

The **KENYA INSTITUTE** for **PUBLIC**  
**POLICY RESEARCH** and **ANALYSIS**

## Constraints and Opportunities in the Kenyan Cotton-Textile-Apparel Sub- Sector: A Value Chain Approach

Adan Guyo Shibia  
Benson Igesa Senelwa

DP/253/2021

# **Constraints and Opportunities in the Cotton-Textile-Apparel Subsector in Kenya: A Value Chain Approach**

Adan Guyo Shibia  
Benson Senelwa Igesa

Kenya Institute for Public Policy  
Research and Analysis

*KIPPRA Discussion Paper No. 253*  
*2021*

## **KIPPRA in Brief**

The Kenya Institute for Public Policy Research and Analysis (KIPPRA) is an autonomous institute whose primary mission is to conduct public policy research leading to policy advice. KIPPRA's mission is to produce consistently high-quality analysis of key issues of public policy and to contribute to the achievement of national long-term development objectives by positively influencing the decision-making process. These goals are met through effective dissemination of recommendations resulting from analysis and by training policy analysts in the public sector. KIPPRA therefore produces a body of well-researched and documented information on public policy, and in the process assists in formulating long-term strategic perspectives. KIPPRA serves as a centralized source from which the Government and the private sector may obtain information and advice on public policy issues.

Published 2021

© Kenya Institute for Public Policy Research and Analysis

Bishops Garden Towers, Bishops Road

PO Box 56445-00200 Nairobi, Kenya

tel: +254 20 2719933/4; fax: +254 20 2719951

email: [admin@kippra.or.ke](mailto:admin@kippra.or.ke)

website: <http://www.kippra.org>

ISBN 978 9966 817 64 8

The Discussion Paper Series disseminates results and reflections from ongoing research activities of the Institute's programmes. The papers are internally refereed and are disseminated to inform and invoke debate on policy issues. Opinions expressed in the papers are entirely those of the authors and do not necessarily reflect the views of the Institute.

---

## Abstract

*The cotton-textile-apparel value chain in Kenya is prioritized for job and wealth creation in the "Big Four" agenda given it is highly labour-intensive. The sub-sector has, however, performed below expectations, since it is being confronted by competitiveness challenges along the value chain. This study, therefore, explores the constraints stifling the sub-sector in a quest to harness the opportunities in the local, regional and global markets. This includes firm size and formality status of enterprises. The value chain approach is used for analysis. In addition, an in-depth review of policy framework was undertaken at both national and county levels. Further, the study explored constraints and opportunities across the value chain using rich firm-level secondary data sets, including the World Bank Enterprise Survey for Kenya 2018 and the 2016 Micro, Small and Medium Enterprises (MSMEs) Survey. Several constraints were revealed along the cotton-textile-apparel value chain. At the policy level, there are gaps in clearly articulating specific interventions along the value chain, weakening policy implementation and outcomes. At the input (farm level), constraints relate to inadequate budgetary allocation to agricultural extension services, coupled with weak farmer cooperatives, and declining returns for farmers. At the processing level, constraints relate to availability of quality cotton lint, access to relevant quality skills and high costs of production. At the market level, while regional markets and trade agreements provide some opportunities, high costs of production make locally manufactured products less competitive particularly against cheaper imports. Imports of second-hand clothes (mitumba) further constrain market access for the local cotton-textile-apparel industry. To revitalize the cotton-textile-apparel value chain, policy documents at the national and county levels need to clearly and consistently articulate specific interventions, resource requirements and indicators for monitoring to promote effective policy interventions and outcomes. At the input (farm) level, it is important to allocate more resources to extension services, revive cotton cooperatives and improve returns on investments for farmers. At the processing level, enhance supply of relevant skills with strong industry-academia linkages, improve access to affordable finance particularly for Micro and Small Enterprises (MSEs), intensify innovation and technology with incentives for Research and Development (R&D) investments, and make electricity affordable. At the market level, there is need to tap into the 'Buy Kenya Build Kenya' initiatives to access local markets, encourage 'Made in Kenya' clothes to expand domestic demand for locally manufactured textile and apparel products.*

