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MINISTRY OF INDUSTRIALIZATION AND
ENTERPRISE DEVELOPMENT

KENYA APPAREL AND TEXTILE INDUSTRY

Diagnosis, Strategy and Action Plan



Kingdom of the Netherlands



WORLD BANK GROUP

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ABBREVIATIONS

AGOA	African Growth and Opportunity Act
CAGR	Compound Annual Growth Rate
CM	Cut-and-make
EPZ	Export Processing Zone
EU	European Union
ITAD	The Institute for Textile and Apparel Development
KAM	Kenya Association of Manufacturers
KNBS	Kenya National Bureau of Statistics
kWh	Kilowatt-hour
MMF	Man-made Fiber
MOIED	Ministry of Industrialization and Enterprise Development
SSA	Sub-Saharan Africa

EXECUTIVE SUMMARY

Kenya's textile and apparel sector has the potential to play a key role in anchoring the country's deeper movement into middle income status and in serving as a source of gainful employment for its fast growing, young population. As a manufactured good, it offers opportunities for increased value capture and streamlined trade logistics, and for the building of skills and experience from the factory floor to management level. Based on these foundations, it therefore serves as a potential gateway to other manufactured goods, offering opportunities for Kenya to capture an increasing share of global trade and to advance economic diversification.

Such thinking—in terms of the opportunities that textile-apparel presents in and of itself as an economic sector and as a potential spring board to further advancement into manufacturing—played a substantial role in underpinning the African Growth and Opportunity Act (AGOA). AGOA gives most Sub-Saharan Africa (SSA) firms duty free, quota free access to the United States, offering a substantial competitive advantage over other textile-apparel exporting countries. Therefore, the trade agreement has played a pivotal role in the growth of the continent's textile-apparel sectors.

However, almost 15 years after the launch of AGOA and shortly after its renewal, Sub-Saharan Africa's trade with the US remains dominated by natural resources. While some manufactured goods feature in the top ten exports from AGOA countries, these are almost wholly from South Africa. Knit and non-knit apparel exports rank 27th and 33rd, respectively, in the value of AGOA countries' exports, with AGOA countries amounting to under 1 percent of total global apparel trade.

Kenya falls within this generalized picture of Sub-Saharan Africa's apparel trade progress. With AGOA, Kenya's apparel exports to the US increased from

US\$8.5 million¹ in 2000² to US\$332 million in 2014. ³Almost thirty-eight thousand (37,750) workers were employed in the Export Processing Zones (EPZ) to produce this export figure.⁴ Nevertheless, the sector in Kenya pales in comparison to that of other developing economies that have made headway in apparel. For example, Kenya's 2014 apparel exports amounted to between 0.7 and 1.4 percent of Bangladesh's exports (for non- and knit apparel, respectively). However, size is not everything, as countries that may be small can grow fast and in time become dominant market players. In this regard, Kenya's exports have grown quite well: 42 percent and 18 percent year over year for knit apparel for the past ten and five years, respectively. But even this growth needs to be put in the context of the ten year growth rate seen in Bangladesh and Vietnam, both 20 percent per year, starting from a much larger base.⁵

Therefore, while Kenya has made some headway in the global apparel market, it is lagging behind many competitor countries. For this reason, the Ministry of Industrialization and Enterprise development (MOIED) of the Government of Kenya is directing its focus towards addressing the primary bottlenecks to competitiveness in the country's textile-apparel sector. This strategy is part of this effort.

However, the MOIED is also very focused on moving fast, to deliver value to the private sector and make up for lost time. Therefore, this strategy effort has also been undertaken in a time bound manner, focused on developing sufficient analysis to inform action that can be embarked upon quickly. The focus for strategic priorities is also bound by areas where the MOIED is most able to affect change, as well as areas where results can be generated in the near to medium term.

¹ All dollar amounts are U.S. dollars unless otherwise indicated.

² UN Comtrade.

³ KNBS, (2015), Impact of AGOA, Kenya Economic Survey.

⁴ KNBS, (2015), Impact of AGOA, Kenya Economic Survey.

⁵ Source: Trade Map, International Trade Commission: <http://www.trademap.org>.

Time and cost challenges

Kenyan textile-apparel manufacturers face a number of competitive disadvantages compared to firms in competitor countries, many of which relate to the cost of doing business. For textile firms, chief among these is the cost of power which, at over 20 cents per kWh in 2014, puts them on a fundamentally unequal footing to textile firms in other countries that pay considerably less, such as Chinese firms that pay seven cents per kWh, or Ethiopian firms that pay six cents per kWh. This results in power costs accounting for up to 25 percent of Kenyan textile firms' operating costs. However, this percentage is not attributable to the high cost of power alone. A review of textile firms undertaken as part of this strategy process revealed that some are operating on equipment that in some cases is up to 38 years old and which draws on considerably more power for its output than more modern equipment. Investment by textile firms in new technology will significantly reduce their operating costs even in a high power cost environment. However, firms are reluctant to undertake such investments when they are unsure about the survival or competitive prospects of Kenya's textile-apparel sector. Thus, some vicious-cycle dynamics are at play. This strategy process and, importantly, the MOIED's commitment to 'getting behind' the sector is an effort to break such dynamics.

For apparel firms, labor productivity and time-to-market are central to their ability to compete. In terms of labor productivity, many Kenyan firms are at a competitive disadvantage on a cost basis. Sewing operators' wages in Kenya average US\$180 per month compared to US\$60 in Ethiopia. Comparatively higher wages do not necessarily inhibit apparel firms from competing globally so long as productivity rises to match higher wage levels. This has not occurred in Kenya, where the value-added to minimum wage ratio is lower than most competitor textile-apparel countries. Skills concerns, both at the managerial and technical levels, are to blame. Case in point, a review of apparel firms in Kenya found change over time—

the time required to change the design of a piece of apparel and successfully manufacture it 80 percent free of flaws—to be as high as two to four days, compared to a matter of hours in Bangladesh. This hinders time-to-market. In a world of fast fashion with regularly changing designs, this is a substantial issue.

Speed to market also requires fast and effective trade logistics. Here, Kenya also fares unfavorably, with a container taking longer to get to the US than it does from countries such as, China, India, South Africa, and Vietnam. Costing over US\$2,000, it is more expensive than almost all apparel exporting countries, bar Ethiopia.

Reviving investment momentum

Some of the challenges relating to the cost competitiveness of Kenyan firms are being addressed. The increased rate at which geothermal power is being generated is bringing down the cost of power. However, despite very impressive gains made, with power prices falling since 2014 from 20 to 14 cents per kWh, this cost nonetheless remains high. Investments in Mombasa port, the rail link to it, the e-single window, and other initiatives will address trade logistics concerns. Some of these are yielding immediate benefits, but others will take many years before their advantages are felt at the firm-level. Issues of skills and productivity are yet to be tackled, and they remain a major challenge for the sector. Going forward, the MOIED is eager to discover opportunities for growth in the near term to renew enthusiasm for the textile-apparel sector, while simultaneously addressing issues more structural in nature.

Therefore, the focus of this strategy is less on the markets that Kenyan firms are already serving, chief among which are exports to the US under the cover of tariff advantages that AGOA offers. The majority of what is sold into the US is commodity segment apparel, where the main competitive differentiator is cost. As mentioned above, Kenya's exports into this segment have grown quite well, but not as well as the growth of some Kenya's apparel competitors.

This should change as Kenya’s business costs are brought in line with competitors, boosting prospects for apparel firms. This is important given these apparel firms dominate Kenya’s exports and are an important source of employment. However, their competitive advantage will be driven in part by the skills and technology upgrades at the firm-level, and in part by the larger investments being made at a national level that will bring down their costs of doing business. The latter process is underway, but many of the drivers of change that will benefit these firms are not ones in the control of the MOIED (though it can, and has been encouraging these changes).

This strategy focuses on opportunities for Kenya’s apparel firms that are not primarily cost-based market plays, while recognizing that continued efforts to build share in such segments is still nonetheless important. Two particular niches have surfaced through the strategy process: ‘green’ markets, and small batch production.

Getting more efficient and going green

The first opportunity focuses on consumers who are environmentally (and socially) conscious and willing to pay a premium for products that cater to their concerns. For a wider set of products, which also includes apparel, this Lifestyles of Health and Sustainability (LOHAS) segment accounts for almost 20 percent of US adults, and more in European markets. Meeting these consumers’ demands will require reconfiguring legacy production processes, a costly prospect and a disadvantage for large textile-apparel sectors that have catered to less environmentally conscious consumers. For Kenya’s sector, which has not made substantial investments for many years and in which new investment is due, this provides an opportunity to invest with the needs of this growing segment in mind.

A key advantage of focusing on this segment is that many ‘green-focused’ investments have energy efficiency at their core.⁶ This translates into cost

savings for firms, therefore presenting a dual advantage of opening new market opportunities with improving the competitive profile of firms that focus on traditional, cost-based markets. This provides firms with a migration path from commodity products—but making these more cost-effectively—into new niches, but all from the same facility and at the pace at which they are comfortable. This greatly reduces the risk of movement towards producing for a new market segment.

Finally, such investments can attract capital on concessional terms as donor countries are eager to encourage the movement of manufacturing in developing economies towards more environmentally sustainable foundations.⁷ This further reduces business costs.

Opportunities in smaller runs

The second opportunity focuses on a market segment that is almost a fall out of the reduction in the global costs of production that have been driven by increasing economies of scale. These are buyers that require small order runs—often of premium products—that many large scale producers are not configured to supply.

Smaller batch opportunities cover a range of products, from new niches such as crowd sourced designs to the small, quick turnaround runs required by the pinnacle of fast fashion buyers. Some of these, particularly the latter, are not options for Kenyan producers who face challenges with change-over and logistics time. However, other smaller run opportunities can be pursued, with the main advantage that larger, mass-producers have little interest in such orders. However, the price premium that such smaller batch buyers pay also requires quality to be of a higher standard than commodity products. This will require addressing skills issues from management to the factory floor so as to ensure high quality is delivered consistently.

⁶ Green production is defined as a production environment where energy efficiency and conservation measures are practiced at each stage of production and emission levels are well within the recommended levels of the Intergovernmental Panel on Climate Change (IPCC).

⁷ While this report was being developed, the MOIED was also in the process of piloting an electricity subsidy scheme for the textile-apparel sector. Encouraging firms to embark on energy-saving investments was therefore of great importance to the Government of Kenya in order to reduce both the burden of power costs to firms and the cost of the subsidy to Treasury.

Implementation priorities

Investments being undertaken in the power and transportation sectors will have a fundamental bearing on the competitiveness of Kenya's textile-apparel sector. However, these are larger business environment changes and not specific to the textile-apparel sector. The pace and scale of these investments and related reform efforts are also broadly beyond the scope of the MOIED to affect (though the MOIED has an important advocacy role to play). Therefore, they are not a main focus of this strategy.

Implementation priorities instead focus on (1) developing access to new market opportunities where competition is based on factors other than cost alone, allowing Kenyan firms to compete despite their higher cost of doing business. This will require (2) new investment in equipment and technology to increase efficiency and reduce costs, but also cater to growing consumer demands for environmentally sustainable production processes.

It will also require that Kenya focuses on (3) building skills to address productivity issues at the managerial, technical, and factory floor level—to compensate for its relatively higher wages—, as well as to cater to higher quality requirements of non-commodity market niches. Finally, developing and supporting such interventions will require an institution to play a leadership and convening role on issues specific to the textile-apparel sector, ensuring public and private sector collaboration, and coordination among different private actors. Such an institution does not exist today. An (4) institution can be created such that it provides a voice for the sector internally, plays a leadership role in developing strategic initiatives to build the textile-apparel sector, and ensures that Kenya's sector dynamically changes in line with the ever shifting textile-apparel global market.

These four areas of support are summarized in Table 1 below:

Table 1: Strategy matrix: textile and apparel recommendations

Institutional Support	Skills to address productivity	Investment in equipment and technology	Access to new markets
Institutionalize support for the textile and apparel sector through a dedicated institute	Shift to on-site skills development and encourage training audits	Encourage firms to conduct factory-level energy audits to see how much energy (and money) could be saved through equipment upgrading	Develop Kenya's brand image as a hub for green textile and apparel production
	Encourage multi-skilling for factory-floor workers and mentorship & coaching programs for mid-level management	Develop a sector-wide promotion program to encourage firms to upgrade technology and equipment through concessionary financing, and support them in drafting business plans to do so	Sponsor trade shows targeted at the textile and apparel sector to generate business to business (B2B) connections
	Improve the efficiency of the training levy	Promote green certifications among firms to provide credibility to international buyers	Sponsor tours for Kenyan firms to see buyers and producers
	Impose term limits on expatriate work permits	Discontinue the energy subsidy or condition it to energy audits and equipment upgrading in participating firms	Leverage public sector procurement
	Foster local partnership between firms and research institutions, potentially through a center of excellence		

Report Objectives, Methodology and Structure

This section sets the overall objectives of this report, describes the methodology utilized, and gives a preview of the report's structure.

1.1 Objectives

This report was requested by the Ministry of Industrialization and Enterprise Development (MOIED). It aims to analyze the competitiveness of the textile and apparel sectors in Kenya, to assess policy options, and recommend critical interventions to stimulate sector growth.

The specific objectives of this study are as follows:

- i. Create a profile of the current state of Kenya's textile and apparel sectors, including comparative and competitive advantages, as well as constraints;
- ii. Propose strategic market segments in which Kenya can best compete;
- iii. Conduct specific analysis in order to:
 - a. Increase demand in domestic and international markets;
 - b. Reduce energy costs;
 - c. Assess the supply and demand of relevant skills;
 - d. Help sector stakeholders improve their production process, upgrade technology, and repair machinery; and
- iv. Recommend interventions for the textile and apparel sectors.

1.2 Methodology and Structure

The World Bank Group, with the support of Global Development Solutions (GDS), undertook a review of existing policy documents and value chain analyses, conducted field interviews with more than 50 private and public stakeholders, held three large stakeholder meetings, and analyzed publicly available data. Importantly, the report was structured to provide the client, the MOIED, with quick, actionable recommendations. The work focused more on the apparel segment of the value chain, emphasized quick wins over long-term structural changes (such as growing the Kenyan cotton sector), and biased the analysis towards issues which the MOIED could impact directly.

The report is structured as follows: Chapter 2 describes global and regional market trends in textile and apparel. Chapter 3 reviews the evolution, growth, and performance of the apparel sector in Kenya and then analyzes the sector in terms of markets, products, and stakeholders. Chapter 4 focuses on Kenya's performance in terms of relevant macro indicators and highlights the critical constraints faced by apparel manufacturers and exporters in Kenya. Chapter 5 concludes with recommendations. Where possible, chapters end with a summary of key points and conclusions.

Context: Global and Regional Market Trends in Textile and Apparel

This section provides an overview of global production trends in the apparel sector and highlights Kenya's performance in the U.S market.

2.1 Global Market Trends

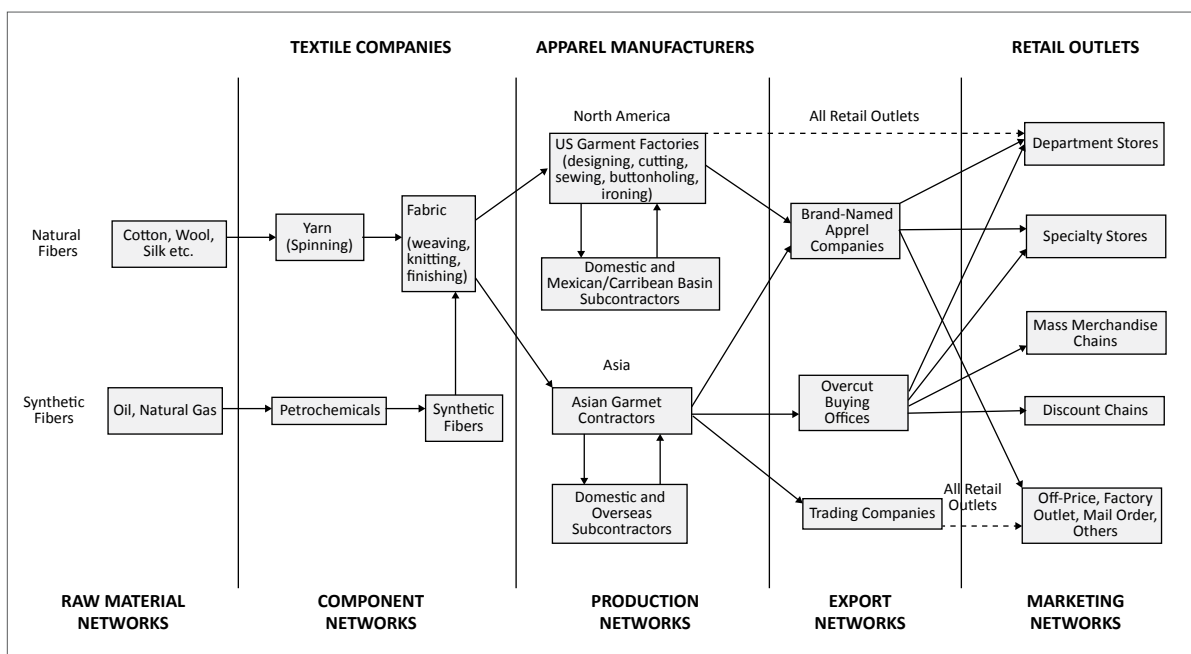
Globally, the relationship between consumers and manufacturers is changing in the apparel market. Traditionally, consumers are restricted in their buying choices as products reach them only after being filtered by retailers, whose purchases are first filtered by the wholesalers they purchase from, who in turn purchase from manufacturers. The diagram of a traditional value chain in Figure 1 illustrates the multiple layers between manufacturers, retailers, and consumers. The apparel commodity chain is organized around five main segments: raw material supply, including natural and synthetic fibers;

the provision of components such as the yarns and fabrics manufactured by textile companies; production networks made up of apparel factories, including their domestic and overseas subcontractors; the export channels established by trade intermediaries; and marketing networks at the retail level.

