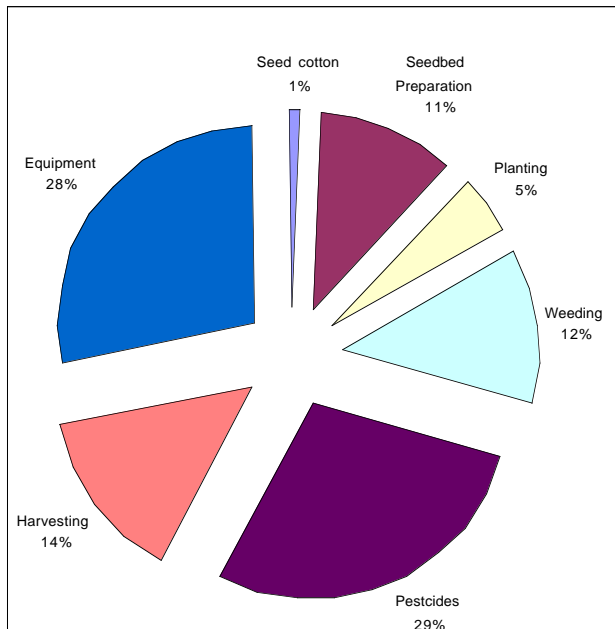
Pest control contributes most to the cost of cotton production in the country, accounting for up to 57%<sup>10</sup> of the cost (Figure 3). Pest control cost includes the cost of pesticides and labour for spraying (29%), and the cost of spraying equipment (28%). Most of the equipment used in cotton production in the country is for spraying. Due to the high cost of pesticides, most farmers are not able to spray as required and consequently suffer high crop losses. A study conducted in the US (Gianessi, 1994), for instance, found that if no chemicals were used, yield of cotton declined by 39%. Some farms in Nyanza Province in fact suffered up to 80% loss. Lack of pest control leads to high proportions of lower grade cotton, which fetches about half the price in total harvests. The pesticide suppliers interviewed indicated that farmers lack adequate understanding of pesticide usage leading to ineffectiveness. They also cited constraints that hinder growth of their businesses, including unreliable supply from manufacturers and importers, lack of finance and unfair competition.

Other major cost items are harvesting, weeding, thinning and seedbed preparation. Planting labour costs and cotton seed account for only 5% and 1% respectively (Figure 3).

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<sup>10</sup> According to the Kenya Agricultural Research Institute(KARI), this cost should be about 32%.

Figure 3: Structure of cost of cotton production in Kenya (2000/01)



Source: Author survey, 2001

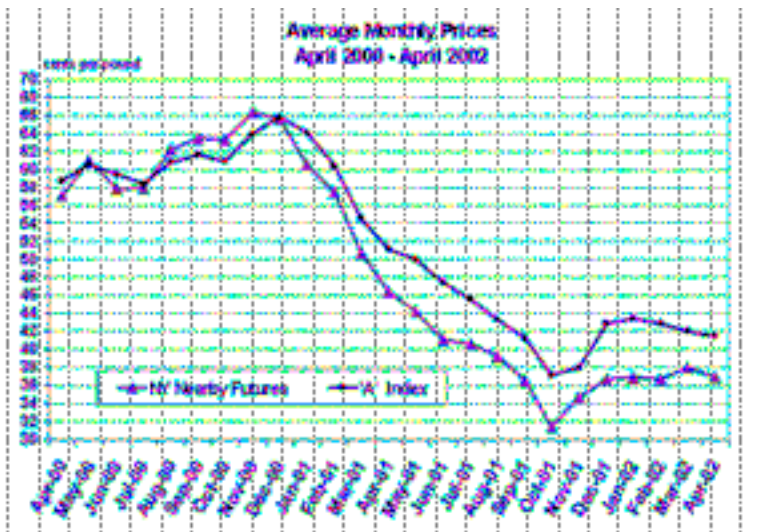
#### 4.1.3 Low and declining prices

The price of cotton has been declining in real terms since 1950. Between 1950 and 1998, for instance, the price fell by 60% in real terms, from US\$ 1.60 per pound in 1950 to 0.65 in 1998 according to a linear trend index, the Liverpool Index. Figure 4 shows the decline over the last three years. Competition from man-made fibres is viewed as the major challenge facing the cotton industry (ICAC, 2001) and therefore responsible for part of this price decline. In the last five decades, global consumption of these fibres has increased by 50% (Coughlin *et al.*, 2001).

Besides competition from man-made fibres, however, the major cause of the tremendous decline in world cotton prices is the increase in international supply driven by subsidies in the world's leading cotton producers. In 1998/99 and 1999/2000, for instance, cotton farmers in eight countries that together account for 53% of world cotton output

(Brazil, China, Egypt, Greece, Mexico, Spain, Turkey and USA) received subsidies totalling US\$ 5.4 billion (Badiane *et al.*, 2002). The level of support ranged from US\$ 0.09/kg of cotton in Egypt to 0.56 in the US, 1.42 in the EU and 1.53 in Spain. The world price of cotton stood at US\$ 1.25/kg at the time.

Figure 4: Average monthly prices for cotton fibre in US cents (2000-2002)

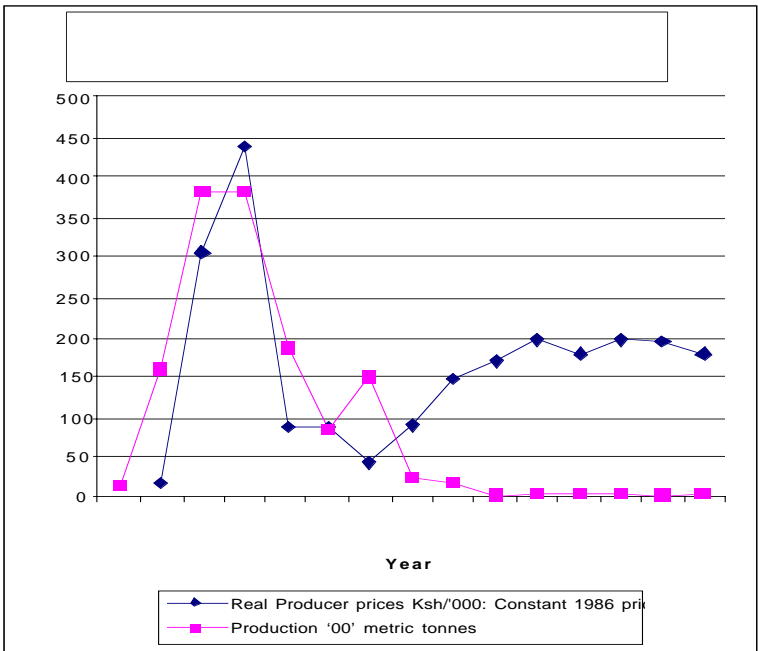


Source: US Cotton Market Monthly Economic Letter, May 10, 2002

The cost of depressed world prices is borne by producers whose governments offer little or no support. Sub-Saharan exporting countries, for example, faced losses of up to US\$ 301 million in export earnings for the 2001/2002 season alone (Oxfam, 2002) while those in West and Central Africa lose about US\$ 250 million annually (Badiane *et al.*, 2002). It has been estimate that removal of the US subsidies would lead to an increase in the world price by upto US\$ 12 cents per pound (Badiane *et al.*, 2002). The area under cotton production in countries without support has been falling due to declining prices in the context of high cost of production (ICAC, 2001; Chaudhry, 2001).