## **Abbreviations and Acronyms**

AFA	Agriculture and Food Authority
AfCFTA	African Continental Free Trade Area
AGOA	African Growth and Opportunities Act
CIDP	County Integrated Development Plan
COMESA	Common Market for Eastern and Southern Africa
EAC	East African Community
EPA	Economic Partnership Agreement
EPZ	Exports Processing Zones
EPZA	Exports Processing Zones Authority
EU	European Union
FDI	Foreign Direct Investment
KALRO	Kenya Agricultural and Livestock Research Organization
KAM	Kenya Association of Manufacturers
KEBS	Kenya Bureau of Standards
KenInvest	Kenya Investment Authority
KEPSA	Kenya Private Sector Alliance
KIRDI	Kenya Industrial Research and Development Institute
KNBS	Kenya National Bureau of Statistics
Ksh	Kenya Shillings
MOITED	Ministry of Industrialization, Trade and Enterprise Development
MSEs	Micro and Small Enterprises
MSMEs	Micro, Small and Medium Enterprises
NEDPS	National Export Development and Promotion Strategy
R&D	Research and Development
UNIDO	United Nations Industrial Development Organization
US	United States
VAT	Valued Added Tax
WTO	World Trade Organization

---

## Table of Contents

Abstract.....	iii
Abbreviations and Acronyms .....	iv
1. Introduction.....	1
2. Review of Policy and Legal Framework .....	7
3. Methodology .....	24
3.1 Value Chain Analysis .....	24
3.2 Data and Data Sources .....	25
4. Results and Discussions .....	27
4.1 Stakeholder Analysis .....	27
4.2 Constraints and Opportunities Along the Cotton-Textile-Apparel Value Chain .....	32
4.2.1 Farm (input) - level constraints and opportunities .....	32
4.2.2 Processing level constraints and opportunities .....	33
4.2.3 Market access constraints and opportunities .....	44
4.3 Lessons from Review of Selected Countries .....	48
5. Conclusion and Policy Recommendations .....	51
5.1 Conclusion .....	51
5.2 Policy Recommendations .....	53
5.3 Areas for Future Research .....	57
References.....	58
Appendices.....	62



---

## 1. Introduction

This study analyses the cotton-textile-apparel sub-sector value chain, which is a key focus of the Kenyan government policy priorities under the "Big Four" agenda. The cotton-textile-apparel sub-sector makes significant contributions to manufacturing production and merchandise trade globally. As of 2019 global export of textiles and apparel was estimated at US\$ 797 billion, representing 6.1 per cent and 4.2 per cent of manufacturing and total merchandise exports, respectively (WTO, 2020). This is a significant growth compared to the year 2000 when the value was US\$ 354 billion, though the shares in manufacturing and total merchandise exports was then 7.5 per cent and 5.5 per cent, respectively. China and the US accounted for 61 per cent of global exports of textile and apparel in 2019 (WTO, 2020). South Africa and Egypt are the key producers and exporters of textiles and apparel in Africa, while within the Eastern African region, Kenya and Ethiopia dominate at US\$ 381 million and US\$ 125 million in its exports performance as of 2019.

The development of cotton-textile-apparel sub-sector is important for developing countries as an early phase of industrialization and learning for transitioning to more sophisticated medium and high technology manufacturing (Robertson, 2012; UNIDO, 2013; Lopez-Acevedo and Robertson, 2016). Alternative paths for economic development, for instance through skill-demanding service sectors such as information technology and finance offer limited opportunities for absorbing low-skill labour that tend to dominate low- and middle-income countries (Rodrik, 2016). Because cotton-textile-apparel value chain offers employment opportunities for labour force with varied skill levels (Malicha and Njoroge, 2020) and absorb a relatively large share of employees that are female (Robertson, 2012), it provides immense opportunities for inclusive development. Thus, cotton-textile-apparel is an important sub-sector in Kenya's development agenda linked to industrialization. These include raising agro-processing to 50 per cent of agricultural production and increasing the share of manufacturing in Gross Domestic Product (GDP) to 15 per cent by 2022 (Government of Kenya, 2018). In contrast, manufacturing contribution to GDP has gradually declined from 9.4 per cent in 2015 to 7.5 per cent as of 2019 (KNBS, 2020a). Overall, agro-processing accounts for only 35 per cent of the agricultural production while that for cotton-textile-apparel was estimated at 3 per cent as of 2019.<sup>1</sup>