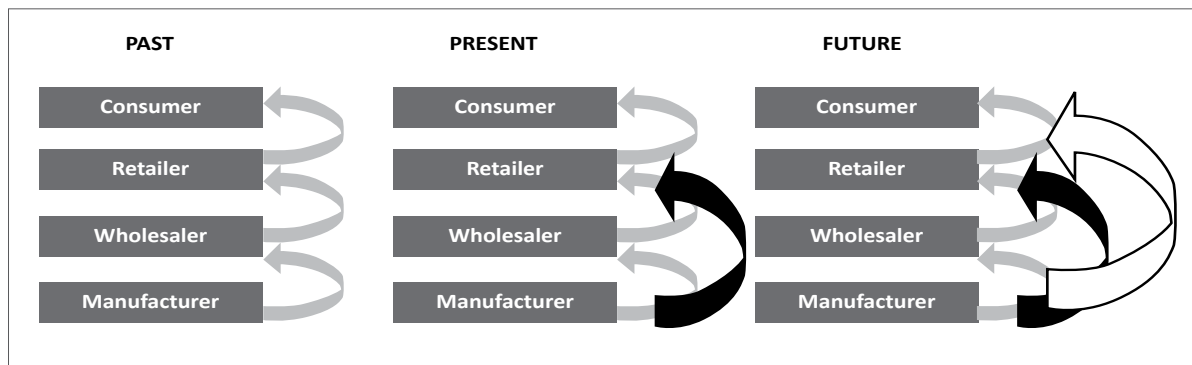
Fast fashion

With improvements in logistics and information flows, retailers are increasingly bypassing wholesalers to procure apparel directly from manufacturers. This trend opens up a range of possibilities for the future as manufacturers can market not only to wholesalers and retailers, but also directly to consumers.

Figure 1: Sample of global textile and apparel value chain and networks



Source: *Outsourcing and Changing Patterns of International Competition in the Apparel Commodity Chain*, UNIDO 2001.

Figure 2: Changing trends in the relationship between consumers and manufacturers

Source: *Apparel Market Outlook 2013: Global & US*. Dam Huy Binh.

These changes have made the ability to respond to consumer desires more important than ever, and underscored even more the need to add value through design, innovation, and branding. As a byproduct of these trends, retailers, wholesalers, and manufacturers are managing the apparel supply chain more closely to eliminate waste and improve overall efficiencies, to capitalize on trade preferences such as duty-free arrangements, to leverage technology for both production and sales, and to ensure compliance with environmental and social standards.

These trends also mean that growth is moving toward a fully integrated farm-to-fashion production system, under which buyers and brand leaders are able to control quality along the entire value chain. Close management from farm-to-fashion—what is termed “hyper supply chain management” in the industry—results in a faster order-to-delivery supply chain structure that can be much more responsive to “fast fashion” trends. Companies like Inditex (Zara), headquartered in Spain with a design team of 300 people, can get a new item of clothing designed and into its more than 6,340 stores in as little as two weeks. To compete in this type of market, buyers and brand leaders must have close control over the entire value chain. This style of close management also responds to a growing consumer demand for traceability of the products they buy.

Small batch

Another byproduct of the reduction in production costs and the improvements in logistics is that buyers are increasingly requiring smaller order runs—often of premium products—that many large scale producers are not configured to supply. Smaller batch runs cover a range of products, from the small, quick turnaround runs required by the pinnacle of fast fashion buyers (like Zara) to new niches such as crowd-sourced designs (like Threadless). Customized production, which focuses more on product quality, and individualized, personalized products is becoming a new frontier.⁸ Nike, for instance, lets customers choose the color patterns on their shoes.⁹

Green production

Globally, consumers are increasingly demanding ‘green products’—products produced in energy efficient facilities. Among the premium and niche market segment, green manufacturing is considered to be the fastest growing. Apparel companies are already focusing on energy and emission reduction efforts in company-owned offices, stores, distribution warehouses, and vehicles. Now the focus is shifting to suppliers, as buyers increasingly purchase from emission-

⁸ “The rise of the Maker Movement, and of the Maker, speak of the growing appeal for smaller batch manufacturing. The companies that are best able to meet that market demand for individualized, personalized products are going to be the ones who will thrive in this kind of an environment.” The Manufacturer, (2013), “Market Demand will Shape the Factory of the Future.” <http://www.themanufacturer.com/articles/market-demand-will-shape-the-factory-of-the-future/>.

⁹ “...vertically integrated system for mass customization...that allows people to custom design, order, and manufacture all sorts of unique garments – on demand, in batches as small as one.” FastColabs, (2014), “Inside the Fashion Incubator that’s Hacking Global Manufacturing.” <http://www.fastcolabs.com/3036555/inside-the-fashion-incubator-thats-hacking-global-manufacturing>

reducing and energy-efficient production facilities. Among the brands leading this trend are Adidas, Gap, H&M, Levi’s, Nike, People Tree, Stella McCartney, Target, and Timberland.

Green manufacturing can be defined as both the manufacturing of green products using renewable energy systems and clean technology equipment and the greening of manufacturing—reducing pollution and waste by minimizing resource use, recycling and reusing waste, and reducing emissions. Not only does green production command a price premium (as much as two to four times that of conventional products), it is also less sensitive to short seasonal production cycles which generally force factories to focus primarily on low-margin, high-volume production.

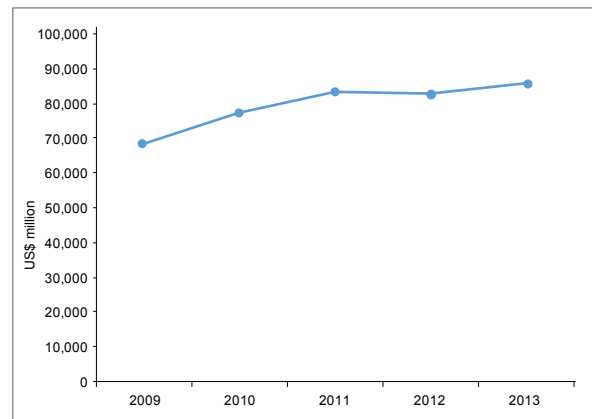
China to supply its domestic market

Another notable trend is that shifts in market growth may result in shifts in production: China may supply more to its local market and less the global market, and given rising wages, may diversify away from exporting and/or making certain product categories. Predicted annual growth rates until 2020 reflect this; overall sales growth is suggested to be 4 percent per year, with sales in Japan, EU, and US at 2 percent growth per year, and sales in Brazil, China, and India at 8 percent growth per year.

China has already reduced sales to the US in specific categories (see Figure 3a), leaving a demand gap which is being filled by other market players in Asia and Africa. Kenya is taking advantage of the decreasing Chinese market share in women’s and girls’ clothing for instance, especially cotton clothing products (see Figure 3b).

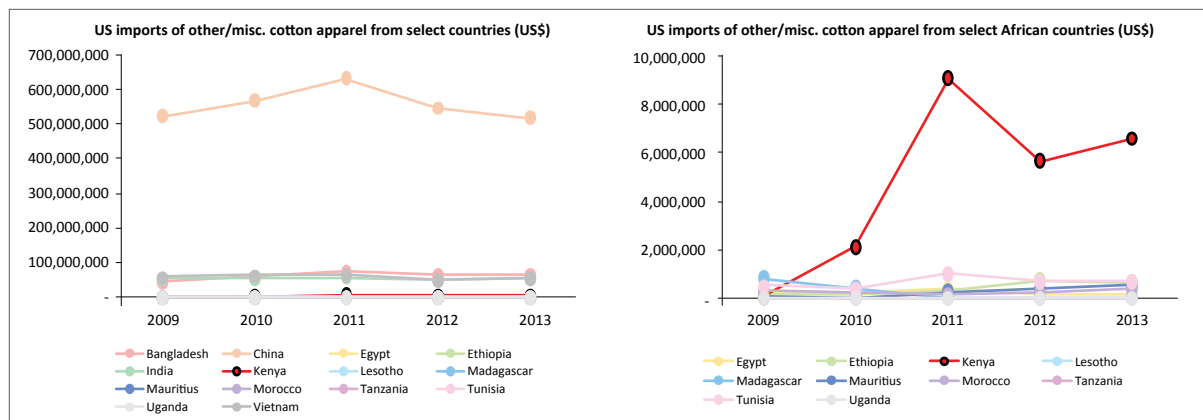
Despite this global shift toward new markets, the US is still the largest apparel market, valued at US\$83 billion in 2013, and its apparel imports have increased at a compound annual growth rate (CAGR) of 5.8 percent between 2009 and 2013 (see Figure 4). Of this market, Kenya captured 0.38 percent in 2013, while China captured 100 times more at 38 percent (see Figure 5).

Figure 4: US global apparel imports (US\$ m)



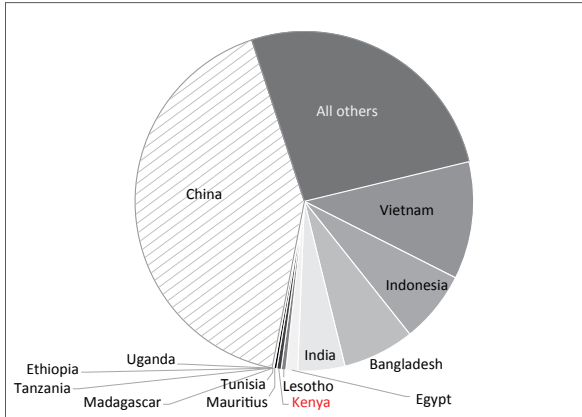
Source: UN Comtrade, 2014.

Figure 3: Kenya’s performance compared to competitors in cotton apparel exports



Source: Office of Textiles and Apparel, International Trade Administration, US Department of Commerce, 2014.

Figure 5: US apparel imports market share (2013)



Source: Office of Textiles and Apparel, International Trade Administration, US Department of Commerce, 2014.

Given the size of the US market and the importance of the African Growth Opportunity Act (AGOA) for Kenya—where Kenyan apparel has access to the US market quota and duty-free—, this report is biased towards the US market.

2.2 Regional Market Trends

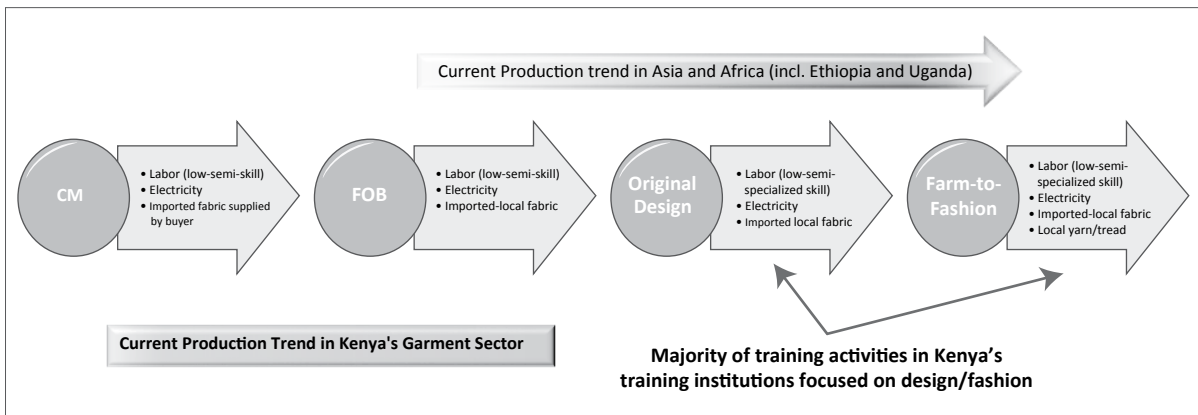
As key competitors in Asia move towards farm-to-fashion models—keeping all value-added activities from cotton production to fashion design within a given geography—, countries such as Ethiopia and Uganda are trying to follow suit. While the latter have expanded their efforts to increase the availability of locally produced fabrics, similar efforts at integration in Kenya have thus far not yielded positive results. Kenyan companies continue to rely on high cost imported material,

pushing a number of EPZ companies (particularly factories operating in Kenya as a subsidiary of a larger apparel company outside Kenya) to move away from purchasing their own materials to primarily doing simple cut-and-make (CM) contract labor where buyers supply a design and all materials. This practice is leading to value attrition, further lowering the revenue generating potential for Kenyan firms and postponing needed efforts to source locally available material to help reduce the cost and time of apparel production. Figure 6 illustrates these market shifts.

2.3 Chapter Summary

- Globally, there is a changing relationship between consumers and manufacturers driven by improvements in logistics and information flows.
- The ability to respond to fast-changing consumer needs, dubbed “fast-fashion”, has pushed faster order-to-delivery supply chain structures and closer supervision of supply chains.
- In line with lower production costs and better logistics, smaller runs are becoming more common as retailers increasingly tailor their products to narrower customer segments.
- Farm-to-fashion is increasingly prized and competitor countries, including regional competitors, are moving towards that.

Figure 6: Production trends in the apparel sector



Source: Global Development Solutions, LLC.

- Consumers, retailers, and wholesalers are more attune to environmental and social standards. Increasingly, consumers are demanding 'green products'—products produced in energy efficient facilities.
- Shifts in market growth, coupled with increasing wages in manufacturing behemoths, may result in shifts in production. China may supply its local market more and supply the global market less, and may diversify away from exporting and/or making certain product categories.
- Despite the global shift toward new markets, the US is still the largest apparel market, valued at US\$83 billion in 2013. Given the size of the US market and the importance of the AGOA for Kenya, this report is biased towards the US market.

The Kenyan Context

This chapter begins with a review of the structure and cost base of the textile and apparel sector, and continues with a description of the evolution, growth, and performance of apparel exports. The chapter concludes with a summary of sector stakeholders and their role in the textile and apparel value chain.

3.1 Structure of the Textile Sector

Kenya has 52 textile mills, of which only 15 are currently operational and they operate at less than 45 percent of total capacity.¹⁰ The existing mills operate using outdated technology and suffer from low levels of skilled labor and low productivity.¹¹

The cost of electricity is a major cost driver for textile mills, as are the high maintenance and overhead costs due to old equipment. A further cost driver is the need to either use high-cost imported material or low-quality local fiber which requires additional processing.

Figure 7: Composition of a cotton fabric in Kenya



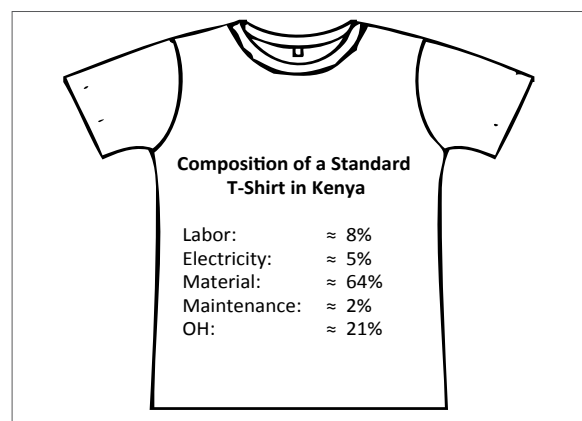
Source: Global Development Solutions, 2014.

3.2 Structure of the Apparel Sector

Thousands of apparel companies operate in Kenya. Approximately 170 are medium and large, while upwards of 74,000 are small and micro companies.¹² Twenty-one companies operate in the EPZ, employing an average of 1,800 people per company.¹³

While the cost structure of apparel companies varies significantly by firm size, for the larger companies, the high cost of imported material (which is a fixed cost due to the absence of export-quality fabric in Kenya) contributes to the majority of the manufacturing cost (approximately 64 percent). Overheads also account for a significant portion of costs, at 21 percent. The only aspects of production where cost and quality can be managed to improve competitiveness are labor, electricity, and overheads. Figure 8 shows the composition of costs in terms of producing a standard t-shirt in Kenya.

Figure 8: Composition of standard t-shirt in Kenya



Source: Global Development Solutions, 2014.

¹⁰ ACTIF, (2013), "Policy Research on the Kenyan Textile Industry."

¹¹ KAM, November 2013.

¹² Supporting Indian Trade and Investment for Africa, "Textile and Clothing Value Chain Road Map: First Stakeholder's Consultation," May 2015, p.35.

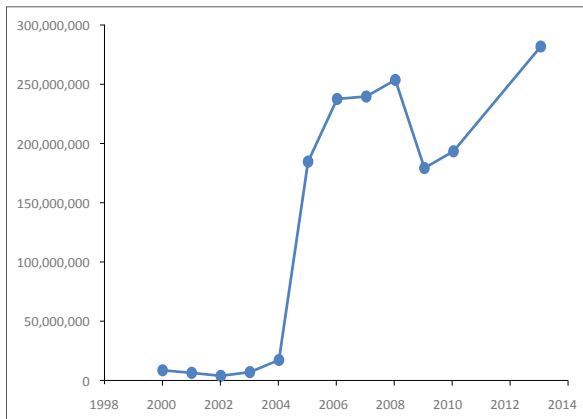
¹³ KNBS, (2015), Impact of AGOA, Kenya Economic Survey, as reported by EPZA. Approximately 81.2 percent of EPZ employment is in apparel companies.

3.3 Evolution, Growth, and Performance of Apparel Exports in Kenya

Kenya has long had a domestic textile and apparel sector, but major growth in foreign investment and exports only arrived with the adoption of AGOA in 2000. Kenya was the first AGOA-eligible country to fulfill the additional requirements for the apparel provision in January 2001, and could thus gain access to the US market, quota and duty-free with single transformation rules of origin (allowing Kenyan manufacturers to import fabric from outside the region). This, along with the quotas that existed on Chinese and other Asian exporters as part of the Multi-fiber Arrangement (MFA), made Kenya an attractive location for producing mass market clothing for the US market.