The case for Kenya is demonstrated in Figure 5, which compares the trends in real gross producer prices and cotton production between 1975 and 2000. While production closely tracked prices before 1991, there has been little response to prices since mid-1990s.

Figure 5: Trends in cotton producer prices and production levels (1975-2000)



The first plausible explanation for this lack of response is lack of price guidance (or guarantee), previously provided by the Cotton Board of Kenya. Before liberalization, the Board used to announce producer prices at the beginning of every season. This type of mechanism has not existed since the mid 1990s. A second reason could be the collapse of the cooperatives that owned most of the ginneries, leaving farmers without marketing outlets. Thirdly, the improvement in prices observed after 1993 may not have reached the threshold level (cost of production) for expansion of production. Analysis of the gross margin for the farmers interviewed supports this.

#### 4.1.4 Gross margin analysis

At the computed cost of production (Ksh. 23.80 per kg of seed cotton) and average price of seed cotton (Ksh. 20.60/kg),<sup>11</sup> cotton farmers experienced negative gross margins (Table 7). Even when the cost of seed is not considered (as it was provided free in most cases), farmers still made a gross loss. The computation does not consider the fixed cost of land (and land rental) and mechanization. The level of mechanization is very low, however, as most cotton farmers are small-scale operators. Leasing of land was hardly observed. Cotton producers cannot do much about the global price dynamics and the only option available is to reduce the cost of production.

Table 7: Gross margin analysis for cotton farmers

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Cost component	Cost (Ksh/ha)
Cotton seed	120.30
Pesticides	3074.60
Equipment	3849.70
Labour	
Seedbed preparation	1527.20
Planting	656.75
Weeding	1694.70
Spraying	771.10
Harvesting	1924.90
Total labour cost	6574.65
<b>Total cost</b>	<b>13619.25</b>
Yield of seed cotton, kg/ha	572.00
Cost, Ksh/kg seed cotton	23.80
Price, Ksh/kg seed cotton	20.60
<b>Gross margin</b>	<b>(3.20)</b>

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Source: Author's survey, 2001

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<sup>11</sup> The world price of cotton by the time the Kenyan crop started being marketed (August-September 2001) was about US\$ 1/kg of lint, equivalent to about Ksh. 26/kg of seed cotton assuming outturn ratio of 33%.

One strategy for dealing with the high cost of cotton production could be to increase yields, which are only about 21% of the potential. Control of cotton pests with minimal use of pesticides can cut cost and simultaneously increase yields. There are concerns about the long-term effects of insecticides and the trend around the world is to adopt less pesticide-intensive production practices. Technology development is critical for this shift. Research in Germany suggests, for example, that extract from Neem tree is a cost-friendly technology that could replace pesticides. Research and Development (R&D) to develop cotton varieties that are resistant to pest attacks is also important. Biotechnology cotton and organic-based cotton production systems should also be considered. Integrated Pest Management (IPM) is also an option although its implementation around the world has been slow.

Studies carried out in the US between 1998 and 2000 show that herbicide-tolerant cotton increases farm yields and farmers' profits while cotton with genes to control bollworm have the same impact and lead to reduced pesticide use (Pray *et al.*, 2001). For the latter type of cotton in China, Pray *et al.* (2001) found the impacts to include higher yields, lower cost (by 20-35%) of production (particularly due to low pesticide and labour requirements), higher profits, and a higher proportion of benefits (82.5-87%) accruing to farmers, and environmental and farmer health benefits due to reduced use of pesticides.

On the issue of prices, the Kenyan government should try to tap the resources from the Common Fund for Commodities, which is currently financing a cotton project on development of price risk management instruments for use by producers in Eastern and Southern Africa (ICAC, 2001).

#### **4.1.5 Institutional constraints**

The cotton sector in the country cannot be relied upon to support apparel exports under AGOA after September 2004 unless existing institutional

constraints, manifested in low cotton production, are removed or eased. Most of these constraints can be traced to the structural adjustment programs (SAPs) introduced in the 1980s and 1990s.

SAPs adversely affected the governance of most commodity chains in developing countries. First, the abolition of marketing boards forced producers to sell independently to the emergent private traders. In the process, the producers lost unity and the strength associated with it. Second, the emergence of these private traders, competing to maximize profits, seriously affected quality through undifferentiated quality purchase, and through collapse of the systems through which buyers provided inputs to producers on credit. The institutions that had previously monitored quality and grading standards were dismantled (Larsen, 2001). Even though the “parastatal or state controlled single-channel marketing system” that existed prior to liberalization had substantial weaknesses, it facilitated recovery of input credit (Larsen, 2001). Third, an important form of governance, agricultural extension, was removed from the bottom end of the chain, with disastrous impact on quality. Reduced revenues from commodity sales moreover led to budget-cuts in such critical areas as research and extension, and promotion. Fourth, liberalization of domestic marketing has made it difficult to control stocks or exports, therefore adversely affecting the functioning of international producer organizations and strengthening the position of roasters in consuming countries relative to other players in the chain (Ponte, 2001). As governments retreated from domestic regulation of commodity markets, farmers lost a political forum for negotiation.

There has also been a tendency of smaller producers being increasingly marginalized as some major buyers do not purchase from countries or producers that cannot guarantee a reliable minimum amount of supply (Ponte, 2001). These small producers are then left at the mercy of agents who can accept small quantities.



Kenya's cotton sector has suffered from all these bottlenecks. Its operating environment is characterized by general disorder and several failures, including regulatory and organizational, policy, and market. With respect to regulatory failure, liberalization of the industry was not accompanied by regulatory changes defining new roles for the Cotton Board of Kenya. This left a regulatory and monitoring vacuum, which the emergent private players have failed to fill through self-regulation. The consequence has been seed contamination, inadequate control of lint quality, and collapse of input credit mechanisms. There is, moreover, inadequate regulation to prevent collusive behaviour between cotton buyers.