Countries such as Vietnam and Ethiopia have recently recorded notable progress in leveraging on the cotton-textile-apparel sub-sector to advance industrialization agenda. The success in these countries has been attributed to robust policy frameworks anchored on incentives and exports facilitation (Nadvi et al., 2004). For instance, about 26 per cent of export earnings for Vietnam are derived from cotton-textile apparel value chain. Its share in the world's textile exports have increased from 0.2 per cent in 2000 to 2.6 per cent in 2018, while its share in the world's apparel exports have increased from 0.8 per cent to 5.3 per cent over the

---

1 Based on authors' calculation from Statistical Abstract 2020 as ratio of inputs to agro-processing related manufacturing sub-sectors (food, beverage, tobacco, textile, apparel, wood and wood products) to value of agricultural production.



same period (WTO, 2019b). Table 1.1 provides comparative economic contributions of cotton-textile-apparel manufacturing in selected countries. The trends revealed in Table 1.1 indicate a window of opportunity for Kenya with relatively increasing prominence of cotton-textile-apparel manufacturing compared to traditionally competitor economies such as China and South Africa. This trend is partly attributed to increasing labour cost in these competitor countries (Lopez-Acevedo and Robertson, 2016; Internal Labour Organization, 2018).

**Table 1.1: Comparative economic contributions of cotton-textile-apparel manufacturing**

	Value Added (US\$ millions)		Share in Manufacturing GDP (%)		No. of Persons Employed		Share (%) in manufacturing employment		Exports (US\$ Millions)	
	(a)		(b)		(c)		(d)		(e)	
	2005	2018	2005	2018	2005	2018	2005	2018	2005	2018
Kenya	62.0	1,133.0	3.1	16.7	47,352.0	86,708.0	19.1	28.2	234.0	381.0
Vietnam	1,469.0	6,792.0	14.7	9.7	699,643.0	1,723,447.0	22.6	24.7	5,406.0	36,504.0
Ethiopia	34.0	30.0	6.2	1.5	23,307.0	57,418.0	21.4	15.4	9.0	125.0
South Africa	1,337.0	556.0	3.3	1.2	129,420.0	73,643.0	11.0	6.1	485.0	876.0
Thailand	3,007.0	5,002.0	7.2	5.2	652,566.0	433,825.0	17.2	10.7	6,849.0	7,557.0
India	6,730.0	16,715.0	8.3	7.5	1,863,149.0	2,929,179.0	21.3	18.9	17,070.0	34,667.0
China	66,977.0	282,680.0	9.1	8.5	11,040,100.0	6,674,000.0	17.6	9.4	115,213.0	276,374.0

*Source: UNIDO Statistical Database for columns (a)-(d) and WTO Database for column (e)*

Textile and apparel enterprises account for significant proportions of manufacturing enterprises in Kenya, both in the formal and informal sectors. Within the formal sector, the Report on the 2017 Kenya Census of Establishments reveal that there were 739 textile and apparel manufacturing enterprises, of which Micro and Small Enterprises (MSEs) that employ between 1 to 49 persons account for 86 per cent (KNBS, 2017a). Within the informal sector, the 2016 Micro, Small and Medium Enterprises (MSMEs) Survey reveals that 43.2 per cent of the MSMEs in the manufacturing sector in Kenya are engaged in the production of textile and apparel (KNBS, 2016). It further reveals that over 95 per cent of the 75,336 MSMEs engaged in the manufacture of textile and apparel are micro enterprises employing less than 10 persons. Given the labour-intensive nature of textile and apparel enterprises and opportunities inherent in MSEs to absorb low-skill and low-income segment of the population, development of the sub-sector provides immense opportunities for employment and income growth (Haraguchi, 2012).