Between 2000 and 2004, Kenya’s apparel exports—virtually all going to the United States—increased slowly, from US\$8.6 million to US\$17 million. With the end of the MFA in 2004, apparel exports rose steeply, hitting a high of US\$283 million in 2008. However, uncertainties over the continuation of AGOA’s relaxed rules of origin combined with the global financial crisis led Kenyan apparel, like the rest of the African apparel sector, to suffer. While exports never collapsed, they dropped and stagnated through the second half of the decade. Figure 9 shows this evolution.

Figure 9: Kenya’s global apparel exports

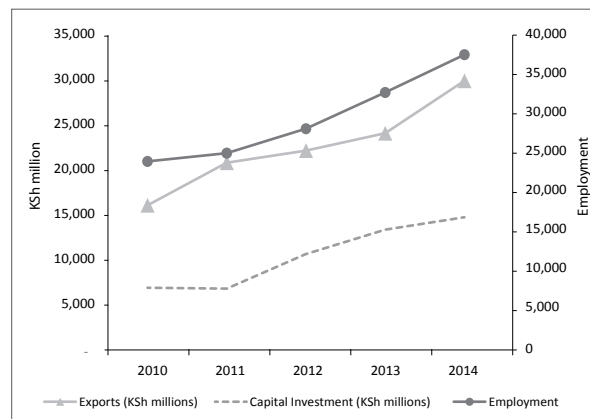


Source: UN Comtrade.

More recently, and partially spurred by assurances of AGOA renewal, Kenya has seen a return of investment and growth, with some firms scaling up their operations and new firms arriving into the Export Processing Zones (EPZ). Indeed, provisional KNBS numbers suggest Kenya’s apparel exports within the EPZ under AGOA grew at a 17 percent CAGR between 2010 and 2014 to reach US\$332 million.¹⁴ Over the same period, investment grew at a 21 percent CAGR while employment grew at a 12 percent CAGR to reach 37,758 people.¹⁵ In the last year alone, exports, employment, and investment grew by 24 percent, 14.7 percent, and 10.3 percent, respectively. The fact that exports have been growing faster than employment suggests labor productivity in the EPZ apparel companies may have improved. The increased number of employees per company may partially explain this.

These trends can be seen in Figure 10 and in its corresponding data table.

Figure 10: Selected performance indicators for EPZ apparel under AGOA, 2010-2014



Source: UN Comtrade.

¹⁴ KNBS reports that the total 2014 apparel exports were KSh 28,948 million, while the KNBS Economic Survey, published in March 2015, shows exports under AGOA in the EPZ were KSh 30,119 million. This discrepancy does not make sense, and this report has chosen to go with the latter number.

¹⁵ Kenya National Bureau of Statistics, (2015), "Economic Survey."

	2010	2011	2012	2013	2014	CAGR
Number of enterprises	16	18	22	22	21	7%
Avg. no. of employees per company	1,507	1,398	1,286	1,497	1,798	
Employment	24,114	25,169	28,298	32,932	37,758	12%
% change		4%	12%	16%	15%	
Exports (KSh millions)	16,190	20,948	22,308	24,246	30,119	17%
% change		29%	6%	9%	24%	
Capital Investment (KSh millions)	6,959	6,858	10,732	13,465	14,856	21%
% change		-1%	56%	25%	10%	

Source: KNBS Economic Survey, 2015, from Export Processing Zones Authority.
 *2014 numbers are provisional.

Approximately 70 percent of Kenyan apparel firms have a US-dominant market orientation, meaning that at least 80 percent of their output is sold to US markets as indicated in Figure 11.¹⁶ Since the majority of Kenyan apparel firms have a US-dominant market orientation, exports to the US serve as a proxy for overall trends in Kenyan apparel exports.

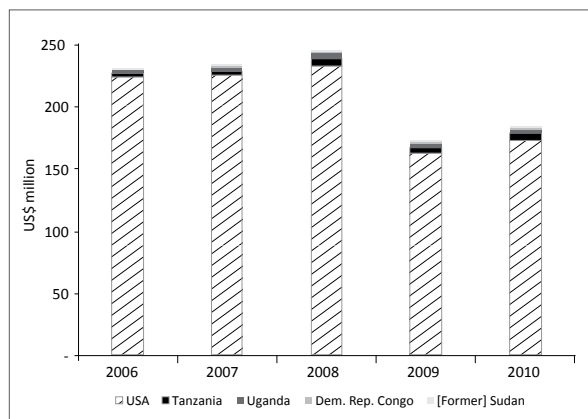
Product wise, six of Kenya’s top ten exports are cotton products, while four are man-made fiber products. Almost half of Kenya’s apparel exports to the US are comprised of women’s and girls’ (W/G) cotton trousers, slacks, and shorts, and W/G man-made fiber (MMF) slacks, breeches,

shorts, knit shirts, and blouses. Figure 12 illustrates the respective shares of each apparel product to the United States.

A more detailed comparison of Kenya’s export performance against selected countries in specific export products can be found in Annex 1: Performance of Kenya’s Apparel Sector as Compared to Competitors.

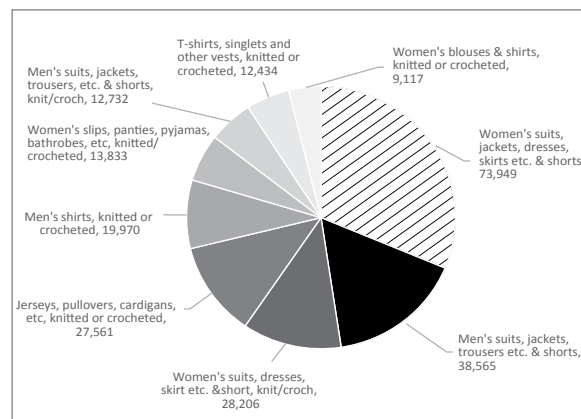
Regionally, Kenya has enjoyed a strong position under AGOA—the country’s share of total SSA textile and apparel exports to the US increased from 16 percent in 2004 to 37 percent in 2014.¹⁷

Figure 11: Kenyan apparel exports to top 5 partners (2006-2013)



Source: UN Comtrade, 2015.

Figure 12: Kenyan apparel exports to the US (in US\$ '000 2013)



Source: UN Comtrade, 2013.

¹⁶ McCormick & Kamau, 2013, "Breaking In and Staying In," University of Nairobi.

¹⁷ OTEXA, US Department of Commerce, 2015.

The renewal of AGOA until 2025 is likely to accentuate current growth trends. This renewal is expected to be a game-changer: it provides both investors and companies in the EPZs with a significant window to capitalize on the existing market opportunity, the confidence to invest in innovation, and the scope to differentiate themselves from regional competitors, even with a higher comparative cost structure.

3.4 Sector Stakeholders and Value Chain

Figure 13 provides a rich picture of the textile and apparel value chain in Kenya and maps out the private and public sector stakeholders and their relationships. Reading the figure from left to right:

Inputs: Major inputs include cotton fiber (both local and from Uganda/Tanzania); man-made fiber; dyes; utilities such as water, electricity and fuel; machinery; and skilled labor.

Yarn spinning: The yarn spinning companies have a capacity of 140,000 spindles in total, with only 40-50 percent currently being utilized. There are few stand-alone yarn spinning mills which produce cotton yarns, blended yarn, as well as polyester, acrylic and sewing threads. Yarn output is sold in Kenya and exported to Uganda, Rwanda, Tanzania, and Nigeria. Only 15 of the 52 yarn mills are operational.

Weaving and knitting: There are some semi-integrated mills, which cover the entire production value chain from spinning to knitting, dyeing, and finishing. Two semi-integrated mills are oriented to knitting and four to weaving. Stand-alone knitting and weaving companies import yarns from India, Indonesia, China, and Taiwan but also utilize 80-90 percent of domestic yarns. The 15 mills that are in the weaving, knitting, and finishing business see a capacity utilization of 40-50 percent.

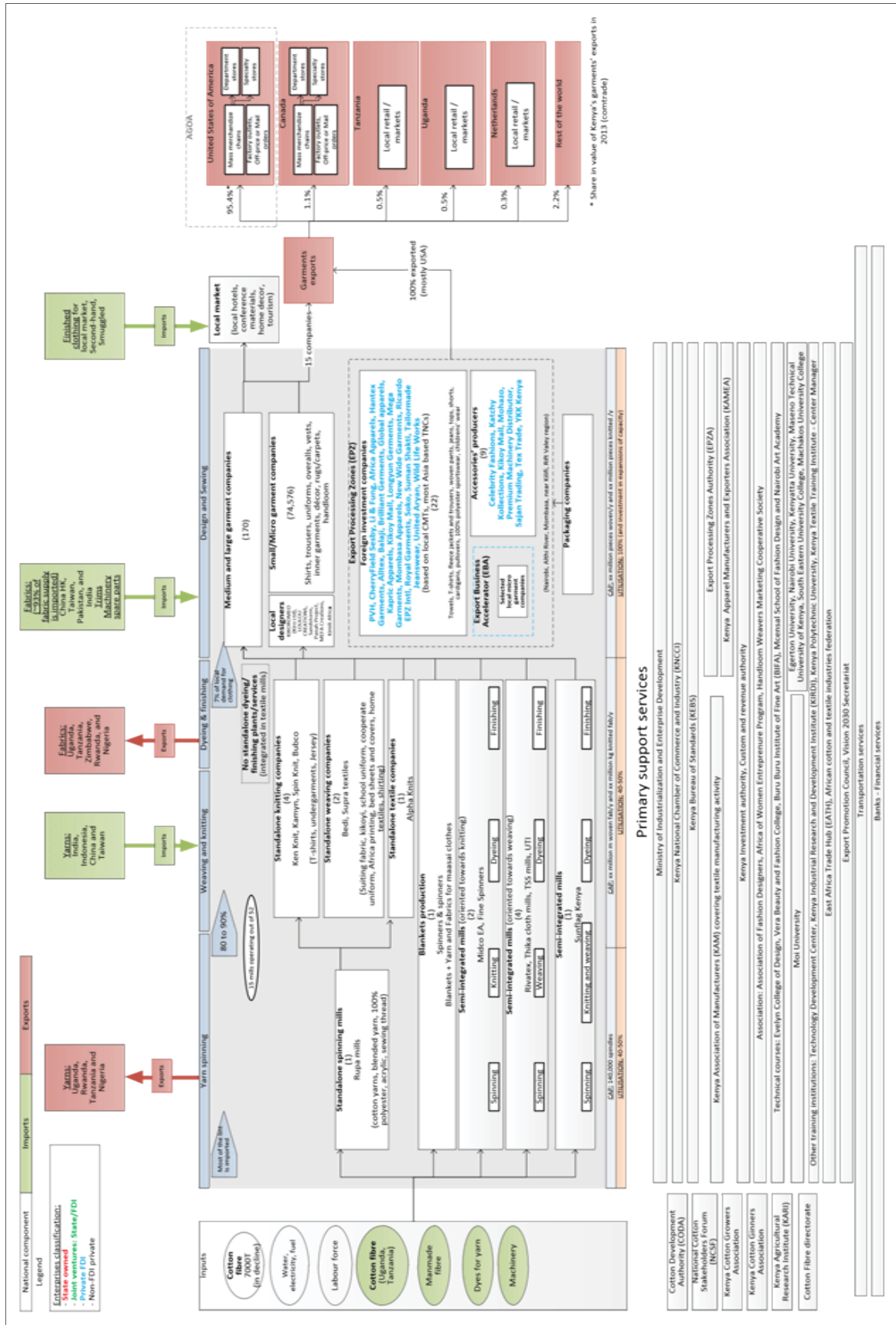
Dyeing and finishing: There are no standalone dyeing and finishing plants and services; this part of the production value chain is deeply integrated with textile mills.

Design and sewing: This segment consists of non EPZ firms (small/micro as well as medium and large apparel companies) and firms inside the EPZs, which are divided into foreign investment firms, accessory producers, and local micro firms located in the Export Business Accelerator (EBA). These firms work at 100 percent capacity utilization, and around 93 percent of their fabric supply is imported from China, Hong Kong, Taiwan, India, and Pakistan, as are the trims, machinery, and spare parts utilized in apparel production. There are significantly more apparel companies than textile manufacturers—170 medium and large companies, 74,576 small and micro companies, 22 foreign firms, and 9 accessory producers.

Markets: A hundred percent of EPZ output gets exported, mostly to the U.S. Around 15 companies outside the EPZ export globally. The rest supply the local market with products for local hotels, conference materials, home décor, and tourism. The local market is also supplied by finished products from the second hand (*mitumba*) market and from smuggled goods. Exported apparel are retailed through mass merchandise chains, factory outlets, and mall orders, which then filter to department stores or specialty boutiques.

Cross-cutting support services: The sector is under the auspices of the Ministry of Industrialization and Enterprise Development which sets its strategic direction. There are many apex associations such as the Kenya National Chamber of Commerce and Industry (KNCCI) and Kenya Association of Manufacturers (KAM), as well as industry specific associations such as the Cotton Growers Association, and Association of Fashion Designers, Handloom Weavers Marketing

Figure 13: The textile and apparel value chain in Kenya



Cooperative, etc. Crucially, there is no single association that represents the apparel and textile sector as a whole *vis-à-vis* the government and each other. Training support comes from courses at various universities as well as training centers at the Technology Development Center, the Textile Training Institute, the Kenya Industrial Research and Development Institute (KIRDI) etc. Training providers and the training needs of the industry will be described in more depth in the following chapter.¹⁸

3.5 Chapter Summary

- Kenya has 52 textile mills, of which only 15 are currently operational and operate at less than 45 percent of total capacity. Electricity and the high-cost of imported fibers are the major cost drivers of these firms. Despite the dominance of cotton products in Kenya's exports, cotton is imported to meet Kenya's quantity and quality demands.
- The apparel sector in Kenya has a three-tiered structure: in the EPZ, there are 21 large companies, and outside the EPZ there are 170 medium and large companies and more than 70,000 micro and small ones. Raw materials and overheads are the main cost drivers of these firms.
- Kenya has long had a domestic textile and apparel sector, but major growth in foreign investment and exports only arrived with the adoption of AGOA in 2000. Apparel exports grew in spurts from US\$8.6 million in 2000 to upwards of US\$332 million in 2014.
- A growth spurt over the last four years (2010-2014) saw AGOA exports, employment, and investment in the EPZ grow by 17 percent, 12 percent, and 21 percent per year, respectively. Today, 37,758 people work in EPZ apparel factories.
- AGOA was set to expire at the end of 2015, and this may have spurred companies to grow to take advantage of its last few years. AGOA was renewed in June 2015 for another 10 years. This is expected to be a game-changer as it provides both investors and companies with a significant window of time to capture market opportunities duty and quota-free.
- Kenya is in a strong position to capitalize on AGOA: the country already captures more than a third of all apparel exports from Sub-Saharan Africa to the US. In addition, 70 percent of Kenyan apparel firms have a US-dominant market orientation.
- Of Kenya's top ten apparel exports, six are cotton products and four are man-made fiber products. Almost half of Kenya's apparel exports to the US are in women and girls' cotton trousers, slacks, and shorts, and man-made fiber slacks, breeches, shorts, knit shirts, and blouses.
- The Kenyan textile and apparel value chain consists of input providers, yarn spinning companies, semi and wholly integrated weaving/knitting/dyeing/finishing mills and plants, and design and sewing firms. The sector is under the auspices of the MOIED and is supported by broad private sector associations and training institutes. Crucially, no single association exists to represent the apparel and textile sector as a whole *vis-à-vis* the government and each other.

¹⁸ Supporting Indian Trade and Investment for Africa, "Textile and Clothing Value Chain Road Map: First Stakeholder's Consultation," May 2015, p.35.

Constraints to Competitiveness

This section describes critical constraints faced by textile and apparel manufacturers in Kenya. They include a difficult business environment characterized by poor infrastructure, limited access to finance, and complex regulations for non-EPZ companies in particular. Secondly, Kenya suffers from poor labor productivity, particularly given the high labor costs, coupled with training systems that are not fit for purpose. Thirdly, manufacturers use equipment and technology that is outdated, inefficient with regards to energy consumption, and costly to replace. A fourth constraint is the insufficient supply of quality raw materials that lengthens time to market, and the fifth constraint pertains to the difficult access to domestic markets given the prevalence of second-hand clothing and until very recently, uncertain access to international markets—given ambiguity leading up to AGOA’s renewal.

The aforementioned constraints have two important implications. First, they result in products with high costs and a long time to market, limiting the market segments in which Kenya can compete to the high-volume, low-margin segments. In addition, they prompt foreign investors who are looking to diversify their production into Africa to think twice about Kenya.

Indeed, discussions with potential investors indicate that within three years, many producers/investors currently operating in China will need to diversify their investments into countries with cheaper labor and other input costs. Given that the economic fundamentals of Ethiopia, Uganda, and to some degree Tanzania, are potentially more attractive for investors and buyers than those of Kenya, it means the window of opportunity for Kenya to attract investors to help accelerate growth and local value addition is likely to be no more than three years.

Therefore, for the government and the private sector, addressing the constraints detailed herein is of primary importance. In the following sections,

empirical analysis is complemented with the responses of a small sample of private sector representatives from textile and apparel companies that were surveyed over the course of this research.

4.1 Business Environment

Kenya’s business environment is not one in which it is easy to operate. It is characterized by high electricity prices, limited access to finance, poor roads, challenging logistics, and for non-EPZ companies, complex regulations.