Cotton farmers in Kenya are not able to interact effectively with other stakeholders in the cotton-textile supply chain because they lack organized groups. They are therefore the most disadvantaged and weakest link in the chain. They lack negotiation power and simply take prices and other terms from input suppliers and buyers of seed cotton. As a result, they do not only suffer from high input prices and low producer prices but also from high prevalence of fake (or sub-standard) pesticides, unfavourable cotton-buying schedules and practices, and lack of credit.

Lack of organization is a serious concern considering that the supply response of cotton is particularly sensitive to sophisticated organizational infrastructure (Dijkstra and van Donge, 2001). In Zimbabwe where private operators had the willingness to engage in informal collaboration and coordination, liberalization of cotton marketing improved performance (Larsen, 2001). In that country, the Commercial Cotton Growers' Association (CCGA) established different companies for ginning (Cotpro), cotton trade, and chemical trading, therefore improving coordination. CCGA, for instance, enters into contracts (on behalf of producers) with private ginners, and into forward contracts with local spinners.

Policy failure is manifested in lack of extension and other support services for cotton farmers, abrupt removal (as opposed to gradual adjustment) of producer price support, and lack of institutional framework for coordination of the sector, among others. Although the government remains the main provider of extension services to cotton farmers, 50% of the farmers interviewed did not receive such support. For the other 50%, the visits have dwindled. Policy failure is also manifested in a poor macroeconomic environment characterized by high cost of borrowing, low and declining purchasing power, increasing insecurity such as banditry in Lamu District and ethnic clashes that may displace farmers, and poor infrastructure including lack of good roads.

Market failure, on the other hand, is manifested in the absence of effective competition (or excessive competition in some areas) among ginners that renders important mechanisms like input credit supply schemes infeasible. It is also manifested in inadequate investment at the spinning, weaving and textile-finishing parts of the chain, as will become apparent in later sections of this chapter. Experience in Africa has shown that contrary to neo-liberal assumptions with regard to deregulation and liberalization, state monopoly is replaced by private oligopoly instead of spontaneous competition in primary purchase, processing, and export (Larsen, 2001).

Governance of the global cotton commodity chain is also an important variable of the operating environment that Kenyan cotton producers find themselves in. The chain is driven by international trading agencies, which oversee quality, supply timing, origins, and volumes (Gibbon, 2001). The power of international traders has also been partly facilitated by the low level of concentration in the spinning industry. International traders have some vertical integration with producers and with ginning machinery manufacturers but none with spinners.

Cotton producers, however, have potential to influence the chain. Their power emanates from a global quality classification system, initially introduced by the US Department of Agriculture, that generates a stratified pricing system (Gibbon, 2001). Quality cotton producers, such as the US and Egypt, are therefore able to get premium prices (of 10-50% or more above the price index).<sup>12</sup>

The operating environment for Kenya's cotton farmers is therefore clearly sub-optimal. Even under this environment, however, the cost of cotton production stands at Ksh. 23.80 per kg of seed cotton (or US\$ 0.92 per kg of lint), which compares fairly well with the rest of the world. Surveys by the International Cotton Advisory Committee (ICAC) show that the cost of cotton production ranges from less than US\$ 0.50 to over US\$ 2.5/kg of lint (Chaudhry, 2001). With interventions to raise yields, therefore, the country can be competitive internationally.

## **4.2 Lint Production**

Cotton farmers sell either directly to ginneries or to independent buyers (commonly referred to as middlemen or brokers), who then sell to the ginners (Figure 2). According to our survey of farmers and ginners (all 13 operating in the provinces visited, Table 8), 75-77% of seed cotton from farms is sold directly to ginneries and the remainder to private traders.

Lint production or ginning separates seed cotton into lint and cotton seed. Gins are a focal point of the cotton industry and their location, efficiency, and organization are critical. The ginner's objective is to produce lint with minimum reduction in fibre spinning quality. The latter requires contact with lint buyers, textile mills, and knowledge of the latest technology. Vertical integration may enhance quality. Ginning,

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<sup>12</sup> The price index is known as Cotlook A Index, considered as the most authoritative index of international lint prices. Lint is classified on the basis of length, grade, strength, and micronaire (Larsen, 2001).

like cotton husbandry, harvesting, and storage, is an important determinant of the spinning quality of the cotton fibre. The most important measures of that quality, which are recognized by the market include: strength, short fibre content, length uniformity, maturity, fineness, trash content, colour, seed coat fragment and stickiness.

Table 8: Distribution of the ginneries interviewed (by province)

<b>Province</b>	<b>Number of ginneries</b>	<b>% of total number</b>
Nyanza	3	23.1
Western	2	15.4
Rift Valley	1	7.7
Central	1	7.7
Eastern	4	30.8
Coast	2	15.4
<b>Total</b>	<b>13</b>	

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Source: Author's survey, 2001

Two ginning practices have particularly important implications on quality: regulation of fibre moisture during ginning and cleaning, and the degree of gin cleaning used. The minimum ginning technology<sup>13</sup> required consists of a dryer or moisture restoration device, and a feeder to uniformly meter seed cotton into a gin stand.

Eleven of the ginneries visited were privately-owned while two were owned by farmers' co-operatives (but leased to private entrepreneurs). The ginneries varied substantially in terms of size, ginning capacity, capacity utilization, and technology. Though the ginneries meet the minimum technology requirements, some of the upcoming (more or

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<sup>13</sup> This minimum requirement, however, lacks the versatility required to properly manage cotton with excessive moisture or trash.

less informal) ones lack drying and moisture restoration devices. Consequently, the lint they produce contains imperfections and lacks a smooth appearance.

#### **4.2.1 Relationship with farmers**

The relationship between farmers and ginners is mainly informal and exchange occurs at arm's length. However, ginners control the farmer-ginner part of the chain (Figure 2) and determine the producer price. It is only in one occasion where farmers were actively involved in price negotiation through a farmers' group. In this instance, the group was able to negotiate for a 15% price increase. Currently, farmers are happy with prompt (often on delivery) payment for their seed cotton although they are unhappy with price levels. In some cases, they are also unhappy with buying schedules as these are not strictly followed. In all the cases, the buyers dictated quality grading which the farmers found unfair.

Formal relationships are rare and when they exist, they largely involve supply of pesticides on credit, with the credit being recovered during the sale of seed cotton. Kitui ginnery has already started supporting farmers through this system. To improve the recovery rate, the ginnery is dealing with small groups of farmers whose members police each other, assisted by local extension agents. This is an important form of relationship through which ginneries around the world increase their raw material supplies. In general, such relationships have failed to develop in Kenya because of widespread fear, among ginners, of defaults on repayment.

Post-liberalization experiences of many countries (Zimbabwe, Zambia, Tanzania, and Uganda) show that excessive competition at the seed cotton-buying link of the chain (ginning and other cotton-buying firms) leads to collapse of out-grower or input credit schemes between cotton buyers and farmers. This is attributed to increased tendency of 'side-selling' to buyers who did not provide credit.