Addressing unemployment particularly among economically excluded segments of the population such as the youth (18-34 years) and women remains a key policy agenda in Kenya. The 2019 Kenya Population and Housing Census reveals that of the 2.6 million economically active persons seeking work, 63 per cent were youth and 44 per cent were female (KNBS, 2019a).<sup>2</sup> In efforts to create employment

<sup>2</sup> Note that the overall statistics for youth also include female-youth. Female youth generally face severe burden of unemployment. Disproportionately a higher segment of the female population is also economically inactive given their role as homemakers and unpaid care givers.

and income growth, the Kenyan government has prioritized the development of labour-intensive manufacturing sub-sectors, including textile and apparel, others being agro-processing (e.g. dairy, tea, coffee, meat, fish, animal feeds, fruits, vegetables, cereals, poultry, sugar, roots and tubers), manufacture of leather and leather products, blue economy and manufacture of construction materials. These policy aspirations are anchored in the Kenya Vision 2030, the Kenya Industrial Transformation Programme (KITP), the Third MTP III of the Kenya Vision 2030 and the "Big Four" agenda priorities that have been mainstreamed into MTP III. The overall manufacturing sector target in the medium-term is to increase its contribution to GDP to 15 per cent by 2022 (Government of Kenya, 2018), which was estimated at 7.5 per cent in 2019 (KNBS, 2020a). A total of 3,850 new manufacturing enterprises are envisaged to be created between 2018 and 2022 through industrial financing and other incentives, with earnings from exports of textiles and apparel projected to grow two and half-fold from Ksh 80 billion in 2017 to Ksh 200 billion in 2022 (Government of Kenya, 2018). The Sessional Paper No. 9 of 2012 on the National Industrialization Policy Framework for Kenya 2012-2030 (Government of Kenya, 2012) further emphasizes development of the textile and apparel manufacturing as an important intervention to employment creation.

The cotton-textile-apparel value chain originates at the farm level, with harvesting of cotton lint from cotton plant that then undergoes value addition at different stages including ginning, spinning, weaving and knitting, garment manufacture and finally trading of the manufactured products in the domestic and export markets as illustrated in Appendix 1. Ginning involves separation of cotton lint (harvests from the farm) into lint (white fibre component) and cotton seed, and therefore serves as the primary stage of value addition. Cotton seed can be transformed into seed cake used as animal feed and other by-products such as candles. This aspect of the value chain, though important, is not the focus of this study. Cotton lint is transformed by spinners and textile mills into yarns (i.e. long continuous interlocked fibres). Apparel industry includes manufacture of garment and clothing accessories such as labels, zippers, and buttons.

Despite the rich value chain and interventions by the government through the Kenya Vision 2030 flagship projects, recent performance of the cotton-textile-apparel sub-sector demonstrates slow growth rates (Table 1.2). The share of the sub-sector in the overall manufacturing GDP averaged 14.0 per cent, increasing from 11.6 per cent in 2011 to 17.6 per cent in 2019. The contribution of the sub-sector to the national GDP has, however, marginally declined from 1.4 per cent to 1.3 per cent over the same period, which is in tandem with marginal decline observed for the overall manufacturing contributions to GDP owing to the slow growth rates compared to other sectors of the economy such as wholesale and retail trade, financial services, construction, real estate, mining and quarrying. With regard to wage employment in the formal sector, Table 1.2 shows that while the contributions of the cotton-textile-apparel manufacturing to overall manufacturing has increased from 23.4 per cent in 2011, peaking at 28.2 per cent in 2018, the share in overall wage employment has largely remained stagnant at about 3 per cent. These trends reveal that while textile and apparel manufacturing

is improving within the overall manufacturing sector, its performance relative to the overall economy remains deficient.