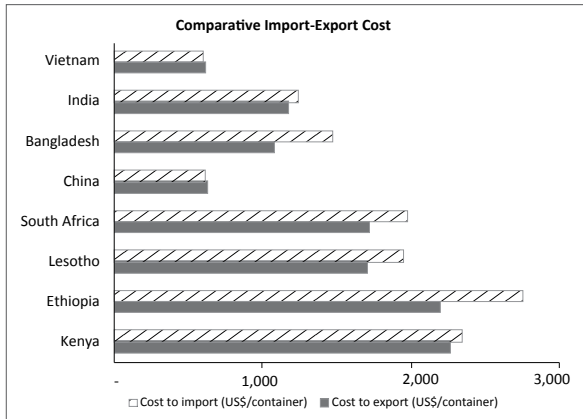
Electricity prices in 2014 were particularly high, over 20 cents per kWh, and even though prices have come down significantly in 2015, they are still higher than those in other apparel and textile producing countries such as China (at seven cents per kWh), or Ethiopia (at six cents per kWh). Electricity in 2014 accounted for 25 percent and 5 percent of the costs of textile mills and apparel manufacturers, respectively, putting Kenyan firms on a fundamentally unequal footing to firms in other countries.

Access to finance is challenging for Kenyan firms due to the high prevailing interest rates—ranging from 15 to 21 percent depending on creditworthiness—and the short time horizons available for loans—usually less than seven years. According to the Kenya Association of Manufacturers, complex regulations and lack of rigorous legal enforcements also affect textile and apparel firms, particularly the non-EPZ ones.¹⁹

Roads and logistics in Kenya are difficult for export businesses which rely heavily on imported inputs. For the apparel and textile sector, they fundamentally constrain time to market, and thus, the market segments in which firms can compete. The next few paragraphs describe the operational costs, number of required documents, length of time for import and export, and logistics performance among Kenya and comparator countries.

¹⁹ KAM, November, 2013.

Figure 14: Comparison of import/export costs among competitors (US\$/Container)

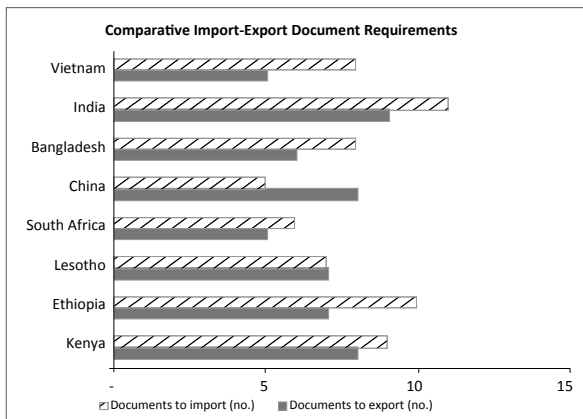


Source: Doing Business Annual Report, 2014.

Kenya has the highest import-export cost among its Asian and African competitors bar Ethiopia. In addition, its road transport costs are four times the globally competitive rate (KSh 4/Kg/km vs. KSh 1/kg/Km).²⁰ Although Kenya requires a high number of import-export documents, average import/export time is relatively competitive compared with African countries, but generally not with Asian countries. In terms of logistics, Kenya’s overall Logistics Performance Index is above Ethiopia and Bangladesh but much below China and South Africa. The country is ranked 74th globally, and performs worst in the customs and logistics competence indicators.

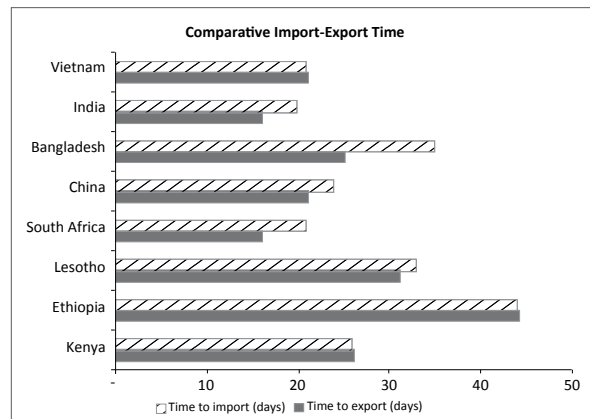
Importantly, for EPZ companies, trade logistics are not viewed as a major impediment to increasing demand, but are a major issue for non-EPZ manufacturers (Figure 18).

Figure 15: Comparison of the number of documents required for import and export among competitors



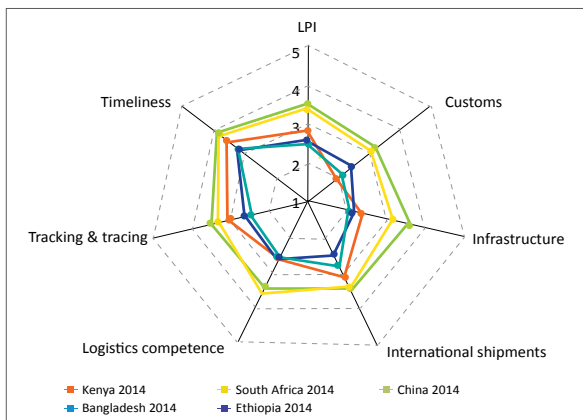
Source: Doing Business Annual Report, 2014.

Figure 16: Comparison of import and export times among competitors



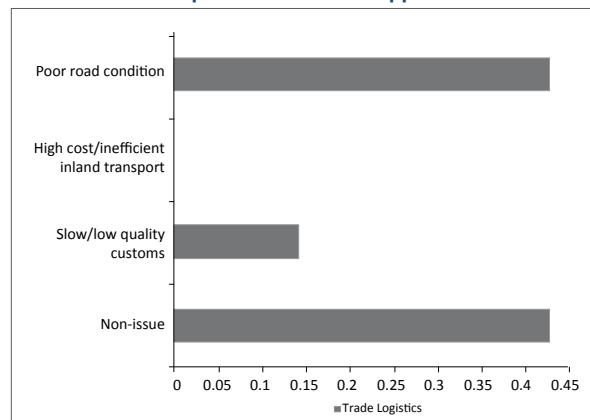
Source: Doing Business Annual Report, 2014.

Figure 17: Logistics performance index



Source: Doing Business Annual Report, 2014.

Figure 18: Extent to which trade logistics limit the expansion of market opportunities



Source: Doing Business Annual Report, 2014.

²⁰ ACTIF, (2013), "Policy Research on the Kenyan Textile Industry."

4.2 Human Capital

Kenya's labor productivity could be significantly improved. This subsection analyzes average labor costs and productivity levels for Kenya, as well as average changeover times in the apparel sector. In addition, it assesses a sample of training suppliers and their fit with industry needs.

Labor costs, quality, availability and productivity

Kenyan labor has the lowest value added per worker among select comparator countries, reflecting poor levels of productivity given current wage rates. Importantly, data for Ethiopia and Bangladesh is missing, and these countries are important reference points for investors in the textile and apparel sector.

Labor prices in Kenya have increased precipitously over the past three years (as much as by 30 percent), and manufacturers are unable to pass on this increased cost to the buyer, particularly for cut-and-make apparel. Among the countries where data is available (see Table 2), Kenya's minimum wage is higher than that in Lesotho, India, and Vietnam, and lower than that in South Africa and China. Existing data for Ethiopia also suggests significant disparities in labor costs: the average wage rate for a sewing operator in Kenya is approximately 3.7 times more than in Ethiopia (US\$180/month and US\$60/month, respectively), and generally 214 percent greater than a global competitive wage benchmark.

Poor productivity levels are also reflected in Kenya's long change-over times. Change-over is the amount of time required by a line worker to adjust

to a new production run with an efficiency rate of approximately 80 percent. In Bangladesh, change-over time is 2-4 hours, while in Kenya change-over can range from 2-4 days, and to get to optimal production, up to two months. Long change-over time means that Kenyan manufacturers are unable to respond to orders for fast-fashion products.

Low value added per worker can be partially explained by meager investments in managerial and technical skills, technology, and equipment. The latter is compounded by the lack of financial incentives for line workers: Kenyan workers are given a flat wage rather than a piecemeal rate which would incentivize efficiency.

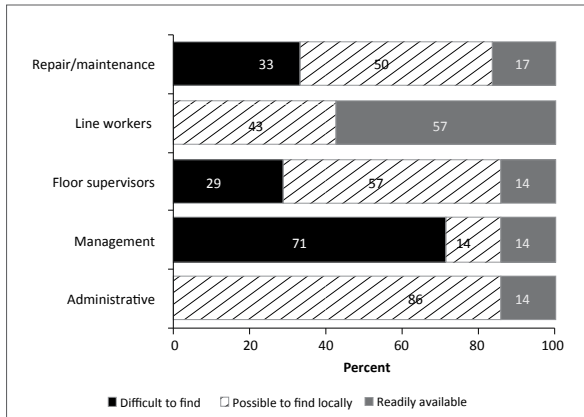
When asked about line workers, firms feel they are easy to find and readily available, but a third of them require substantial training, while the rest only need task specific training. Furthermore, firms (29 percent) perceive that specialized training for line workers is not available from local training institutions, or that when it is available, it is of poor quality (57 percent). In particular, multi-skilling—the ability to operate more than one type of equipment—is lacking due to equipment-specific training programs in Kenyan institutions.

Regarding workers for repair and maintenance, only 17 percent of firms feel they are readily available. On the other end of the spectrum, 33 percent of firms feel they are difficult to find. Overall, firms perceive that most repair and maintenance workers only need task-specific training, but that the training available is of poor quality or not specialized.

Table 2: Comparison of wage statistics for selected countries

	Kenya	Lesotho	South Africa	China	India	Vietnam
Minimum wage for 19 year old (US\$/month)	241.39	158.7	336.46	245.39	134.82	123.02
Ratio of minimum wage: Value added per worker	1.72	0.73	0.36	0.33	0.68	0.60
Value added per worker per month (US\$)	140.34	217.39	934.61	743.60	198.26	205.03
50 hour work week allowed	Yes	Yes	Yes	Yes	Yes	Yes
Max working days/week	6	6	6	6	6	6
Premium for night work (% of hourly pay)	0	0	0	39	0	30
Premium for working on rest days (% hourly pay)	0	100	100	100	0	0
Dismissal due to redundancy allowed by law	Yes	Yes	Yes	Yes	Yes	Yes
Notice period for redundancy (weeks of salary)	4.3	4.3	4	4.3	4.3	0

Figure 19: Perceived availability of Labor



Source: Global Development Solutions, LLC.

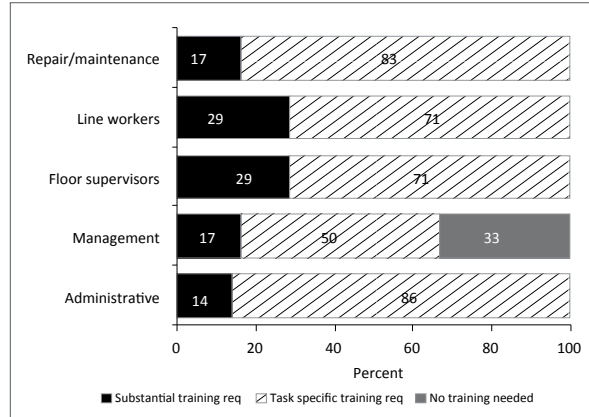
Concerning floor supervisors, almost 60 percent of firms feel they are possible to find locally, but over 70 percent feel that floor supervisors need task-specific training. Only 14 percent of firms perceive good quality training can be provided through local institutions, while the rest are evenly split between “training available but of poor quality” and “specialized training not available.”

Firms overwhelmingly feel that administrative staff are possible to find locally, that most only need task-specific training, and that the quality of basic administrative skills training available through local institutions is relatively good.

Regarding managerial staff, firms were not so positive. More than two thirds of respondents noted they were difficult to find (both locally and internationally), and when found, that upwards of 70 percent needed training. More difficult yet, firms thought that available training was of poor quality or not specialized. Given this sentiment, it is not surprising that many Kenyan manufacturers have to rely on foreigners to fill their managerial positions. The high salaries often demanded by expatriates, compounded by the cost of securing their work permits (US\$2,400 in Kenya compared to US\$62 in Ethiopia), partially explain the high overhead costs in both apparel (21 percent) and textile (33 percent) firms.

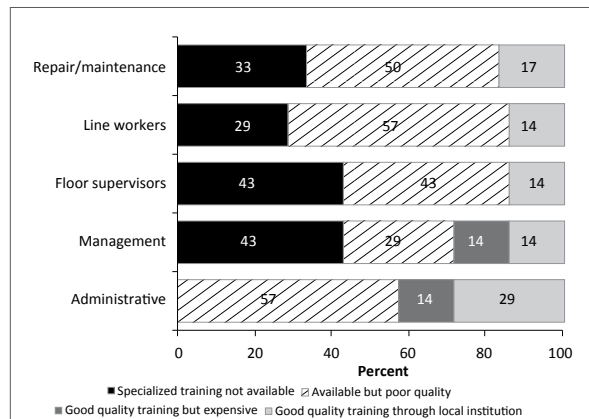
Kenyan firms pay a Training Levy every month for each of their employees. That fee is used to help the National Industrial Training Authority train current and potential industry workers. Although firms can choose to carry out training activities themselves

Figure 20: Perceived labor training needs



Source: Global Development Solutions, LLC.

Figure 21: Perceived quality of local training institutions



Source: Global Development Solutions, LLC.

and then request reimbursement, rebates are reportedly difficult to claim and reimbursements take too long.

Training systems

Training needs audits are not performed by Kenyan companies, and there is very limited interaction between training institutions and the textile and apparel sector. There is no mechanism for training institutions to anticipate private sector needs or for companies to identify key productivity gap areas. It is little surprise, therefore, that the existing training system is not fit for purpose.

Interviews were conducted to develop a profile of the most active training institutions in the textile and apparel sectors, and to assess the types of training and equipment used by them. This was done to determine whether there is sufficient capacity and capability to build the human resource

Table 3: Background information on training institutions in the textile/Apparel sector in Kenya

Name of organization	University of Dedan Kimathi	Mascal School of Design	Technical University of Kenya (TUK)	Moi University	Technology Development Centre (TDC)
Source of funding	Student fees	Student fees	Student fees	Student fees	Government and student fees
Source of students	School leavers form 4 leavers, KCSE	Form four leavers, Degree holders	KCSE leavers	Form 4 leavers, Degree holders	Form 4 leavers, industry works
Partnership with private sector	No	No	TDC	Rivatex Ltd	TUK/ EPZA

base required for the textile and apparel industries to expand production into new markets and product areas. The following training institutions were profiled:

- University of Dedan Kimathi;
- Mascal School of Design;
- Technical University of Kenya;
- Moi University; and
- Technology Development Center (TDC).

These institutions are largely funded through student fees, and some limited government support in the case of the Technology Development Center. Students are sourced directly from form 4, the industry, among existing degree holders, and from takers of the Kenya Certificate of Secondary Education (KCSE). While Moi University has a partnership with Rivatex, the Technology Development Center has a partnership with the Export Processing Zone Authority and the Technical University of Kenya. (See Table 3)

The key perceived challenges in the aforementioned institutions are insufficient funds for programs and students, lack of modern equipment and material,

and low capacity levels of training staff. Secondary challenges are low enrollment, and the mismatch between manufacturers' needs and training institutions' focus on fashion and design (Table 4).

Kenyan training institutions generally suffer from the use of outdated equipment and/or inadequate amounts of appropriate equipment (Table 5). At Kimathi, although there is a wide range of training equipment, it averages 15 years of age. The Technology Development Centre has wide range of relatively new equipment, yet its single straight sewing machine is 14 years old. Importantly, Asian competitors tend to replace their training equipment every 3-4 years.

Certificate and diploma courses, including technical vocational education and training (TVET), tend to emphasize fashion and design, which are of great interest among the younger population in Kenya, rather than focusing on basic skills associated with production technology and processes, equipment maintenance, and multi-skilling where there is a great deal of demand for skilled workers.

Table 4: Key challenges facing training institutions in the textile and apparel sector

	Kimathi Univ.	Mascal School of Design	Tech. Univ. of Kenya	Moi Univ.	Tech. Dev. Center
Insufficient funding for program and students	X	X	X	X	X
Lack of modern equipment/facilities/materials	X	X	X		X
Limited capacity of training staff	X		X		X
Low enrollment	X				
Lack of private sector opportunities in fashion industry		X			

Source: Global Development Solutions, LLC.

Table 5: Training equipment used by textile/apparel training institutions

Type of unit available	Kimathi		Macsal		Technical University		Moi University		Technology Development Centre	
	No. of unit	Avg age of unit	No. of unit	Avg age of unit	No. of unit	Avg age of unit	No. of unit	Avg age of unit	No. of unit	Avg age of unit
Large and small sewing equipment	1	15	23	5	20	5				
Drafting Tables	4	15							1	2
High speed over locking sewing machine	1	15	2	5					6	6
High speed straight sewing machine	1	15	18	3					18	6
High speed zigzag stitching machine	1	15							2	2
Singer classic ultra automatic sewing machine	1	15							5	2
Twin needle post bed drop feed lock stitcher with reverse stitching machine	1	15								
Single needle cylinder bed unison lock machine	1	15								
Manual single straight sewing machine	1	15								
High speed round knife cutting machine	1	15								
single skiving machine	1	15								
Industrial steam iron	1	15								
Electrical iron	1	5								
Computers			10	1						
spinning plant machinery(Rivatex factory)								various	7.5	
weaving plant machinery(Rivatex factory)								various	7.5	
fabric processing machinery(Rivatex factory)								various	7.5	
Tailoring machinery								various	7.5	

Source: Global Development Solutions, LLC.