Positive relationships between farmers and ginners have failed to develop in the country because the manner in which most of the cooperative ginneries were privatized antagonized the farmers. In many places, farmers had contributed money towards the purchase of the ginneries or were owed money by the ginneries before these ginneries were privatized. These schemes failed to succeed and farmers felt swindled by the private operators who purchased or leased the cooperative ginneries.

#### **4.2.2 Obstacles faced by ginners**

The most important obstacle in the lint production part of the chain is insufficient supply of seed cotton, which is a major disincentive to investment in ginning. It has led to very low capacity utilization rates (about 24%) for ginneries, leading some of them to take new investment to neighbouring countries where there are adequate supplies of cotton. This has led to slow revival of the ginneries that had collapsed. Indebtedness has also contributed to the slow revival of ginneries.

Another constraint is low quality of seed cotton, with 54% of the ginners interviewed citing it as a problem. Some ginners (33%) attributed the problem to poor husbandry practices. Of importance to ginners is the ginning outturn (GOT). This was estimated at 33% and is significantly lower than that achieved by ginneries in West and Central Africa (40-43%). The potential GOT for HART89M and KSA81M is about 40-42%.

High cost and unreliability of electricity was frequently cited as a major bottleneck to ginners. Power costs (electricity and/or diesel) constitute the highest proportion of total variable ginning cost, averaging about 45% (Table 9). Nevertheless, at the world market price of Ksh. 79 per kg of lint (at the time of the survey), ginners returned a positive gross margin of about Ksh. 6.15 per kg of lint. This is not unexpected considering that the ginners govern the farming-ginning supply chain. All the lint and cotton seed is sold in the domestic market.

Although some ginners (23%) cited poor and fluctuating market prices as a constraint, textile manufacturers complained that lint prices in the country were uncompetitive, at about US cents 42/ pound compared to the world price of US cents 38/pound.

Table 9: Structure of operating cost for gineries

Variable cost component	Ksh/month	% of total var. cost
Labour	925,017.50	26.5
Capital/credit	492,500.00	14.1
Diesel	460,009.00	13.2
Electricity	1,093,142.90	31.3
Baling material	18,298.00	0.5
Repair and maintenance	500,000.00	14.3
<b>Total operating cost</b>	<b>3,488,967.40</b>	
Cost per kg of lint (a)	11.05	
Cost of seed cotton (b)	61.80	
Price of lint (c)	79.00	
<b>Gross margin: c - (a+b)</b>	<b>6.15</b>	

Source: Author's Survey, 2001

#### 4.2.3 Institutional constraints

The operating environment for ginning enterprises in Kenya is characterized by regulatory failure, lack of government support, inadequate supplies and low quality of seed cotton, high cost and unreliable supply of electricity, and generally high cost of production. Competition among primary cotton buyers without any regulations forces many gineries to cover long distances just to purchase small quantities of seed cotton. This makes organization of out-grower schemes with farmers unviable. Because of these factors, local lint is

internationally uncompetitive. Ginneries are still stuck with old technology acquired when seed cotton supply was large. There is no evidence that investment is switching towards ginning technology suited to smallscale operations.

A positive institutional development is the establishment of the Kenya Cotton Ginners Association (KCGA) to articulate the interests of ginners. Although it is yet to develop to full strength, the ginners association, unlike that of farmers, has a voice and will be crucial in the design of effective out-grower schemes.

Another aspect of the operating environment for ginning enterprises is the negative sentiment among farmers, some of who feel that the private owners of the ginneries swindled them.

A major challenge as far as the cotton-textile industry is concerned is how to attract investment in lint production given this operating environment. Farmers require higher producer prices for supply response but the ginners are unlikely to offer such prices given the global trend in prices and their low capacity utilization and inefficiency of the ginners. The cotton-textile chain is therefore clogged at this stage.

### **4.3 Yarn Spinning and Fabric Manufacturing**

Once lint is produced, it goes through spinning to produce yarn (Figure 2). The yarn is then weaved or knitted to produce different types of fabric. Spinning and weaving firms in Kenya are all large scale and locally-owned. There is inadequate investment in spinning, weaving, and fabric finishing operations. Technology is also a problem and there are complaints of poor quality and high price of locally-produced fabric. To look at these issues more closely, 9 firms were interviewed in Nairobi, Mombasa, Nakuru, Nanyuki, and Athi River (Table 10).

Spinning firms produce yarn, industrial yarn, and sewing thread while integrated mills produce a wide variety of products including yarn, fabrics (knitted and woven), canvas, blankets, sweaters, shawls,



Table 10: Textile manufacturing firms interviewed

Type of manufacturing	No. of firms	% of all firms
Spinning	2	22.2
Spinning, weaving, design	1	11.1
Spinning, weaving, knitting, design and garment making	1	11.1
Spinning, weaving and fabric dyeing and finishing	4	44.4
Weaving, knitting, fabric dyeing and finishing, and design	1	11.1
<b>Total</b>	<b>9</b>	

Source: Author's survey, 2001

uniforms, towels, baby nappies, and knitted garments. Textile firms import about half of their inputs. In the year 2000, for example, textile firms imported about 56.4% of their inputs mainly from Asia (India, Indonesia, Taiwan, Thailand, China, Hong Kong, and Korea), Europe, US, and South Africa. Over 90% of all the firms that import inputs get at least some of them from Asia. Key determinants of the import market chosen are price, quality, availability, and delivery time.

Through formal but largely informal relationships, 50% of the yarn spinning and fabric manufacturing firms provide support to their input suppliers, mainly in the form of quality and technical advice. More than 80% of the firms reported that they do not have influence on the price of any of their inputs.

About 77.8% of the textile firms had reduced their workforce and experienced capacity utilization declines. A few years ago, the national average capacity utilization for the textile sub-sector stood at 66% (ADEC, 1998). This has declined in recent years, especially for integrated mills (Table 11). Respondents attribute this general decline in capacity

utilization and production to high cost of electricity and poor infrastructure in general, lack of market, competition from customed and uncustomed textile and clothing imports, high interest rates, technological changes, lack of qualified labour, lack of government support, and unfavorable policies. Political and economic uncertainty was also frequently mentioned, particularly as a hindrance to the large investments required in yarn spinning and fabric manufacturing.

Table 11: Capacity utilization (%) in textile and apparel firms (1999 and 2000)

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Type of firm	1999		2000	
	Mean	Range	Mean	Range
Spinning firms	62.5	40-85	57.5	40-75
Integrated mills	51.9	20-81	46.0	20-80
Garment firms	52.5	25-100	57.3	10-100
All firms	53.9	20-100	53.1	10-100

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Source: Author's survey, 2001

The implication of extra capacity is that production can be expanded without additional expenditure on machinery, which is important for continued participation in exports under AGOA especially after 2004. Unfortunately, the hardware technology used in the industry includes old obsolete machinery. Only 44.4% of the textile firms had their machinery installed after 1990. Most of the existing processing technologies are large scale, have large initial capital outlay<sup>14</sup> and are not viable if the turnover is low. Technologies appropriate for smallscale processing are critically important in the sector.