**Table 1.2: Cotton-textile-apparel manufacturing contributions to the economy, 2011-2019**

Year	2011	2012	2013	2014	2015	2016	2017	2018	2019
<b>GDP Contributions</b>									
Textiles (Ksh billion)	33.0	36.5	43.7	49.8	52.2	65.8	70.9	79.6	90.6
Wearing apparel (Ksh billion)	17.6	18.2	19.6	22.4	22.4	28.2	30.4	34.1	38.8
Textiles and wearing apparel (Ksh million)	50.6	54.8	63.4	72.1	74.6	94.0	101.3	113.7	129.4
Total manufacturing GDP (Ksh billion)	437.9	469.5	506.6	538.0	588.9	654.5	659.1	690.6	734.6
Share of textiles and apparel in manufacturing GDP (%)	11.6	11.7	12.5	13.4	12.7	14.4	15.4	16.5	17.6
GDP at market prices (Ksh billion)	3,727.4	4,261.4	4,745.1	5,402.6	6,284.2	7,023.0	8,165.8	8,892.1	9,740.4
Share of textiles and apparel in national GDP (%)	1.4	1.3	1.3	1.3	1.2	1.3	1.2	1.3	1.3
<b>Contributions to Wage Employment ('000)</b>									
Manufacturing of wearing apparel, except for apparel	27.5	27.4	28.2	31.2	33.3	34.6	35.9	37.3	35.1
Preparation and spinning of textile fibres	6.7	6.7	7.0	7.3	7.6	7.7	7.8	7.9	7.7
Manufacture of knitted and crocheted fabrics	8.5	8.4	8.6	8.8	9.0	8.9	8.6	8.5	5.9
Manufacture of cordage, rope, twine, and netting	2.4	2.4	2.5	2.4	2.5	2.5	2.5	2.5	2.6
Manufacture of other textiles not classified elsewhere	1,027.0	1,072	1,161	1,248	1,347	1,411	1,479	1,550	3.8
Manufacture of made-up textile articles, except apparel	17.2	17.8	18.5	20.9	22.8	24.8	26.8	29.0	27.8
Textile and apparel total	63.3	63.9	66.1	71.9	76.6	80.0	83.1	86.7	82.9
Manufacturing wage employment	270.2	271.0	279.4	287.5	295.4	300.8	303.4	307.6	353.3
Share of textile and apparel in total manufacturing (%)	23.4	23.6	23.7	25.0	25.9	26.6	27.4	28.2	23.5
Total wage employment	2,084.1	2,155.8	2,283.1	2,370.2	2,478.0	2,554.3	2,699.5	2,765.2	2,928.3
Textile and apparel employment in total formal employment (%)	3.0	3.0	2.9	3.0	3.1	3.1	3.1	3.1	2.8

*Data Source: KNBS (2019b; 2020b), Statistical Abstracts*

Besides employment at the processing level of the value chain, cotton-textile-apparel sub-sector can significantly contribute to household incomes through linkages with agriculture. For instance, cotton is grown by about 23,000 households in 12 counties in Kenya (Appendix 2), with the top six counties by number of cotton-growing households being Homa Bay, Siaya, Kitui, Meru, Bungoma and Kisumu. As shown in Appendix 2, unemployment remains high in some of these counties despite the existing potential for backward linkages of textile and apparel industries to the agriculture sector.

Given the potential but limited contributions of the cotton-textile-apparel sub-sector in Kenya, it is imperative to gain deeper insights into the constraints along its value chain. Preliminary insights from existing reports suggest that only 30 per cent of the textile manufacturers in the country are operational (World Bank, 2015). Further, operational textile manufacturers run at an average capacity of 61 per cent, while those in the manufacturing of wearing apparel operate at a capacity of 67 per cent. These statistics reflect lost opportunities in production and, therefore, diminished advantages that would have been gained from economies of scale resulting from increased level of production.

This study employs value chain analysis to generate empirical evidence for policy interventions in the cotton-textile-apparel sub-sector. Value chain embody activities and relationships involved in sourcing inputs, transforming them and delivering the final products to the market (UNIDO, 2009a; 2009b; 2011). The value chain analysis entails assessing constraints and opportunities in terms of sourcing of inputs and supplies, processing of inputs to outputs, value chain actors and their interactions, flow of product and markets. The cotton-textile-apparel sub-sector involve diverse value chain actors comprising farmers who supply inputs (i.e. cotton lint), manufacturers who undertake a range of value addition activities, traders who supply other inputs and products to the consumers, private sector associations advancing interest of their members and various support institutions within the policy ecosystem. The value chain can conceptually be broadly categorized into input market, processing (value addition), and markets; the approach employed in this study.