Table 6: Topics and skills training categories (Number of trainers)

	Univ. of Dedan Kimathi	Mascal School of Design	Tech. Univ. of Kenya	Moi Univ.	Tech. Dev. Center
Sewing tools and equipment	1		1		
Spinning				1	
Weaving				1	
Textile fibres	1		1	1	1
Textile exploration		1			
Pattern drafting	1	1	1		1
Fashion design	1	1	1		2
Fashion marketing		1	1		
Design development		2	1		
Apparel making	1		1	1	1
Clothing construction		1	1		
Industrial engineering				1	

Limited number of training activities reflecting current production trend in Kenya

High concentration of training activities in fashion/design rather than physical production of textiles and garments

Source: Global Development Solutions, LLC.

Because of this mismatch (Table 6), the production skills which are key to the sector are not supplied, and the graduates of training institutions are not readily employed. Fashion design is still a very niche occupation in Kenya, particularly given that globally, apparel retail companies prefer to do their own fashion design in-house and send these designs to manufacturers to be produced.

For further reference, Annex 2 details major training courses, certificates, and diplomas offered by selected training institutions.

4.3 Equipment and Technology

Equipment and technology are an integral part of the productivity of the textile and apparel sector. A small sample of firms was surveyed regarding equipment maintenance, spare parts, and equipment upgrading. Responses highlight the old age of equipment, the urgent need to upgrade it to improve productivity, and the difficulties firms face in carrying out the needed upgrades.

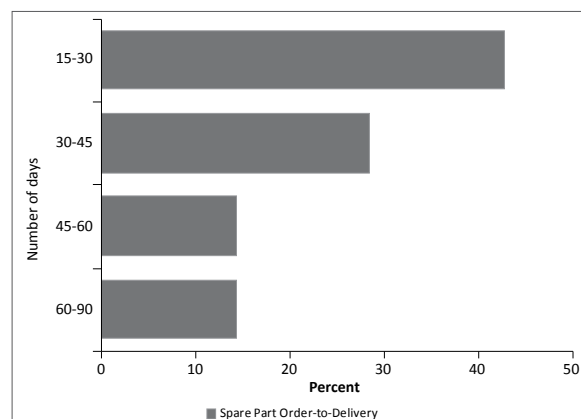
Equipment maintenance and spare parts

Among textile manufacturers surveyed, half of them regularly scheduled equipment maintenance while the other half performed maintenance on an ad hoc basis. Respondents considered spare parts

to be competitively priced, but noted that spare parts were no longer available for old, outdated equipment. Order-to-delivery time for spare parts in the textile sector ranged from 30-60 days.

Among apparel manufacturers, most conform to a regular maintenance schedule. Respondents feel spare parts are not available locally and have to be imported from countries where the quality is considered good. While imported spares are readily available, order-to-delivery time ranges from 15-90 days (Figure 22) due to cumbersome customs clearance.

Figure 22: Average number of days between order and delivery of spare parts (Apparel)



Source: Global Development Solutions, 2014.

Both textile and apparel manufacturers found tariff rates on spares to be excessively high, particularly because customs typically charges tariff rates for finished rather than intermediate goods (25 percent tariff rate instead of the 10 percent tariff rate category). Since the surveys were conducted for this report, the tariff on spare parts has thankfully decreased to 0 percent.

Equipment upgrading

Textile firms reported that information regarding replacement equipment is generally available. The primary sources of information used by textile firms to make equipment purchasing decisions are the Internet and sales and marketing agents. Firms are not looking for state of the art technology and equipment, and tend to look instead for equipment and technology from one or two models prior, since these prices are often heavily discounted. Price is a large factor in the decision to buy, as financing for large equipment is expensive and difficult to access. This is reflected in the fact that some Kenyan millers continue to operate equipment that is more than 38 years old. For smaller, minor replacements, finance was not found to be a problem. Order-to-delivery time for minor replacements was 45-60 days, while major pieces of equipment took 90-120 days.

Apparel firms reported that information regarding replacement equipment is easily accessible. The primary source of information used by apparel firms to make equipment purchasing decisions is personal contacts, followed by the Internet. Two thirds of firms feel equipment financing is expensive and difficult to access, which discourages upgrading of

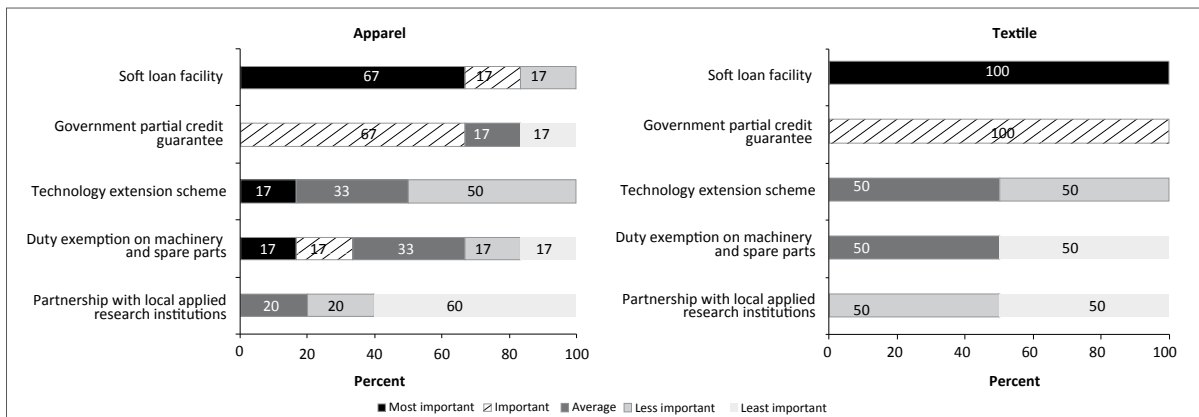
equipment. Order-to-delivery time for equipment is generally between 90-120 days.

A firm’s decision to upgrade equipment can be influenced by a variety of factors. Textile and apparel manufacturers view access to soft loans and government partial credit guarantees as the most important factors influencing this decision, while they view partnerships with local applied research institutions as the least important factor. Technology extension schemes, which have been proven internationally to be effective mechanisms for technology upgrading, are perceived as average in terms of influencing factors.

Replacement of old equipment would benefit firms in two ways: firms, it would offer potential capacity improvement based on installed capacity ranging from 100-1,567 percent. Second, it would result in potential energy savings between 4-26 percent, and potential cost savings ranging from 10-50 percent per annum. Importantly, for these improvements in capacity to happen, equipment upgrading needs to take place hand-in-hand with skills training.

Most textile and apparel companies operating in Kenya have not conducted thorough energy audits; given the old age of equipment, this constitutes a missed opportunity. Preliminary assessments indicated the largest energy and cost savings would be from converting old heavy fuel oil (HFO) boilers to an efficient biomass system. The payback period for the various possible energy investments ranges from two months for fixing compressor leaks to 47 months for switching to light weight spindles.

Figure 23: Perceived importance of various factors in the decision to upgrade equipment



Source: Global Development Solutions, LLC.

Table 7: Capacity improvements associated with textile equipment upgrading

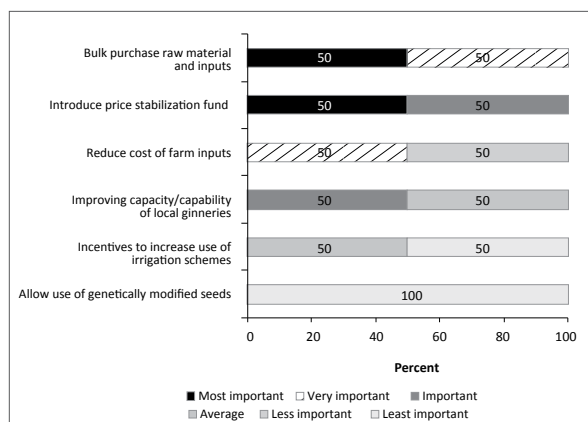
Capacity improvements (est. with 38 year old equipment)	
Warper Machine Ezd	100%
Sizing Machine –Sucker Lc3	400%
Folding machine	150%
Packing machine	167%
Carding machine	300%
Drawframes	380%
Speed frame	355%
Ring frames	1,567%
Twister	100%

Source: Global Development Solutions, LLC.

4.4 Raw Materials for Processing

The Kenyan textile industry faces an inadequate supply of locally produced cotton, and that which is available is of poor quality: 93 percent of cotton is imported to meet Kenya’s quantity and quality demands.²¹ This means the majority of export-quality fabric manufactured in Kenya is made from imported fibers due to the poor quality and high trash content in local lint. The implication is that the textile sector in Kenya has to choose between the high-cost of imported material and the low-quality of local fiber which requires additional processing. This is important to apparel manufacturers because they have to choose between the long order-to-delivery times for imported fabric which limits the

Figure 24: Relative importance of various factors related to access and supply of quality raw materials



Source: Global Development Solutions, LLC.

²¹ Kenya Association of Manufacturers (KAM), November 2013.

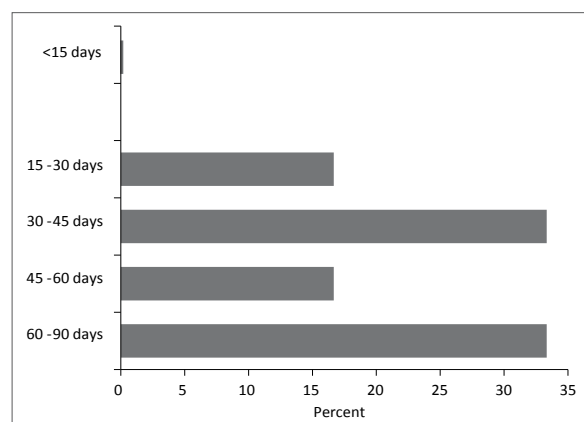
market segments in which they can compete, or “faster” local fabric that is expensive and of varying levels of quality.

Textile firms were asked to rank the relative importance of several factors in ensuring affordable and sufficient supply of quality raw materials and inputs for processing. Firms prioritized the ability to make bulk purchases of raw material and inputs and the establishment of a price stabilization fund to counter-act cotton price volatility. As least important, they viewed policy changes such as allowing the use of genetically modified cotton seeds or offering incentives to increase irrigation schemes. These solutions were viewed as being too long-term to revitalize the textile sector.

Textile firms are also concerned about the lack of customs enforcement and capability of the Kenya Bureau of Standards (KBS) to regulate the inflow of inferior products. For example, they encountered spools of thread imported from China labeled 5,000 yards which only contained 4,500 yards of thread.

If more local fabric were available—at an acceptable price and quality—, apparel manufacturers would purchase it.²² Today, many apparel buyers designate or provide manufacturers with imported fabrics for quality assurance purposes. Buyers typically secure a competitive bulk purchase price for fabric from

Figure 25: Average time elapsed between order and delivery of imported fabric



Source: Global Development Solutions, LLC.

²² Kenya currently produces less than 12 million m² of woven fabric per year, against a market demand of approximately 171 million m². Taking into consideration that textile mills are operating at about 45 percent capacity, even if all textile factories currently operating in Kenya were to operate at 100 percent capacity, this would produce 26.7 million m² of fabric, which is only 15.6 percent of the total local market demand. In this regard, even with upgraded equipment and technology, fabric demand by local apparel companies is sufficiently large that there is no threat of excess capacity in the foreseeable future.

India, Hong Kong, China, Bangladesh, Pakistan, or Taiwan. While Kenyan apparel manufacturers feel that the quality of imported fabric is either above average or very good, long order-to-delivery times (Figure 25) restrict them from competing in the higher margin, fast-fashion segment of the market.

Demand for locally produced fabrics (using imported threads) will be spurred by the extension of AGOA until 2025 and the decrease in electricity prices. If incentives to upgrade equipment and technology are made available, textile firms could respond to that demand and apparel manufacturers would have shorter order-to-delivery times for fabrics.

4.5 Access to Domestic and International Markets

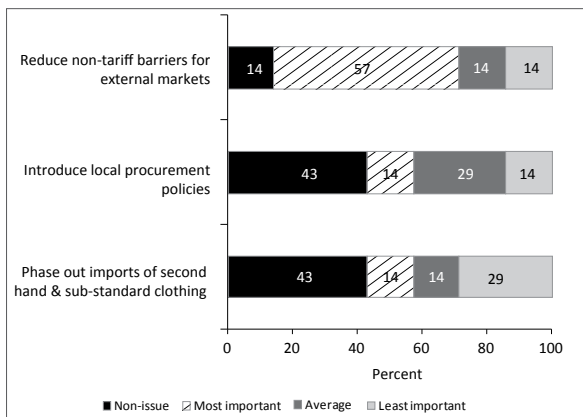
Market access by apparel and textile firms is not as easy as it might seem given AGOA. For non-EPZ firms, access to the domestic market is difficult because the influx of second-hand clothing renders the market minuscule. Public agencies, which could be very large customers, primarily import to fulfill their needs. International safari tourists are a predictable customer base, but relatively few repeat visitors and declining tourist numbers means a shrinking number of the same, standard products continue to sell. High-end Kenyan fashion designers sell items to a niche local customer base and have *ad hoc* agreements with international buyers. For EPZ firms, AGOA’s late renewal represented a major source of market uncertainty and could have postponed investment in marketing, technology, and training, among others.

When asked what measures they thought would help expand market opportunities (Figure 26), apparel and textile firms indicated that reducing non-tariff barriers for external markets would have the greatest impact. The introduction of local procurement policies is not reported to be important for EPZ companies engaged in cut-and-make manufacturing (CM), but is an important consideration for both EPZ and non-EPZ companies seeking to diversify their products and markets. Addressing the influx of second-hand clothing and counterfeit products is a major concern for non-EPZ companies. For example, it is said that counterfeit products made in China and Turkey using Kenyan producers’ labels come into the market and are sold at 20-30 percent of the original product price.

In order to expand market opportunities, firms reported customs regulations were restrictive—especially given the current low quality of service offered by customs officials—and government incentives were insufficient (Figure 27).

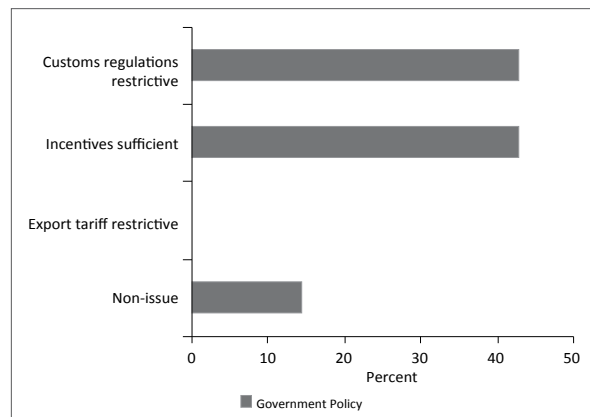
Many Kenyan producers are seeking to diversify their export markets (43 percent) and product mix (29 percent) in order to increase their market opportunities (Figure 28). They have difficulties doing so because long order-to-delivery times, poor labor skills, outdated equipment and high electricity prices restrict them to the high-volume, low-margin market segment. To successfully diversify and increase market opportunities, those issues must be addressed.

Figure 26: Relative importance of various factors in increasing domestic and foreign market opportunities



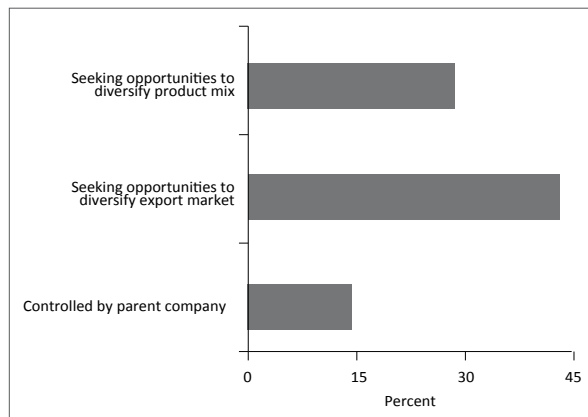
Source: Global Development Solutions, LLC.

Figure 27: Appraisal of government policies on the expansion of market opportunities



Source: Global Development Solutions, LLC.

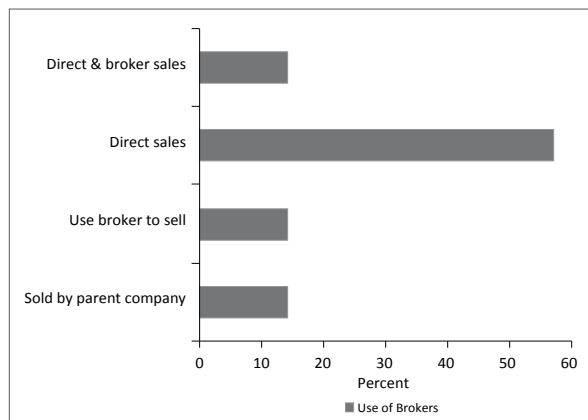
Figure 28: Perceptions of market opportunities among Kenyan textile and apparel producers



Source: Global Development Solutions, LLC.

With regard to marketing outreach as a strategy to expand opportunities (Figure 29), buyer or parent companies handle marketing for EPZ companies that practice CM. Otherwise, the primary source of marketing is through personal contacts, but many apparel manufacturers lack access to both market opportunities and sources of information on market opportunities. This lack of access is reflected in the high percentage of direct sales reported in Figure 30.²³

Figure 30: Party responsible for managing sales of textile and apparel products in Kenya

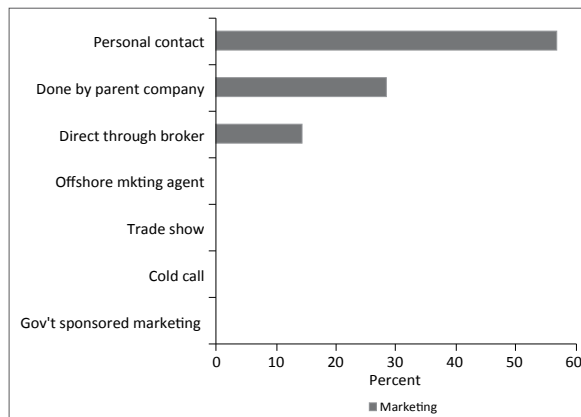


Source: Global Development Solutions, LLC.