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<sup>14</sup> The survey found the average cost of machinery for spinning and fabric manufacturing to be Ksh. 72 million.

The majority of the firms (77.8%) are aware that better machinery and technology than what they are using are available. However, very few firms had changed their machinery since installation because of lack of finance (including high interest rates), high cost of the machinery and technology, lack of an environment conducive for major investments, and smallness of the market for the firms' products. A further problem facing manufacturers outside EPZs and MUB schemes is that they are not allowed to import machinery duty-free.

The main market for spinning/fabric manufacturing firms is the local market although some of them export to regional and European markets. About 88.9% of the spinning/fabric manufacturing firms interviewed were on average exporting 30% of their output. Specific countries serving as export markets for Kenya's yarn and fabric manufacturers are Uganda, Tanzania, Malawi, Ethiopia, Malaysia and Germany. Instead of helping exporters of Kenya's textile products, regional trading blocs such as COMESA and EAC were reportedly increasing competition, as market access to most of the partner countries is limited while access to the Kenyan market is relatively easier. For instance, Kenyan textile products cannot enter the Egyptian market because of WTO-sanctioned protective measures while Egyptian products have easy access to the Kenyan market. In the Tanzanian market, moreover, Kenya's textile products face a duty of 43% (due to a 20% suspended duty) whereas Tanzanian textiles face a duty of only 3% in the Kenyan market.

#### **4.3.1 Constraints and cost drivers**

The most important obstacles facing spinning firms are high cost of electricity, lack of market, and competition from imports (including unfair competition from tax-evading imports) (Table 12). Other obstacles include contamination of local lint by polypropylene and sisal, which often leads to breakdown of spins. In the case of integrated firms, obstacles include high cost of electricity, high interest rate, inappropriate

government regulations,<sup>15</sup> and competition from imports (including unfair competition).

Table 12: Major constraints facing textile and apparel firms (number of firms citing the constraint)

<b>Constraint</b>	<b>Spinning firms</b>	<b>Integrated mills</b>	<b>Garment firms</b>	<b>All firms</b>	<b>No. of firms giving constraint rank 1 or 2</b>
High cost of electricity	2	7	11	20	7
Poor infrastructure	1	5	8	14	3
High interest rate	1	6	6	13	2
Lack of qualified labour	0	4	8	12	4
Lack of market	2	4	5	11	4
Inappropriate government regulations	1	6	5	12	1
Competition (and unfair) from imports	2	6	3	11	9
Availability of electricity	1	0	10	11	1
Lack of working capital	1	4	5	10	2
Poor availability of raw materials	1	2	7	10	3
Low quality of raw materials	1	2	5	8	1
Poor technology	0	3	4	7	0
Availability of water	1	0	8	9	1
High tariffs on raw materials	0	3	3	6	2
High cost of labour	1	1	2	4	1
Insecurity	0	2	3	5	1
Total number of firms	2	7	13	22	22

Source: Author's Survey, 2001

The problem of poor quality and inadequate supply of labour is also serious, especially for integrated mills and apparel firms. According to some respondents, the average textile worker in Kenya requires about 5 years of training to attain the skill and productivity level of a similar worker in China. In addition, the country lacks qualified managers and design experts, a factor seriously limiting exploitation of the US market potential. No explicit human resource development plan exists in the industry. The mainstream academic institutions offering courses in the

<sup>15</sup> For example, preferential treatment of firms under EPZ and, to some extent, those under Manufacturing Under Bond (MUB).

field of textiles (Moi University and the Directorate of Industrial Training) have not adequately catered for the industry needs in the design of the courses. Moreover, the Kenya Textile Training Institute is hardly operational. Corruption and bureaucratic delays over migration procedures affects tapping of experts in the international market. It has been reported that, even for firms in the EPZs, securing of a special pass for an expatriate worker can take as long as 3 months and is costly (largely because of corruption).

Raw materials, labour, buildings, electricity, and taxes and levies are the most important cost items for yarn and fabric manufacturing firms (Table 13).<sup>16</sup>

Table 13: Cost structure of textile and apparel firms interviewed (year 2000) as % of total cost

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<b>Item</b>	<b>Yarn and fabric manufacturers (%)</b>	<b>Garment manufacturers (%)</b>
Equipment	3.5	24.7
Buildings	16.9	14.3
Raw materials	19.5	29.2
Labour	15.6	23.4
Electricity	13.0	1.5
Water	0.5	0.6
Transport	1.2	0.7
Infrastructure	-	1.0
Design	1.6	1.0
Taxes and levies	16.9	0.2
Fuel oil	5.1	0.6
Interest rate	4.5	-
Maintenance	1.9	2.6
Others	-	0.2

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Source: Author's survey, 2001

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<sup>16</sup> The cost figures reported in the table are only indicative because most of the firms did not provide data.

Compared to textile and clothing producers in the Southern Africa Development Cooperation (SADC), Kenyan textile and clothing producers are competitive in labour cost but non-competitive in electricity (Table 14). In SADC, labour constitutes about 28% of the total costs for textile and clothing producers while electricity cost accounts for about 1.7% of the cost for textile producers and 3% for spinning and weaving firms (Muradzikwa, 2001).

Almost all the firms experience marketing bottlenecks both in the local and export markets. The most important of these are competition from imports and other exporters, domination or control by buyers, low demand, and low prices. Unreliability of the market and lack of market information (Tables 15 and 16) are also important bottlenecks. In addition, there are no agencies to provide direct export insurance to the industry.