While there exists few studies on the cotton-textile-apparel sub-sector in Kenya (Ikiara and Ndirangu, 2003; World Bank, 2015; Malicha and Njoroge, 2020), the enterprises in this sub-sector are not homogenous and, therefore, there is an opportunity to gain further insights in terms of features such as firm size and formality (registration status). Moreover, there have been policy and institutional developments at the national, regional, and global levels that present evolving opportunities and constraints. Key among these include priorities in the Third MTP of the Kenya Vision 2030; new constitutional dispensation with agriculture being a devolved function; the East African Community Cotton, Textiles and Apparel Strategy and Implementation Roadmap, 2019; and implications of regional developments such as the African Continental Free Trade Area (AfCFTA) that became effective 30th May 2019. Unlike existing studies on the cotton-textile-apparel sub-sector (Ikiara and Ndirangu, 2003; World Bank, 2015), this study explores the diverse nature of cotton-textile-apparel enterprises. As such, it entails analysis of micro-level datasets to explore the constraints and

opportunities across a range of enterprise sizes (micro, small, medium, and large), and formal and informal enterprises. This approach would guide a more tailored recommendations for policy interventions at the national and county government levels. Review of County Integrated Development Plans (CIDPs) provide additional insights on recent dynamics on development of the cotton-textile-apparel sub-sector. While it may be interesting to explore other components of the textile and apparel sub-sector such as wool and sisal, the value chain approach requires a focused analysis. Thus, these other elements of the textile and apparel sub-sector are considered worthy areas for future research.

This study therefore sought to analyse the constraints and opportunities in the cotton-textile-apparel sub-sector in Kenya along the value chain, considering firm size and formality. The specific objectives are to:

1. Map stakeholders in the cotton-textile-apparel value chains in Kenya and identify their roles and linkages;
2. Analyse the constraints and opportunities along the cotton-textile-apparel sub-sector in Kenya at the input, processing (value addition) and market access levels;
3. Review and draw lessons from selected countries in development of the cotton-textile-apparel value chain.

---

## 2. Review of Policy and Legal Framework

This section provides a value chain review of policies and legal framework on development of the cotton-textile-apparel sub-sector at the national and county government levels in Kenya. Policy review is increasingly used in development research to provide background and context on the subject matter (Atkinson and Coleman, 1997). There are regional, national and sector-specific policies and legal frameworks that have implications for development of this sub-sector. The review is elaborated in Table 2.1 and Table 2.2 along the three levels of value chain (input, processing and marketing). The key issues of focus relate to policy interventions at each of the three levels that then provide insights on synergies across the value chain and with other policies, and gaps or constraints for development of the sub-sector. Thus, besides identifying any specific interventions along the value chain, the goal of this subsection is to identify the synergies or opportunities and point out gaps that exist and implications for the sector. In addition to the national level policy and legal framework, this subsection also reviewed County Integrated Development Plans (CIDPs) to establish how the county governments prioritized cotton-textile-apparel sub-sector and the interventions they have considered along the value chain. Three insights can be drawn from the reviews of the policy and legal framework at the national level as summarized in Table 2.1.

- (i) While the Kenya Vision 2030 places emphasis on industrialization with agro-processing as a priority, it is not specific on cotton-textile-apparel activities within the sub-sector. Agro-processing can include a wide range of activities such as livestock, horticulture and non-cotton industrial crops such as tea, coffee, sugarcane and sisal, among others. Arguably, the Kenya Vision 2030 is implemented through its MTPs, which are expected to elaborate on medium-term interventions. The first two MTPs (covering the periods 2008-2013 and 2013-2017) were also not specific on development of the cotton-textile-apparel value chain beyond suggesting agro-processing as a priority. It is only during the third MTP (2018-2022) that value chain development of the cotton-textile and apparel has gain traction, with explicit interventions at the three levels of the value chain.
- (ii) Various national level sector policies place more emphasis on processing level compared to the input and marketing levels, except for those dedicated to agriculture and exports that tend to focus on these specific areas of the value chain. The consequences of this partial approach with limited synergies across different sector policies can be severe in depressing a holistic development of the sector. The specific challenges that emanate from such an approach relate to unreliable supply of raw materials (hence lowered opportunities for economies of scale) that may be mitigated by increased imports and lower market-based incentives such as ready market for farmers' produce.
- (iii) Most policy documents only provide interventions as broad policy statements without clear activities/programmes, resource requirements, indicators and actors responsible for implementation. This contributes to policy implementation challenges, and therefore weak policy outcomes.