Given the benefits resulting from AGOA, most Kenyan producers view their products as highly competitive in the market. In the absence of AGOA, however, the apparel sector is not likely to survive regional and global competition.

²³ Independent apparel companies (not linked to a parent company) that rely on direct sales tend to only have a few buyers through which apparels sold. The limited number of buyers is not by choice, but reflects the lack of access to market information about opportunities to sell to other potential buyers.

Figure 29: Marketing sources for textile and apparel companies in Kenya



Source: Global Development Solutions, LLC.

4.6 Chapter Summary

- This chapter highlights critical constraints faced by textile and apparel manufacturers in Kenya. These constraints explain why Kenyan products are relatively expensive and take a long time to market, limiting the market segments in which Kenya can compete to the high-volume, low-margin segments.
- Within three years, many producers/ investors currently operating in China will need to diversify their investments into countries with cheaper labor and other input costs. Although the window of opportunity for Kenya to attract investors is now, some of the constraints facing the textile and apparel sector may prompt investors to think twice about Kenya.
- Kenya’s business environment is not one in which it is easy to operate. It is characterized by high electricity prices, limited access to finance, poor roads, challenging logistics, and for non-EPZ companies, complex regulations.
- High labor costs, coupled with training systems that are not fit for purpose, render Kenyan labor productivity the lowest among comparator countries. The industry also faces a skills gap along the entire value chain, and a pervasive lack of practical knowledge of modern equipment, tools, and production methods. Managerial staff are difficult to find, rendering the use of expatriates very common.

- Firms do not perform training needs audits, which limits the information they have to conduct targeted training. In addition, the Training Levy firms must pay every month is not perceived to increase the quality and quantity of skills in the market.
- To substantially improve skills of repair and maintenance staff, shift workers, floor supervisors, and administrative workers, training should be tailored for factory-specific production needs. Multi-skilling in particular should be promoted.
- There is limited interaction between training institutions and the textile and apparel sector. Institutions suffer from insufficient funds for programs and students, lack of modern equipment and material, low capacity levels of training staff, low enrollment, and a mismatch between manufacturers' needs and training institutions' focus on fashion and design.
- Equipment and technology are an integral part of the productivity of the textile and apparel sector. Yet, outdated equipment is pervasive across the sector and firms face major difficulties in carrying out the needed upgrades.
- The textile industry faces an inadequate supply of locally produced cotton, and that which is available is of poor quality. Textile firms must choose between the high-cost of imported material and the low-quality of local fiber which requires additional processing. As a result, the majority of export-quality fabric manufactured in Kenya is made from imported fibers. This is important to apparel manufacturers because they have to choose between long order-to-delivery times for imported fabric or "faster" local fabric that is expensive and of varying levels of quality. If more local fabric were available—at an acceptable price and quality—, apparel manufacturers would readily purchase it.
- Market access by apparel and textile firms is not as easy as it might seem given AGOA. For non-EPZ firms, access to the domestic market is difficult because of the influx of second-hand clothing and the fact that most public agencies import to fulfill their needs. For EPZ firms, AGOA's late renewal represented a major source of market uncertainty, and likely postponed investment in marketing, technology, and training, among others.

Strategy and Recommendations

A table in Annex 3 summarizes the top constraints and sub-constraints highlighted in this Chapter.

Given the current condition of the textile and apparel sectors and the constraints outlined previously, continuing to play in the high-volume, low-margin space created by AGOA, with no improvements in macro or firm-level competitiveness, would not bode well for Kenya's apparel sector. There is a need for a paradigm shift that targets new product segments that match the industry's current cost structure and time-to-market, and a need for an overall effort to markedly improve Kenya's productivity, delivery times, and ability to attract new investment.

This chapter briefly outlines the proposed strategy for the textile and apparel sector and details the corresponding policy recommendations.

5.1 Target Market Segments

Global green market

Globally, consumers are increasingly demanding 'green products'. Among the premium and niche market segment, green manufacturing is considered to be the fastest growing. The green apparel consumer market is estimated at 15-24 percent of developed markets' consumers, with an annual market size of US\$2.7 billion in the United States alone.

This represents a significant opportunity for Kenya, a country whose competitiveness in the low-margin, high-volume space is weak. Shifting into the high-margin, low-volume green niche requires a two-pronged response: reconfiguring production to make it more energy efficient – generating substantial cost-savings in the process – and then marketing towards green buyers in the United States and EU. Kenyan firms can participate in green production by improving energy efficiency at the factory level and by switching from thermal fuel inputs to biofuels such as bio-briquettes.

Importantly, other countries in the region have

not taken advantage of the green opportunity, and Kenya is well-poised to act now in order to gain the first-mover benefit from this growing and lucrative market.

Small batch market

With the reduction in global costs of production and improvements in logistics and information flows, buyers are increasingly requiring smaller order runs—often of premium products—than many large scale producers are not configured to supply.

While small batch production may not be ideal for companies in the EPZ that are organized to respond to orders with long production runs, small batch markets offer opportunities for smaller, local firms capable of responding to small batch sizes, but on the higher end of the quality spectrum. For example, there are a number of SMEs currently operating in the Kenyan apparel sector in small batch production that are producing high quality products for the tourism sector. Such companies are ideal candidates to exploit the growing small batch market in the EU and in the US where premium prices can be as much as three times the price of a standard product.

At a minimum, targeting this segment requires higher levels of quality, both in terms of materials and manufacturing, and improved access to markets—a concerted effort to find and sell to small batch buyers.

5.2 Recommendations

To deliver on the strategies suggested in this report, recommendations focus on (1) developing access to new market opportunities where competition is based on factors other than cost alone, allowing Kenyan firms to compete despite their higher cost of doing business. The recommendations also prioritize (2) new investment in equipment and technology to increase efficiency and reduce costs, but also to cater to growing consumer demands for environmentally sustainable production processes.

Recommendations also suggest that Kenya focuses on (3) building skills to address productivity issues, at the managerial, technical, and factory floor level—to compensate for its relatively higher wages—, as well as to cater to higher quality requirements of non-commodity market niches. Finally, developing and supporting such interventions will require institutions to play a leadership and convening role on issues specific to the textile-apparel sector, ensuring public and private sector collaboration, and coordination among different private actors. Such an institution does not exist today. An (4) institution can be created such that it provides a voice for the sector internally, plays a leadership role in developing strategic initiatives to build the textile-apparel sector, and ensures that Kenya's sector dynamically changes in line with the ever shifting textile-apparel global market.

Recommendations regarding the business environment—electricity, roads, access to finance, logistics, and complex regulations—are not included because action and investments in these areas are already underway (particularly in power,

roads, logistics, and regulations). Also, given the emphasis of this strategy on quick wins over long-term structural changes (such as growing the Kenyan cotton sector), the recommendations do not specifically address the insufficient supply of quality raw materials for processing that textile-apparel firms face.

Annex 6 provides a detailed action plan to implement the recommendations in this chapter.

INSTITUTIONAL SUPPORT

The textile and apparel sectors are considered pivotal sectors for the growth of the Kenyan economy; yet unlike competing producer countries, Kenya does not have a specialized local institution dedicated to developing, supporting, and marketing the sectors. The African Cotton & Textile Industries Federation (ACTIF) is based in Nairobi, but it covers all of Africa and its resources are already stretched with requests on a daily basis. A sector board for textile and apparel already exists within KAM, but as an institution, KAM must lobby for all manufacturing and not just for textile and apparel.

Table 8: Textile and apparel recommendations

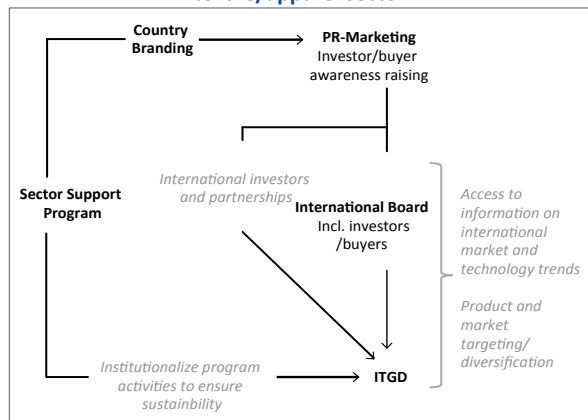
Institutional Support	Skills to address productivity	Investment in equipment and technology	Access to new markets
Institutionalize support for the textile and apparel sector through a dedicated institute	Shift to on-site skills development and encourage training audits	Encourage firms to conduct factory level energy audits to see how much energy (and money) could be saved through equipment upgrading	Develop Kenya's brand image as a hub for green textile and apparel production
	Encourage multi-skilling for factory-floor workers and mentorship & coaching programs for mid-level management	Develop sector-wide promotion program to encourage firms to upgrade technology and equipment through concessionary financing, and support them in drafting business plans to do so	Sponsor trade shows targeted at the textile and apparel sector to generate B2B connections
	Improve the efficiency of the Training Levy	Promote green certifications among firms, to provide credibility to international buyers	Sponsor tours for Kenyan firms to see buyers and producers
	Impose term limits on expatriate work permits	Discontinue the energy subsidy or condition it to energy audits and equipment upgrading in participating firms	Leverage public sector procurement
	Foster local partnership between firms and research institutions, potentially through a center of excellence		

Source: Global Development Solutions, LLC.

Also, a few major companies have chosen not be KAM members.

It is recommended that the MOIED promote the creation of a private institution—the Institute for Textile and Apparel Development (ITAD)—to specifically support these two sectors. Such an institution would help ensure sustainable support to the sector and would also help create a platform to engage major buyers and investors in the development and growth of the sector in Kenya. Importantly, the ITAD would help drive the skills

Figure 31: Institutionalizing support to the textile/apparel sector



Source: Global Development Solutions, LLC.

agenda in the textile-apparel sector to improve labor productivity.

Setting up an Institute for Textile and Apparel Development will require stakeholders to develop a draft framework for the organizational mandate and structure of the ITAD. Going beyond just the Kenyan manufacturers, it would be best practice to invite foreign manufacturers to become sponsors and have key sector leaders from around the world sit on the board. Examples of similar sector-specific support organizations and programs for the textile and apparel sector can be found in Annex 4.

SKILLS TO ADDRESS PRODUCTIVITY

Continuous and rapid design and material change have become common characteristics of the global textile and apparel industry. As such, the ability to manage human resources, and update and upgrade the skill base of the labor force has become a defining feature of successful and competitive textile and apparel sectors. While technology and equipment upgrading is important for the implementation of the proposed strategy, the ability of the labor force

to keep up with changing demands of the market is equally important.

In Kenya, a traditional approach to training through local training institutions has failed to keep up with the pace of change required to remain competitive in the textile and apparel sectors. In this regard, in order for the proposed strategy to elevate the competitive position of Kenya’s textile and apparel sectors, a more nimble and dynamic delivery mechanism is required to respond to market changes. While basic skills training can continue to be performed by existing training institutions, the types of skills and knowledge required to support rapid sustainable growth, particularly in niche markets, needs to be fostered. In order to do this, the focus of skills development will need to shift away from formal, institutionalized training to on-site skills development where managerial, product, and task-specific training can be realized.

On-site training is optimal for the apparel and textile sector because it allows for more targeted and relevant training. It allows the training to focus on specific items that are causing issues, and enables the company and its employees to discuss real and current challenges faced on the factory floor. On the job training is also convenient since it can fit around the location and working schedule of the staff.

For factory-floor workers, Kenya’s textile-apparel firms should be encouraged to implement training audits to help them identify specific training needs. If possible, a voluntary training audit scheme should be introduced as a part of the ITAD program to help managers of textile and apparel companies identify and develop in-house training programs. Multi-skilling should be encouraged over equipment-specific training, and employees should be tested and certified at the end of the training. The latter serves both to ensure mastery of specific competencies and as an incentive to the employee.

For mid-level management, the proposed ITAD should develop partnerships among buyers and key investors and leading textile and apparel training institutions from around the world to develop internships and mentoring programs for current and future Kenyan managers. This will help enable a smooth transition between foreign and local management.

Table 9: Examples and benefits of various types of training levy schemes

Scheme	Countries in use	Benefit delivery
Revenue-raising scheme	Bahrain, Brazil, Morocco, Turkey	Revenue used to build up national training systems to provide pre-employment and in-service training courses
Levy-disbursement schemes		
Payroll tax exemption scheme	Cote d' Ivoire, France, Korea	Firms reduce or eliminate levy obligations by amount of training provided or purchased
Training cost reimbursement scheme	Kenya, Malaysia, Nigeria, Singapore	Firms paid grants based on cost incurred for designated training
Levy-grant scheme	South Africa, Hungary, Tanzania, UK	Grants paid to firms conditional on criteria met once a systematic training approach is adopted

Source: *Training Levies: Rationale and Evidence from Evaluation*, Amit Dar, Sudharshan Canagarajah, Paud Murphy, December 2003.

Improve the efficiency of the Training Levy

The MOIED should consider working closely with the Directorate of Industrial Training and the National Industrial Training Authority (NITA) to improve efficiency of the training levy, particularly to redefine conditions for approval and timing of rebates.²⁴ Reimbursements are reported to take a long time, making companies reticent to train.

Once the conditions for approval and timing of rebates are redefined, a range of specific training needs that could be covered by the training levy should be identified, as should the specific coverage of the training levy. The table below shows different models of training levies employed by various countries and their benefits.

Impose term limits on expatriate work permits

For mid-level and upper management, the range of specific skills not available in the Kenyan labor market should be identified, and evidence should be provided regarding the absence of this skill base in Kenya. Once the former has been identified, the government should ensure the list of expatriate labor required matches that which is listed under the training levy scheme. In addition, companies that contract expatriate labor should be required to utilize the training levy to mentor local staff with the expatriate hires for the entire duration of the work permit.

²⁴ Under the Industrial Training Act, all employers are required to register with the Department of Industrial Training and to pay the industrial training levy, currently at the rate of Sh50 per employee a month.

Concurrently, the MOIED should negotiate with the Department of Immigration Services to reduce the cost and time required to issue work permits for the identified skills categories. For example, they could allow work permits to be issued within 30 days of request if the qualified individual is on the list of skill needs. If work permits are not issued within 30 days, then the permit would automatically be validated effective immediately and without charge.

To ensure Kenyans are eventually at the helm, term limits on the recruitment of expatriate staff should be introduced on the condition that a sufficient skill base can be developed using the training levy within the time frame provided for the work permit.

Once the ITAD is established, the responsibility for identifying new skills and continuously updating the authorized, expatriate recruitment base should fall under ITAD.

Foster local partnership between firms and research institutions, potentially through a center of excellence

Partnerships between local applied research institutions and textile-apparel companies have been successful for the development of the industry in a number of countries. The lack of interest and appetite for such partnerships in Kenya was understandable given uncertainties regarding the future of the sector. As the sector strengthens—particularly with the renewal of AGOA—partnerships with applied research institutions will become increasingly more important to maintain a competitive edge at the production, management,

and product levels. This can be encouraged either through competitive and open grant funding or through an investment in a center of excellence. The latter is currently being discussed with possible funding from UNIDO and with a tentative location of the Athi River EPZ.

As an example, the American Textile Partnership (AMETEX) was formed as an alliance between research institutions and the private sector to develop high speed, automated cutting and sewing systems and sensors to increase productivity, reduce worker health risk, and improve quality control.

INVESTMENT IN EQUIPMENT AND TECHNOLOGY

Equipment in textile and apparel firms is outdated and consumes a significant amount of electricity. Investments in equipment and technology are urgently needed to increase efficiency and reduce costs, and also to cater to growing consumer demands for environmentally sustainable production processes. Such investments—particularly those related to energy efficiency—are privy to a range of concessionary development and commercial financing. The recommendations herein lay out a path the MOIED, KAM, and others can follow to help the industry upgrade its equipment and technology.

Through a partnership between the MOIED and KAM, as part of KAM's SUNREF project (Sustainable Use of Natural Resources and Energy Financing), significant greening opportunities exist for manufacturers. SUNREF covers 70 percent of the cost of a factory audit, which recommends changes specifying potential energy and cost savings. Free business plan assistance is then provided to assist with applications for concessionary loans, which carry interest rates of around 5 percent offered by specific banks engaged by SUNREF. In conjunction with the greening of production, the program facilitates matchmaking with potential buyers.

Given the conditions of the SUNREF program, as a first-step in the green / technology upgrading direction, the MOIED should encourage firms to conduct factory-level energy audits to see how much energy (and money) they could save by upgrading. As this is being done, the MOIED should create a baseline database of the industry's

energy consumption to monitor cost and energy savings. As per the SUNREF program, the MOIED should then encourage firms to seek free business plan assistance and develop a standard business plan package to support those firms which apply for concessionary financing. Finally, a sector-wide promotion program should be developed to increase firms' knowledge about energy efficiency and the different ways it can benefit their factories and sales.

Part of the rationale behind the green manufacturing strategy is that it is a win-win strategy. Equipment upgrading to ensure energy efficiency is logical on both a cost basis and on a sales basis. To provide buyers with assurance that 'greening' has in fact happened, Kenyan firms should seek to attain certifications that provide credibility of their efforts. There are a multitude of organizations that offer green certifications for buildings, manufacturing operations, and business management, such as Leadership in Energy & Environmental Design (LEED), Green Business Bureau, Green Business Certification, Institute for Green Business Certification, and Green Plus Certification.