Table 14: Comparative energy and labour costs (SADC vs Kenya)

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<b>Country</b>	<b>Electricity cost, US cents/Kwh</b>	<b>Labour cost, US cents/hour</b>	<b>Unit cost for assembly (men's casual shirt)</b>
Malawi	8.5	52	0.11
Mauritius	4.8	95	0.27
Mozambique	15.8	46	0.19
South Africa	3.2	235	0.75
Tanzania	20.6	58	0.31
Zimbabwe	5.1	50	0.28
<b>Kenya</b>	<b>10.0</b>	<b>25</b>	<b>0.21</b>

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Source: Muradzikwa, 2001; Coughlin et al, 2001; Bedi, 2002; and Author's survey, 2001

Table 15: Bottlenecks facing textile and apparel firms in the local market

<b>Marketing problem</b>	<b>Number of firms citing the marketing problem</b>		
	<b>All firms</b>	<b>Spinning/fabric manufacturers</b>	<b>Garment producers</b>
Competition from imports	11	8	3
Low demand	10	7	3
Low prices	9	7	2
Domination/control by buyers	4	3	1
Unreliability of the market	4	2	2
Lack of market information	4	2	2
Inappropriate govt. regulations	1	1	0

Source: Author's survey, 2001

Table 16: Bottlenecks facing textile and apparel firms in the export market

<b>Marketing problem</b>	<b>Number of firms citing the marketing problem</b>		
	<b>All Firms</b>	<b>Spinning/fabric manufacturers</b>	<b>Garment producers</b>
Competition from imports	7	3	4
Domination/control by buyers	7	2	5
Low demand	6	4	2
Low prices	5	3	2
Unreliability of the market	5	2	3
Lack of market information	4	1	3

Source: Author's survey, 2001

### **4.3.2 Important institutional factors**

A notable institutional strength of the textile part of the supply chain is that almost all of the firms interviewed belong to at least one association, mainly the Kenya Association of Manufacturers (KAM), the Federation of Kenyan Employers (FKE) or the Kenya Apparel Manufacturers and Exporters Association (KAMEA). These associations are strong and have substantially increased the negotiation power and lobbying influence of the member firms.

Many institutional obstacles, however, characterize the sub-sector. Broadly, the constraints faced by textile firms relate to infrastructure, market, and policy. Infrastructure problems, inappropriate policies (tax and tariff regimes), and market failure including globalization can be attributed to the institution of the state (McCormick *et al.*, 2001). Indeed, there is widespread belief in the industry that the government abets, or even facilitates, unfair competition for mainstream business from uncontrolled imports of second hand clothes, counterfeit textile products, and from imports that evade duty. A large majority of the firms report that they receive little support from the government. Even though there are schemes like the export processing zones (EPZs) and manufacturing-under-bond (MUB), they don't work well. Examples of unfavourable trade policies include the import declaration fees (IDF) charged on Kenyan businesses when competitors in other countries do not pay such fees, and taxation of second hand items on weight basis rather than value. The latter leads to unfair competition from new or high quality second hand clothes often disguised as cheap second hand imports. The operating environment is also characterized by low demand in the domestic market due to low purchasing power and the influx of textile imports.

Political and economic uncertainty is another important institutional factor which is seriously affecting investment decisions. It is difficult to



attract the massive investment required in yarn spinning and fabric manufacturing with such uncertainty.

Besides the failures of the state, the textile sub-sector is also constrained by poor technology, lack of appropriate technologies for smallscale processing, inadequate investment, and low quality and high cost of locally-produced fabric. Of course, these are also attributable to the weaknesses of the state, at least to some extent. Uncertainty over what will happen after 2004 when the LDC rule under AGOA expires is also an important element of the operating environment for textile firms.

#### **4.4 Apparel (Garment) Manufacturing**

Thirteen (13) garment or apparel manufacturers were interviewed in Nairobi, Mombasa, Nakuru, Nanyuki, and Athi River. This part of the broader cotton-textile supply chain is thriving because of the preferential market access offered by AGOA. The firms produce various types of garments. About 46% of them produce men's wear while the others produce woven chemise and robes, pants, *Kaunda* suits, school and traveling bags, knitted garments, and ready-made garments.

Only 3 out of the garment firms interviewed had the local market as their main market. About 84.6% of the garment producers were exporting some of their output while 76.9% were already exporting to the US, thanks to AGOA, using such outlets as Wall Mart and Shah Safari Investment. The same proportion of firms (76.9%) were exporting all their output. That the firms have been able to penetrate the US market in spite of the stringent requirements (Box 1) is evidence of potential of the sub-sector.

Most of the apparel firms responding to the question (90.9%) have relationships with their customers. Informal agreements are the most prevalent form of relationship (reported by 46.7% of the firms having relationships), followed by formal contracts (33.3%) and a combination of both. Informal agreements are largely in the form of gentleman's

agreements, relationships based on quality, price and delivery terms, and mutual respect cultivated through long-term business relations.

Unlike textile firms, garment manufacturers have experienced increasing capacity utilization (Table 12). A few years ago, the national average capacity utilization stood at 70% for the garment sub-sector (ADEC, 1998). These firms have not been affected by employment declines as much as the other textile firms. Therefore, only 15.4% of the garment firms reported decline in employment. Exporting firms had, on average, more employees (501 workers) than non-exporting ones (128 workers), indicating the potential role of AGOA in poverty reduction. This was confirmed by a simple regression, which showed that  $\text{percentage output exported} = 0.53 + 0.0012 \text{ Number of workers} - 0.03 \text{ Age of the firm}$ .<sup>17</sup>

The survey shows that in year 2000, garment manufacturers imported about 87% of their inputs, supporting the finding by Kinyanjui and McCormick (2002). Import markets and criteria for their choice are the same as those for textile firms. A few firms receive such support as marketing, technology advice, and credit from international suppliers. Only 16.7% of the garment manufacturers provide support to their suppliers. Three quarters of apparel firms reported that they do not have influence on the price of any of their inputs. All the firms that reported being able to influence the price of inputs also export, suggesting that larger firms are able to influence input prices.

Garment producers have newer machinery and therefore technology than the yarn and fabric manufacturers. About 75% of the garment firms had their machinery installed after 1990 compared to about 44.4% of textile firms. The majority of the garment firms (69.2%) are aware

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<sup>17</sup> Both variables are statistically significant at 2% level, the standard errors are very low and Adjusted R<sup>2</sup>= 55%.

that better machinery and technology than what they are using exists but are not acquiring them for the same reasons cited by textile firms.

#### **4.4.1 Constraints and cost drivers**

The main obstacles confronting garment producers are high cost of electricity and its availability, poor infrastructure, lack of qualified labour, and availability of water (Table 12). Like integrated mills, poor quality and inadequate supply of labour is a serious constraint for garment manufacturers. In general, these findings support those of McCormick *et al.* (2001). In that study, however, high tariffs on raw materials, availability of water, high cost of labour, and insecurity did not emerge as important obstacles for garment producers. The study identified transport cost, uncertainty concerning AGOA, and political and economic uncertainty to be important obstacles.

Buyer control of the chain is also a constraint because the country's garment producers operate as mere contract manufacturers. This is evident from the little or no influence that the Kenyan garment-makers have on product design and prices. Therefore, 41.7% of the garment firms reported that the buyer determines the design and another 25% reported that the buyer provides samples. Only one firm reported that it determines the price of its products. The ratio between the factory and the retail price of garments is estimated to range from 1:4 to 1:6. This indicates that about 75% of the value-added is attributable to wholesaling and retailing (Coughlin *et al.*, 2001), confirming the governing role of wholesalers and retailers.