Ideally, the ITAD or the Ministry initiates dialogue with potential buyers to see which type of certification would have the most impact on attracting consumers in the green market segment. If possible, the certification process itself could then be included as a part of the business plan firms use to apply for concessionary financing, such that the time and resources required for certification can be covered by the cost of the loan. The latter would help ensure that beneficiaries complete the certification process as a part of their equipment and technology upgrading.

Importantly, as this report was being developed, the MOIED decided to provide textile and apparel companies with a subsidy on the cost of their electricity through a program dubbed "Electricity Cost Reduction Facility". The purported objective of the subsidy was to cushion companies from very high electricity prices and to stimulate employment. The majority of companies receiving the subsidy were located inside the EPZ. The total amount, specific criteria, targets, and exit strategy for the electricity subsidy were not made public.

The World Bank believes the subsidy did not meet its purported objectives and agrees with the government's decision to discontinue it. Since the majority of the companies which benefitted from the subsidy manufacture apparel, electricity was not a major cost for them. As such, the subsidy was unlikely to have a direct impact on employment. Also, since the price of electricity came down substantially in 2015, the impact of the subsidy was felt even less. While the subsidy was ongoing, the World Bank had suggested it at least be conditioned to an immediate energy audit in participating firms and to subsequent equipment upgrading through the mechanisms described previously. The latter would have reduced the public cost of the subsidy and enabled to the Ministry to show concrete results from it. Thus, discontinuing the subsidy is a better policy choice.

ACCESS TO MARKETS

Increased access to international and domestic markets is a fundamental need for the textile-apparel sector. With the renewal of AGOA, targeting international buyers will be increasingly important as they will be looking to source production from Africa. In this regard, sponsoring trade shows and tours for Kenyan firms to see buyers and producers will enable firms to generate much needed B2B connections. The proposed Institute (ITAD) can play an integral role in this. Beyond AGOA, developing Kenya's image as Africa's Hub for Innovation and Green Production will help position Kenya to cater to the green and small batch markets. Finally, leveraging public sector procurement will help firms increase the quality of their products and their capacity to cater to demanding clients.

Regarding the second-hand market, the World Bank believes its benefits in terms of employment generation and lower cost of living for all Kenyans outweigh its costs in terms of a smaller domestic market for apparel producers.

Develop brand image as hub for innovation and green production

Kenya needs to develop a unique country and brand image which removes the time element from the competitive equation, and introduces products which regional competitors are unable to produce or which they lack the strategic vision and capability to develop.

Coupled with changes made on the factory floor and efforts to seek 'green' certification to ensure external credibility, Kenya should begin leveraging its current image as an ICT hub to rebrand itself as a Hub for Innovation and Green Production. First steps in this direction are the development of a media package that targets consumers in the US and the EU, and when the ground work has been laid, extending an invitation to major buyers and producers to showcase innovation and green production schemes. As appropriate, the branding campaign could include key corporate social responsibility (CSR) and health, safety, and environment (HSE) messages which are popular with American and European consumers.

Annex 5 highlights key characteristics for developing a hub for innovation and green production.

Leverage public sector procurement

For non-EPZ companies, the market for uniforms worn by the Kenyan military, police, and other public service agencies represents an important opportunity to expand local sales and employment. According to domestic-oriented apparel producers, few government agencies currently purchase uniforms from Kenyan manufacturers. In this regard, it is recommended that the MOIED move towards the implementation of the *Buy Kenya, Build Kenya program*,²⁵ to ensure public service uniforms are purchased from local manufacturers.

To help avoid price fixing, local suppliers should be required to supply uniforms priced within 20 percent of the price of currently imported uniforms of equal quality. In addition, the ITAD should work with public agencies to develop design and functional specifications for the uniforms, such that they are transparent to all interested local companies. Feedback loops should be incorporated into the contracts awarded such that the manufacturers receive feedback on their products, and products that do not meet specifications are returned for reworking. Finally, a sunset clause is recommended where import restrictions are lifted after five years, after which public service agencies have the option of importing all uniforms.

²⁵ The Ministry of Industrialization and Enterprise Development is in the process of finalizing the Buy Kenya, Build Kenya policy, which is seen as a way of creating markets for local products and services. The policy aims to reduce government and private expenditure on imported products and services and reduce the unemployment rate by supporting the local economy to grow.

5.3 Risks and Benefits

All strategies entail risks and benefits. The benefits of pursuing the green and small batch markets are clear: increased sales, larger profit margins, and a more sustainable source of competitive advantage—one that is not based on costs and where the time element is less important. The risks are primarily two: first, that the green and small batch markets may not be responsive, may not be ready to buy from Kenya, or may not be convinced about the value proposition Kenya offers. Second, that the time invested in pursuing the green and small batch segments has an opportunity cost: the time could have instead been spent growing existing market segments to take advantage of an AGOA renewal. These are choices each firm must weigh and considerations the government must keep in mind as it goes forward.

On the benefit side, the recommendations aim to improve overall competitiveness in the textile and apparel sector and move a portion of the industry towards new niche product segments. Following these recommendations will help all producers and not just those gearing up for the green and small batch markets. At the heart of the recommendations is a push to increase competitiveness, regardless of the market segment.

On the risk side, a few of the recommendations are very specific to green production and small batch, such as the brand image campaign to market Kenya as a hub for innovation and green production. In that case, if the proposed market segments do not materialize as expected, efforts spent advertising Kenya as a hub will be largely lost. The brand image campaign may result in more name recognition and a greater awareness of Kenya as an apparel manufacturer—which is useful—but without any significant premiums paid for its green and small batch producers.

ANNEXES

Annex 1: Performance of Kenya's apparel sector as compared to competitors

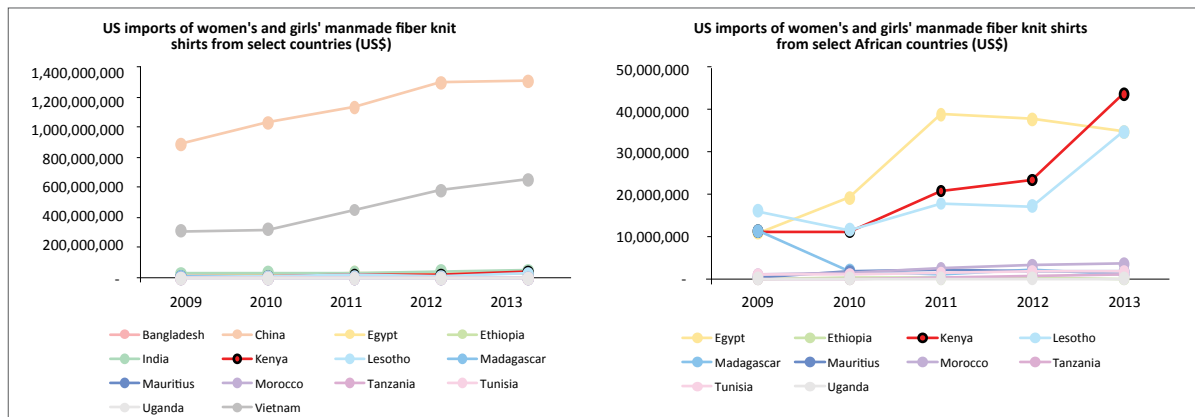
Kenya exports the following apparel products to the US: ²⁶	
<ul style="list-style-type: none"> • Cotton playsuits, sun-suits, etc. • Babies' apparel/clothing accessories, cotton • Other men's & boys' coats, cotton • Women's & girls' cotton coats • Cotton dresses • Men's & boys' knit shirts, cotton • Women's & girls' knit shirts/blouses, cotton • Men's & boys' cotton shirts, not knit • Women's & girls' cotton shirts/blouses, not knit • Cotton skirts • Cotton sweaters • Men's & boys' cotton trousers/breeches/shorts • Women's & girls' cotton trousers/slacks/shorts • Cotton dressing gowns, robes, etc. • Cotton underwear • Other cotton apparel • Women's & girls' wool coats • Wool knit shirts/blouses • Other wool apparel • Other men's & boys' man-made fiber coats • Women's & girls' man-made fiber coats • Manmade fiber dresses • Men's & boys' man-made fiber knit shirts 	<ul style="list-style-type: none"> • Men's & boys' not-knit man-made fiber shirts • Women's & girls' not-knit man-made fiber shirts/blouses • Manmade fiber skirts • Men's & boys' man-made fiber trousers/breeches/shorts • Women's & girls' MF slacks/breeches/shorts • Man-made fiber bras/other body support apparel • Man-made fiber underwear • Other man-made fiber apparel • Women's & girls' silk coats • Silk dresses • Women's & girls' silk not-knit shirts/blouses • Silk skirts • Men's & boys' silk trousers/breeches • Women's & girls' silk trousers/breeches • Silk nightwear/pajamas • Other silk apparel • Women's & girls' coats, silk/veg blends • Dresses, silk/veg blends • Skirts, silk/veg blends • Sweaters, other non-cotton veg fibers • Trousers/breeches/shorts, silk/veg blends • Other silk/non-cotton veg apparel

The following charts illustrate Kenya's export performance as compared to selected competitors in the top four apparel exports.

Women's Shirts of Knit Man-made Fiber (MMF): Kenyan exports of women's shirts made of MMF have increased dramatically in the past five years, growing at a CAGR of 40 percent between 2009 and 2013. Although Kenya has pulled into the lead among its African competitors such as Egypt and Lesotho, its market share in the US (the primary destination of clothing exports) is still dwarfed by China and Vietnam. Moreover, while Chinese exports did not exhibit a large increase between 2012 and 2013 (only 1 percent), the country cannot be deemed as having pulled out of the women's and girls' MMF knit shirts market in such a way that leaves a sizeable gap for Kenya to exploit in the near future.

²⁶ Office of Textiles and Apparel, International Trade Administration, US Department of Commerce, 2014
<http://www.otexa.ita.doc.gov/scripts/tqads2.exe/catpage>

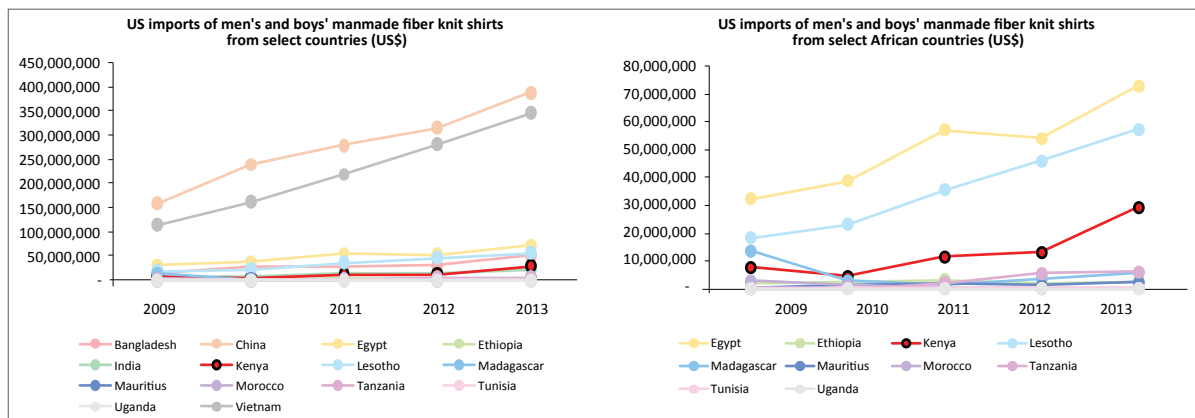
Figure 32: US imports of women’s and girls’ man-made fiber knit shirts



Source: OTEXA, US Department of Commerce, 2014.

Men’s Shirts made from MMF: The value of Kenyan exports of men’s MMF knit shirts knit has increased at a 40 percent CAGR between 2009 and 2013. Among African competitors, Egypt and Lesotho continue to outperform Kenya with similar or greater rates of increase over the same time period. China and Vietnam have vastly larger market shares, with more dramatic rates of increase in dollar value in the past five years.

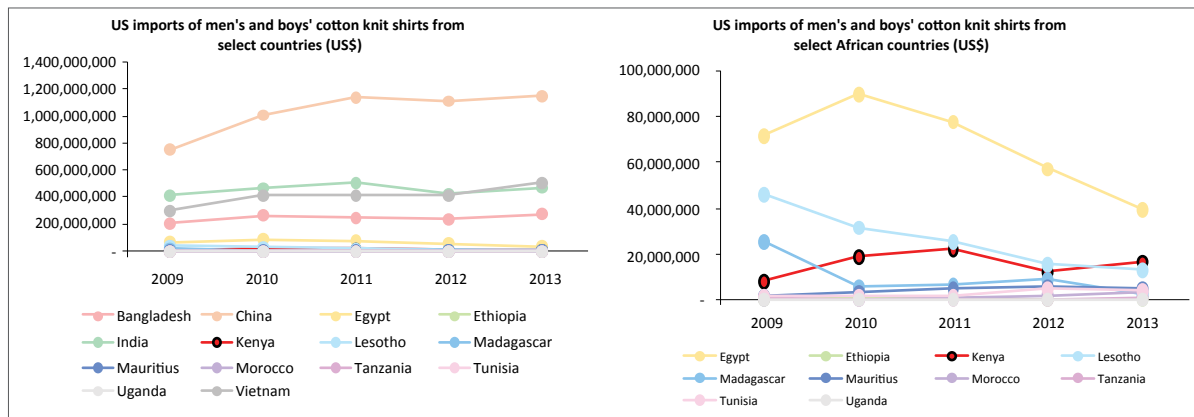
Figure 33: US imports of men’s and boys’ man-made fiber knit shirts



Source: OTEXA, US Department of Commerce, 2014.

Men’s Cotton Shirts: Although the export value of men’s cotton knit shirts from Kenya has fluctuated in the past five years, the 2013 export value has doubled since 2009. Currently on an upward trend compared to 2012, Kenya is poised to overtake regional competitors as Egypt’s export value continues to decrease, with similar downward trends in exports from Lesotho, Madagascar, and Mauritius. Despite this promising regional outlook, exports from Asian competitors continue to dominate the market with no sign of decreasing or levelling off.

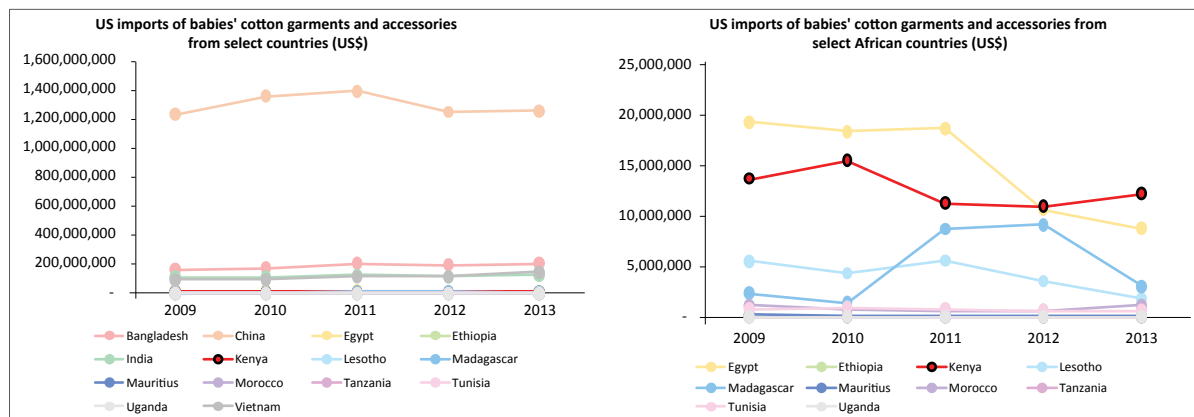
Figure 34: US imports of men's and boys' cotton knit shirts



Source: OTEXA, US Department of Commerce, 2014.

Babies' Cotton Apparel: Following a sharp decrease in the value of babies' cotton apparel from former regional leader Egypt, Kenya has emerged as the leading exporter among its African competitors. Although Asian competitors achieve significantly larger export values and market share as compared to Kenya, their exports show relatively flat growth, with China's exports decreasing since 2011. This trend indicates that there is room in the market for Kenya to increase exports in babies' cotton garments.

Figure 35: US imports of babies' cotton apparel and accessories



Source: OTEXA, US Department of Commerce, 2014.

Annex 2: Training courses, certificates, and diplomas offered by selected training institutions in Kenya

Table 10: Details of relevant training courses offered by institutions in Kenya

Institution	No. of students/ course	Avg. enrollment (%)	Duration (years)	Cost/course (KSh)	Financial aid (Y/N)
Kimathi University					
Diploma in Fashion Design and Interior Decoration	8	40	2	137,537	Yes
Certificate in Fashion Design and Interior Decoration	6	40	1	65,894	Yes
Short courses (new)					
Apparel Making and Fitting			0.5	39,000	
Fashion Illustration			0.17	7,500	
Fashion Accessory Making & Jewellery			0.17	20,000	
Fabric Decoration			0.08	10,000	
Soft furnishing			0.33	26,000	
Interior Decoration			0.25	20,000	
Events Decoration					
Mascal School of Design – Business and Technology Education Council (BTEC)					
BTEC Higher National Diploma	30	6	3	85,000	No
BTEC National Diploma	8	12	1	90,000	No
Technical University of Kenya					
Certificate in Tech. Fashion Design	9		1	57,600	
Diploma in Tech. Fashion Design	23		3	72,000	
Moi University					
Bachelor of Engineering in industrial & Textile Engineering	150		5	40,000	
Masters of Science in Textile Eng.	3		1	200,000	
Master of Science in Industrial Eng.	9		1	200,000	
Technology Development Center (TDC)					
Dip Dress making	10		3	43,500	
Short courses (New)					
Machine training for operators	18		0.08	5,500	
Dress making certificate	2		2	57,600	

Source: Global Development Solutions, LLC.

Annex 3: Summary of constraints faced by the Kenyan textile-apparel sector

Table 11: Constraints faced by the Kenyan textile and apparel sector

Main constraints	Specific sub-constraints
Difficult business environment	<ul style="list-style-type: none"> • Kenya’s business environment is characterized by high electricity prices, limited access to finance, poor roads, challenging logistics, and for non-EPZ companies, complex regulations. • In 2014, electricity accounted for 25 percent and 5 percent of the costs of Kenyan textile mills and apparel manufacturers, respectively, putting Kenyan firms on a fundamentally unequal footing to firms in other countries. • Access to finance is challenging for Kenyan firms due to the high prevailing interest rates and the short time horizons available for loans. • Poor roads and logistics in Kenya impact export businesses which rely heavily on imported inputs. Kenya’s road transport costs are four times the globally competitive rate, and they fundamentally constrain time to market and limit the market segments in which firms can compete.
Low labor productivity and a mismatch in the supply and demand for relevant labor skills	<ul style="list-style-type: none"> • Labor prices in Kenya have increased over the past three years and these costs have not been matched by improved productivity and quality. • Kenyan labor has among the lowest value added per worker among select comparator countries, reflecting poor levels of productivity given current wage rates. • Firms do not perform training needs audits, which limits the information they have to conduct targeted training. In addition, the Training Levy firms must pay every month is not perceived to increase the quality and quantity of skills in the market. • Low firm productivity is partially due to limited availability of qualified staff, especially for managerial positions. • Training institutions suffer from insufficient funds for programs and students, lack of modern equipment and material, and low capacity levels of training staff. Secondary challenges are low enrollment, and the mismatch between manufacturers’ needs and training, largely due to the limited interaction between training institutions and the textile and apparel sector. • The lack of equipment-specific training programs in Kenya hinders multi-skilling of labor.
Difficulties in maintaining and upgrading technology and equipment	<ul style="list-style-type: none"> • Outdated equipment is pervasive across the sector and firms face major difficulties in carrying out the needed upgrades. • Equipment financing in Kenya is expensive and difficult to access. • Most textile and apparel companies have not conducted thorough energy audits; given the old age of equipment, this constitutes a missed opportunity.
Insufficient supply of quality raw materials; coupled with high input costs	<ul style="list-style-type: none"> • Kenya suffers from an inadequate supply of locally produced cotton, and that which is available is of poor quality. • Textile firms have to choose between the high-cost of imported material and the low-quality of local fiber which requires additional processing. • Apparel manufacturers have to choose between long order-to-delivery times for imported fabric or “faster” local fabric that is expensive and of varying levels of quality. • There is concern in the industry regarding the lack of customs enforcement and capability of the Kenya Bureau of Standards (KBS) to regulate the inflow of inferior products.
Challenges in increasing demand in and accessing domestic and international markets	<ul style="list-style-type: none"> • For non-EPZ firms, access to the domestic market is difficult because of the influx of second-hand clothing and because most public agencies, which could be very large customers, primarily import to fulfill their needs. • Firms feel that customs regulations are too restrictive and that Government incentives to expand market opportunities are insufficient. • For EPZ firms, AGOA’s late renewal represented a major source of market uncertainty.

Annex 4: Examples of sector-specific support programs

Table 12: Examples of policy-based, incentive programs to support the textile and apparel sectors

Country	Support Program	Budget	Policy-Based Incentives				
			Tax	Financial	Operational	Fiscal	Institutional
India	Technology Up-gradation Fund Scheme (TUFS)	US\$1.8 billion (2012 – 2017)	X	X		X	
Bangladesh	Technology and Enterprise Upgrading Program	US\$13 million		X	X		
South Africa	Manufacturing Investment Program (MIP), Clothing and Textiles Competitiveness Improvement Program (CTCIP), Production Incentive Program (PIP), Export Marketing and Investment Assistance Scheme (EMIA)	Project specific	X	X	X	X	
Ethiopia	Agriculture Led Industrialization Program	US\$200 – US\$500 million	X	X	X	X	X
	Textile Industry Development Institute (TIDI)	US\$7.9 million (2014/2015)			X		X

Source: Global Development Solutions, LLC (GDS).

1. Technology Up-gradation Fund Scheme (TUFS): Example of Incentives and Benefits (India)

Objectives:

- Access to capital for modernization of the textile industry;
- Technology upgrade;
- Investments in common infrastructure or facilities by industry associations, trusts, or cooperative societies;
- Voluntary retirement scheme (VRS) for restructuring manpower of existing units.

Repayment Period:

- Seven years, including two years of moratorium/implementation.

Eligibility Criteria:

- Existing unit with or without expansion and new units;
- Existing unit can modernize and/or expand with state-of-the art technology;
- New units must set up entire facility only with appropriate, eligible technology;
- Unit can undertake one or more activities in an integrated manner;
- Textile/jute units with 100 percent foreign equity qualify.

Table 13: Incentive and benefits package under TUFs

	Incentive	Benefit
1	Interest rate reimbursement	5%
2	Exchange rate fluctuation coverage	<5%
3	Margin money subsidy	15% -20%
4	Capital subsidy	10% - 25%
5	Investment and working capital	<50% of cost (incl. land, factory, pre-operation expense, margin money for working capital, and equipment)

2. Textiles Industry Development Institute (TIDI – Ethiopia)

Table 13: Incentive and benefits package under TUFs

Vision By 2024 we aspire to be a world-class Institute that enables the Ethiopian textile industry to be competitive in the global market.	
Mission Enabling the Ethiopian textile industry to be competent in the global market by providing sustained investment promotion, consultancy, training study and research, laboratory and marketing support and services.	
Objective To facilitate the development and transfer of textile and apparel industries’ technologies and enable the industries to become competitive and beget rapid development	
Values 1. Problem solving 2. Continuous learning 3. Quality and fast service 4. Priority for human resource	5. Customers are our means of existence 6. Team work for effectiveness 7. Attention for the environment 8. Striving for technology transfer 9. Effectiveness with limited resource

Main Duties and Responsibilities of the Institute

1. Formulate policies, strategies and programs that assist in the facilitation of the development of textile and apparel industries and implement the same upon approval;
2. Collect, analyze, organize and transfer to the sector’s data center and disseminate to users, as may be appropriate, data necessary for the development of textile and apparel industries;
3. Prepare and disseminate project profiles that may be helpful in expanding investment in the textile and apparel industries; conduct feasibility studies for those investors desiring to engage in the sector; follow up project implementation and provide remedies concerning problems encountered during implementation;
4. Advise investors desiring to engage in the textile and apparel industries sector on the selection of technology, negotiation, construction, erection and commissioning;
5. Prepare and conduct practical trainings on technology, technical matters, marketing and management and other tailor made trainings, that assist the development and competitiveness of the textile and apparel industries sector; and issue certificates to trainees;
6. Conduct studies and researches to promote the development of textile and apparel industries;
7. Provide support and consultancy services concerning production process, production planning and quality control;
8. Cooperate with government and private institutions with similar objectives, locally and abroad, and encourage similar co-operations between private institutions;
9. Undertake benchmarking studies that facilitate the development and competitiveness of the textile and apparel industries and assist those conducting similar activity in the sector;
10. Deliver testing services to textile and apparel industries products;
11. Extend support in the creation of input and output linkage;
12. Conduct market study for textile and apparel industries products;
13. Identify technologies that can be developed and undertake product development activities;
14. Cooperate with universities on product development and human resource development, conduct joint research and assist in the strengthening of local research capacity in the sector; and
15. Deliver its services to users at one stop shop.

Table 14: Other examples of incentives offered by competing countries

Country	Investment incentives	Fiscal incentives	Concessional export finance	Infrastructure	Textile Vision/policy	Other non-fiscal benefits
Bangladesh	No special investment incentive	5% rebate rate on net value addition if local yarn is used; Tax holiday for backward areas	Back-to-back letter of credit arrangement for working capital funding	Availability of natural gas; Constant investment in ports	Textile sector development plan; International institutional cooperation through the Bangladesh Institute of Fashion and Textiles and the National Institute of Technical Textile Research and Design	High productivity; Duty-free export to the European Union, Canada and Norway; Highly trainable work force
China	No special investment incentive	Export tax rebate of 16%; Tax holiday in special economic zone(s) to foreign enterprises	No special funds as interest rate is low	Special economic zone(s) and general infrastructure is first class	Sectoral targets set in five-year plans	Big home market; Own textile machinery industry, low machine and spare part costs; Low (but increasing) wages, no Unionization; Low freight rates; Efficient dry and wet ports
Egypt	No special investment incentive	6% incentive on free-on-board value of exports	None	No special provision	Textile vision for 2010-2015	QIZ program allows preferential market access to the United States
India	5% interest rebate under Technology Up-gradation Fund Scheme and capital subsidy	Duty drawback on export; 10-year tax holiday; Lower energy cost tariffs in certain states	4.5% interest subsidy on pre- and post-shipment credit	Special economic zone(s) and special textile parks set up by Government to promote cluster development	Textile Policy 2000 sectoral targets set in five-year plans	Big home market; Own textile machinery industry, low spare part and machinery costs; Relatively low wages

Country	Investment incentives	Fiscal incentives	Concessional export finance	Infrastructure	Textile Vision/policy	Other non-fiscal benefits
Pakistan	Long-term finance facility for export oriented units at concessional interest rates for up to 10 years	Research and development support on processed fabrics and apparel (3-6%) removed in 2008; No duty on export companies for accessories and raw materials	Export refinance scheme at 7.5% per annum on export of fabrics, “made-ups” and apparel	Natural gas supply to textile industry at competitive rates; Captive power plants generate power at 50% lower cost than from national grid	Dedicated Ministry of Textiles and Textile Commissioner’s Office	Strong tradition of textile production; Low wages Favorable exchange rate
Turkey	None	Low corporate tax at 20 %; Workers’ social charges are subsidized by 25%; Lower energy cost tariffs in backward areas	None	Power at a concessional rate of USC 4 below prevailing tariff in priority areas	None	Proximity to the European Union market; Duty-free export to the European Union

Source: Feasibility study for a cotton spinning mill in 11 sub-Saharan African countries, UNIDO, Gherzi, 2011

Annex 5: Key characteristics for developing a hub for innovation and green production

Table 15: Key Characteristics for Developing a Hub for Innovation and Green Production

Key characteristics for developing a hub for innovation and green production	
Production environment	Continuous energy audit
	Use of energy efficient equipment
	Use of biomass
	Use of efficient lighting, heating, and insulation materials
	Best raw material for fabric and trims, and packaging with lowest environmental impact
	Minimum water and energy input and usage
	Minimum pollution and GHG emissions during manufacturing
	Use of renewable resources
Manufacturing process	Manage manufacturing process and controls from fabric-to-garment
	Tight control over wastewater, discharge, pollutants and energy use
	Third party monitoring of environmental and social compliance
Transportation	Minimize GHG emissions and environmental impact
	Optimize transport routes and use of rail, truck and air, and consolidated shipment
Utilities	Clean and stable source of electricity at competitive prices
Internet	High internet connectivity
	Stable and cost competitive internet connection

Source: Global Development Solution, LLC (GDS).

Annex 6: Detailed action plan for the recommendations

1. Institutional support

Recommendation: Create a dedicated private institution—the Institute for Textile and Apparel Development (ITAD)—to support the sector. The institute should act as the voice of the sector, play a strategic leadership role, and ensure responsiveness to ever-changing global market trends.

Goal	Steps recommended
Institutionalize support for the textile and apparel sector through a dedicated institute	<ul style="list-style-type: none"> • Develop draft framework, organizational structure, role, and mandate of the proposed ITAD. Special attention should be given to ensure that the ITAD becomes the central focal point for developing and promoting the Green Production Hub (see below). • Based on the organization’s mandate, develop a draft budget required for the ITAD to support the textile-apparel sectors. • Once these drafts are completed, sponsor a workshop to bring together all of the stakeholders in the textile-apparel sector to present and validate the proposed organizational structure, role and mandate. • Based on inputs from the workshop, finalize the organizational structure, role, mandate and budget. Present the final version to MOIED for consideration. • Upon authorization by MOIED, invite foreign manufacturers and buyers to become sponsors of the ITAD, and invite key sector leaders from around the world to sit on the board of the ITAD to help guide the development and promotion of the Green Production Hub.

2. Skills to address productivity

Recommendation: Build skills to address productivity issues, at the managerial, technical, and factory floor level. At the same time, recognize the need to import skills where these are not available, but impose term limits on expatriate work permits. Draw upon institutions to play a leadership and convening role on issues specific to the textile-apparel sector, to ensure public and private sector collaboration and coordination.

Goal	Steps recommended
Shift to on-site skills development and encourage training audits	<ul style="list-style-type: none"> • Engage private sector to encourage on-the-job training for textile-apparel workers. Provide evidence from best practice to show firms that this kind of more targeted and relevant training benefits the firms. • Develop a training audit to identify stakeholder training needs. • Introduce a voluntary training audit scheme.
Encourage multi-skilling for factory-floor workers and mentorship & coaching programs for mid-level management	<ul style="list-style-type: none"> • Develop a mentorship program in partnership between the ITAD, buyers, key investors, and leading textile-apparel training institutions.
Improve the efficiency of the Training Levy	<ul style="list-style-type: none"> • Coordinate with NITA and improve the efficiency of the training levy by defining specific training to be covered by the training levy. • Prepare recommendations to this effect.
Impose term limits on expatriate work permits	<ul style="list-style-type: none"> • Identify specific skills not available through the Kenyan labor market, by contracting out a skills gap assessment. From this assessment, create a list of skills that require expatriate recruitment. • Set up in-house mentoring for companies that hire expatriates. • Coordinate with the Department of Immigration Services to reduce cost and time required for issuance of work permit. Agree to automatic work permit approvals for processes taking longer than 30 days. • Transfer expatriate skills needs database to the ITAD once it is operational. • Introduce term limits on recruitment of expatriate on condition of sufficient skill base development.
Foster local partnership between firms and research institutions	<ul style="list-style-type: none"> • Conduct further study to explore the following two options: (1) competitive and open grant funding, and (2) setting up a center of excellence.

3. Investment in equipment and technology

Recommendation: Undertake new investments in equipment and technology to increase efficiency and reduce costs. These investments will have the added benefit of meeting growing consumer demand for environmentally-sustainable production processes.

Goal	Steps recommended
Encourage firms to conduct factory level energy audits to see how much energy (and money) could be saved through equipment upgrading	<ul style="list-style-type: none"> • Partner with existing SUNREF program (under KAM) to create a mechanism dedicated to the textile-apparel sector, through which firms are made aware of the benefits arising from energy audits – namely, that the cost savings generated from subsequent investments will far outweigh the cost of the audit itself. • Make KAM members aware that energy audits are offered at a heavily subsidized rate through the SUNREF program. • Host workshops with KAM/SUNREF to achieve these objectives, for both KAM members and non-members. • Engage firms individually to cater to their specific needs.
Develop sector-wide promotion program to encourage firms to upgrade technology and equipment through concessionary financing, and support them in drafting business plans to do so	<ul style="list-style-type: none"> • Identify and negotiate access to concessionary financing through programs such as SUNREF. SUNREF is supported by AFD-funding and offers concessionary financing (around 5 percent) for qualifying investments. • Work with firms to prepare business plans that will qualify for this concessionary financing. SUNREF provides free business plan preparation. • Develop standard business plan package to support stakeholders that apply for concessionary financing • Train banks on the specifics of textile-apparel investments, educating them on the business case, government support for the sector, and alter bank historic perceptions about the risk level of the sector. • Use successful pilots as case studies to develop and implement sector-wide promotion program to encourage equipment and technology upgrading.
Promote green certifications among firms, to provide credibility to international buyers	<ul style="list-style-type: none"> • Research what counts as green according to major international buyers. Currently there is no standard definition. Therefore, analyze a sampling of major buyers to determine what could be a standard green definition for Kenyan producers. • Work with the Kenya Bureau of Standards to make this definition official by offering green certifications to textile-apparel companies meeting this standard. • Market this certification to international buyers and convince them to adopt companies that achieve it.
Discontinue the energy subsidy (recommended) or condition it to energy audits and equipment upgrading in participating firms	<ul style="list-style-type: none"> • Coordinate with the Ministry of Energy to ensure the change in composition of energy sources for electricity generation to renewables. • Negotiate load redistribution to ensure continuous access to electricity to EPZ companies. • Create baseline data on energy usage using data from energy audits. • Collect energy usage data and benchmark with baseline data. • Conduct sensitivity analysis to determine subsidy rate adjustment. • Consider two options based on the analysis: (1) discontinue the energy subsidy altogether (recommended), or (2) condition it to firms that adopt green production and apply for the green certification.

4. Access to markets

Recommendation: Develop access to new market opportunities where competition is based on factors other than cost alone, allowing Kenyan firms to compete despite their higher cost of doing business.

Goal	Steps recommended
Develop Kenya's brand image as a hub for green textile and apparel production	<ul style="list-style-type: none"> • Introduce government policy to transform Kenya into Africa's Hub for green production. • Prepare a draft policy statement and steps to be undertaken by both the public and private sectors to implement the policy. • Engage a marketing and media agency to develop a media package to promote policy targeting green consumer bases in the US and Europe. • Invite major buyers and producers to Kenya to tour selected firms to showcase the innovation and green production schemes.
Sponsor trade shows targeted at the textile and apparel sector to generate B2B connections	<ul style="list-style-type: none"> • Invite key buyers to present green market opportunities and requirements for Kenyan firms. • Facilitate linkages to green market opportunities.
Sponsor tours for Kenyan firms to see buyers and producers	<ul style="list-style-type: none"> • Facilitate market access for small- and medium-sized Kenyan producers to premium small batch markets through tours to the United States and Europe.

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