Like textile firms, almost all the garment producers interviewed experience marketing bottlenecks both in the local and export markets: competition from imports and other exporters, domination or control by buyers, low demand, low prices, unreliability of the market, and lack of market information (Tables 15 and 16).

The major cost drivers for garment-makers are raw materials, labour, buildings, and equipment (Table 13). Nevertheless, the country's garments are more competitive than those of most SADC countries due to relatively lower labour costs (Table 14). The cost of electricity is much higher in Kenya, however. Even in terms of productivity, garment manufacturers in Kenya can be as competitive as those in India and China (Coughlin *et al.*, 2001). Although only about 20% of the country's formal textile firms were exporting, and only about a quarter of their output in mid 1990s, some studies have found that Kenya could be competitive (relative to producers in countries like Zimbabwe, Senegal, and India) and as competitive as producers in Bangladesh, Sri Lanka, and Mauritius in the production of such standard garments as men's casual long-sleeved shirts and Afro-centric garments.<sup>18</sup>

#### **4.4.2 Important institutional factors**

The institutional factors discussed for textile firms are also important for apparel producers. An additional factor is the nature of governance of the cotton-textile chain. Overseas-based retailers dominate the chain; they set prices, quality, and delivery times, and often closely supervise the production of garments right from the development of fabrics. The buyers also concentrate on design and marketing functions (which generate very high profits) and externalise to lower labour cost countries less profitable functions such as production of (i) standard garments or parts of them (ii) fashion garments, and (iii) supply in general.

Largely because of this buyer control of the chain, the firms are operating in an environment of low prices. The prices are often below production cost and the firms are forced to seek survival strategies.

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<sup>18</sup> The studies, quoted in McCormick *et al.* (2001), include Biggs *et al.* (1994, 1996) and Gereffi (1994).

## **4.5 So, Are the Prospects Good?**

From the preceding, the prospects of Kenya relying on the local cotton-textile industry to supply fabric after 30 September 2004 in the variety and quality required for the AGOA market are rather dim unless urgent interventions are made. Only the apparel (garments) part of the chain (Figure 2) is thriving at the moment, albeit also under various constraints. It is thriving because, until end of September 2004, AGOA allows apparel manufacturers to obtain fabric from the most competitive sources. At the lower end of the chain (farming-ginning) there is insufficient supply of seed cotton because of various disincentives, poor quality of operations due to old technology, and slow investment. The yarn spinning, fabric manufacturing and fabric finishing parts of the chain are characterized by inadequate investments, largely because of serious constraints in infrastructure, market, and policy constraints including political and economic uncertainty. As a result, locally produced fabric is of low quality, is expensive, and lacks market because of intense competition from legal and illegal new and secondhand imports. Almost all parts of the chain lack competitiveness because of poor macroeconomic fundamentals such as poor and costly infrastructure, high interest rates, corruption, unfavourable fiscal policies, and inappropriate trade policy.

The country lacks an operational cotton-textile-apparel chain. Following liberalization, a general institutional failure set in. Different actors in the industry now operate independently of each other without coordination and consultation, a vacuum that affects performance and exposes the industry to total external control. Even though strong and influential associations (KCGA, KAM, FKE, KAMEA) exist, there is little evidence to show that they work together to coordinate the chain. Cotton farmers and micro and small garment producers are the weakest part of the chain as they lack institutions for lobbying.

Besides lack of chain coordination, there are institutional failures manifested by lack of strong producer associations; weak or ineffective mechanisms for overseeing critical issues such as quality seed production and distribution, provision of inputs to producers on credit, quality of such important inputs as pesticides; and virtual collapse of extension services.

Policy failure, especially the manner in which liberalization was done, adversely affected the cotton-textile industry. The sector was opened up completely and suddenly without adjustment allowance for the key players. The Cotton Board of Kenya was stripped of its role without an alternative institution to carry out crucial regulatory and coordination tasks. Besides this failure, the industry lacks a manpower development policy, a dynamic technology development policy, a regulatory and legal framework consistent with the current liberal environment, a comprehensive policy framework covering all links and aspects of the cotton-textile supply chain, and a comprehensive policy for strengthening institutions. There is also a glaring absence of a strategic positioning policy. Therefore, even as the global dynamics of the cotton-textile chain governance change, there is no strategic response in Kenya with the result that the country's producers continue suffering worsening terms of trade while other countries are subsidizing their farmers.

With modest interventions, however, this option of satisfying AGOA conditions is viable. The industry has substantial potential if the whole chain could be well-managed. Some of the strengths of the industry include access to the EU, US, COMESA and the EAC markets through various trade agreements, its versatility, existence of integrated (or composite) mills capable of high value addition, a suitable geographical location, existence of ports and airports offering access to important markets, and abundance of inexpensive labour (Bedi, 2002).

## 5. Prospects with Respect to Alternative Fabrics

This section looks at the prospects of sourcing fabric and yarn from either the US or other AGOA-eligible SSA countries. These are the only other options open to Kenya's apparel producers under AGOA after 30 September 2004.

Currently, most of the garment manufacturers in Kenya are sourcing fabric from Asian countries utilizing the yarn forward rule exemption. The firms have not been using US fabric because it is more expensive. Using data on US imports of cotton apparels under AGOA, calculations show that apparels made from US fabric and yarn costed about US\$ 10.80 per square metre between 2001 and 2002 (Table 17). This was almost 50% higher than the cost of apparels made from fabric sourced from the African region and 60% higher than that of apparel made from fabric sourced under the yarn forward rule.<sup>19</sup>

Table 17: Comparison of unit cost of apparels made from different fabrics

Apparel made from:	US\$ million		Square metres (m <sup>2</sup> ), million		US\$/m <sup>2</sup>	
	2001	By Sept 2002	2001	By Sept 2002	2001	By Sept 2002
US fabric and yarn*	1.62	0.13	0.150	0.01	10.81	10.67
African yarn	53.74	105.20	9.44	20.19	5.70	5.21
Foreign fabric**	240.58	380.00	53.30	89.73	4.50	4.24

\*This includes fabric made in US but from imported yarn

\*\* Fabric obtained from outside SSA and USA

Source: Computed from data obtained from US Department of Commerce, OTEXA

<sup>19</sup> This is consistent with comments by one of the manufacturers in Kenya who noted that for firms to penetrate the American market, the cost of the finished garment should not exceed US\$ 5.

These calculations show two important things. First, the expiry of the rule on Least Developing Countries in sub-Saharan Africa (LDC SSA) will have a substantial impact on the competitiveness of apparels made in these countries. The cost will more than double if these countries source fabrics from the US. Second, fabric from SSA would be a better option than from the US in terms of cost for Kenyan producers, only if it will be available, but the AGOA-eligible countries do not seem to have the capacity to supply the variety and quality of fabrics required for the US market. The potential of African countries with more developed textile industries such as South Africa, Mauritius and Botswana to supply fabric to Kenyan apparel producers is limited by the fact that these countries are unable to meet the demand for their garment industries (Coughlin, 2001). Moreover, fabrics obtained from other AGOA-eligible SSA countries lack the variety and quality required for international markets (Textiles Intelligence, 2002).

Even though the utilization of the quota increased tremendously in the second year of AGOA, the proportion of exported garments made from regional yarn and fabric dropped slightly from 15.1% in the first year to 14.9%<sup>20</sup> in the second year. The rest were made from foreign fabric under the LDC provision. This shows that the prospects of Kenya obtaining the variety and quality of fabrics required for the international export market from SSA are weak. SADC manufacturers produce only half of the yarn and fabric consumed in the region (Coughlin *et al*, 2001).

Despite this rather gloomy picture, considerable room exists for regional collaboration especially within the EAC and COMESA to develop a regional cotton-textile apparel chain that exploits the relative comparative advantages in different countries. For instance, several sub-

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<sup>20</sup> Computed from data obtained from the US Department of Commerce, the Office of Textiles and Apparels (OTEXA).



Saharan African countries including Malawi, Uganda and Tanzania are efficient producers of seed cotton. They however lack strong textile and garment sectors. However, Uganda has a competitive advantage in textile manufacturing because of its relatively lower electricity and capital costs (Salinger, 2001). Another indicator of Uganda's comparative advantage is the fact that it is a net exporter of lint with an excess of about 90% (CDO, 2001). Furthermore, Uganda's investor credit rating during the last decade has been rising, from 7.3 points in 1993 to 22.9 in 2000, compared to Kenya's which rose from 24.7 to 26.6 over the same period (CDO, 2001). Most important is that Uganda currently has one of the largest modern mills in East Africa. But Kenya can still reclaim its advantage in textiles manufacturing if infrastructure constraints, especially roads, and availability and cost of electricity are addressed. With its low labour costs, Kenya can develop a competitive garment industry. There is, however, need for greater commitment to regional, economic and political stability in order to realize this regional collaboration.

## **6. Conclusion and Recommendations**

### **6.1 Conclusion**

In spite of the various criticisms levelled against AGOA, this study argues that AGOA is a good intervention for sub-Saharan Africa (SSA) countries, including Kenya. It has the potential of building supply capacity and competitiveness which the continent requires for greater integration into the global economy. The opportunity for capacity strengthening is, unfortunately, slipping away. Less than two years before the LDC rule of the Act expires, countries in the region have not increased their use of regional fabric and yarn to manufacture apparels exported into the US. In fact, the proportion of apparels exported to the

US under AGOA that utilized regional fabric and yarn dropped slightly in the second year of AGOA.

Out of the three options available to Kenyan apparel-producers for continued exports under AGOA after 30 September 2004, none of them is feasible as things stand now. High quality fabric and yarn is available from the US but sourcing them to make apparels in SSA (and Kenya) will raise the unit cost of apparels by 50-60%, which will make them uncompetitive. The country has a cotton-textile supply chain in place but only the garments part of it is thriving and is fairly competitive (particularly because of low labour costs and high productivity). Many apparel firms are already exporting to the US, which is impressive considering the stringent requirements of that market. All the other parts of the chain, however, are very disorganized, weak and lack adequate capacity largely due to infrastructure, market, and policy constraints. The option of sourcing fabric and/or yarn from other AGOA-eligible SSA countries is limited by the fact that the region does not meet the fabric requirements of its apparel sub-sector due to a myriad of supply constraints. The fabric produced locally and regionally, moreover, falls short of the variety and quality demanded by the US market.

For Kenya and the rest of SSA, the solution lies in sourcing fabric from both the local cotton-textile industries and the region. There is substantial opportunity to build regional cotton-textile supply chains through collaborative efforts.

## **6.2 Recommendations**

The most viable (and profitable) option for Kenya is to source fabric locally and from other AGOA-eligible SSA countries. The government has identified the cotton-textile industry as one of the sectors that can play a significant role in poverty alleviation (Republic of Kenya, 2000) because of its potential to benefit many people through various linkages in the economy, its suitability for marginal areas which have limited

alternative development use and have most of the country's poorest people, and its potential to offer employment to women and youth due to its labour-intensiveness and involvement of smallscale operators.

For the required quality fabrics to be supplied competitively locally, however, substantial capacity building in the lower parts of the country's cotton-textile chain is required. The following are critical inputs into the required capacity building:

- Establishment of an apex institution, with stakeholder representatives from the public and private sectors, to coordinate the chain and provide continuous strategic oversight and guidance.
- Institution building in parts of the chain where institutions are lacking or are weak, particularly cotton farming and micro and small garment production. Strengthening smallscale garment producers is particularly strategic if the country is to take advantage of the hand-loomed and handmade exports under AGOA, an opportunity likely to benefit women most.
- Interventions aimed at cost reduction at various points in the chain. These include research and development (R&D) to generate cost-effective technologies (such as biotechnology cotton, pest-resistant cotton varieties, drought-resistant cotton varieties, and ginning and textile manufacturing technologies suitable for smallscale processing), addressing the key cost drivers at each part of the chain (pesticides, seed quality and distribution, cotton purchase logistics, electricity and other infrastructure, interest rate, and taxes and levies), establishment of a competitive private sector-based pesticide importation and distribution system, institution of an organized private sector-based system for certified seed production and distribution, and provision of rural access roads and cotton purchase centers, among others.

- Incentives to stimulate investment at the ginning, spinning and fabric finishing parts of the supply chain.
- Improved macroeconomic management including effective tackling of corruption and ensuring fair competition, through implementation of minimum standards for imports such as second-hand clothes and improved surveillance to keep out illegal imports.
- Identification of unique or niche markets as a way of warding off competition, through a combination of information, state support and capital. Such niches include (i) cotton knitwear/hosiery sub-sector that has the highest return per kilogram of cotton used (about US\$ 13), has less investment and working capital requirements, and faces less competition from the fashion sub-sector, and (ii) organic cotton.
- Accumulation of the capital and skills required for competitive provision of services like design, marketing, financial services, and chain governance which constitute areas of growing economic rent in global value chains.

To be able to exploit the different comparative advantages in the region, there is need for:

- Strategic alliances with regional partners such as Uganda, Malawi, and Tanzania that can produce lint (and perhaps yarn and fabric in the case of Uganda) more competitively.
- Regional frameworks to facilitate sharing of expertise, information, and even infrastructure. Mauritius, for example, has tried to develop a regional hub of value-added services such as design, marketing, technology, and training to draw on expertise and skill in each country.
- Greater commitment to regionalism and economic and political stability.

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