At the county governments level, there are varying levels of policy measures to promote cotton-textile-apparel value chain development. Table 2.2 provides a summary of policy interventions by county governments through CIDPs.<sup>3</sup> The first 12 counties are those identified in the Kenya Population and Housing Census 2019 (KNBS, 2019a) as having households practicing cotton farming. The key thematic issues arising from the analysis are that:

- (i) Counties majorly focus on input and processing levels of value chain, with very few prioritizing market level interventions. While some of the devolved functions relate to crop husbandry, plant disease control, and (domestic) trade development including markets, in most instances, it is not clear how the county governments develop priorities; for instance in terms of partnerships with the national government, development partners, private sector and synergies across counties in development of value chain of relevant sub-sectors. It is emerging that there are challenges that are also emanating through support service activities such as weakened tailoring skills, dwindled farmer support groups and cooperatives for lobbying and realizing economies of scale.
- ii) Some counties demonstrate low consistency in prioritizing development of the cotton-textile-apparel value chain through the CIDPs, which implies dampened policy efforts and uncertainties for interested private sector investors. For example, some counties had policy interventions during the 2013-2017 CIDP and not during the 2018-2022 CIDP and vice versa.
- iii) A number of counties have prioritized revival of cotton cooperatives, which became dormant in the 1980s and 1990s. The interventions largely revolve around budgetary allocations, capacity building for farmers and farm inputs for increased production. The challenges related to cooperatives are, however, multidimensional in nature, including inadequate supply of cotton, poor cotton marketing and pricing, poor technology, weak governance structures and competition from low cost producing countries and synthetic fibres.
- iv) The CIDPs in various instances provide broad statements that county governments will prioritize the cotton-textile-apparel sub-sector in line with the "Big Four" agenda, yet they are not clear with regard to activities/programmes, resource requirements, indicators and actors responsible for implementation, with potential consequences of weak policy implementation and outcomes.
- v) There are limited policy recognitions of value addition to cotton by-products. For instance, under the 2018-2022 CIDPs, only Kisumu County has explicitly prioritized to undertake value addition of cotton by-products that can be used for manufacture of cotton seed oil, cake, candles, and soaps. During the 2013-2017 CIDP, Lamu County had also planned construction of a cotton industrial park to facilitate value addition of cotton lint and seeds. Development of

---

3 Note that exercise on county government activities involved review of the 2013-2017 and 2018-2022 CIDPs for all the 47 county governments. Key search words included 'cotton', 'textile', 'apparel', 'ginning', 'agro-processing' and 'agroprocessing'.

secondary value chains beyond textiles can incentive farmers through higher expected returns.



**Table 2.1: Synthesized review of existing policies and legal framework**

Policy/legal Framework	Value chain level policy priorities identified and targets			Policy synergies	Policy gaps/constraints and implications
	Input Level	Processing Level	Market Level		
Kenya Vision 2030	There are no explicit interventions for cotton production, but it acknowledges the former Nyanza and Eastern provinces as potential areas for production. Among the industrial crops such as tea, coffee and sugarcane, cotton is noted to have the lowest value per hectare.	Measures for cotton fibre value addition is not clear, but it is a broad-based policy for promoting competitiveness across sectors of the economy, including agro-processing. It emphasizes on agro-processing with a goal of attracting at least 10 large strategic investors in key agro-processing industries. Special economic clusters for agro-processing were envisaged to be established in the former Nyanza, Nairobi and Coast provinces.	Measures for development of cotton-textile-apparel markets not explicit but provides overall goal for manufacturing exports to the East African Community market to increase from 7% to 15%.	It is a broad-based policy for development of guiding medium term and sector-specific policies, with emphasis on agro-processing.	<ul style="list-style-type: none"> <li>While it recognizes opportunities for agro-processing and exports, it is not explicit on specific interventions for promoting value addition to cotton products.</li> <li>As a broad-based national policy, absence of implementation matrix blurs measurement indicators and responsible policy actors. The Medium-Term Plans (MTPs), however, help overcome this limitation.</li> </ul>
MTPs of the Kenya Vision 2030	1st and 2nd MTPs were not explicit on cotton production, but the 3rd MTP identified the need for application of biotechnology for insect protected and water efficient Bt cotton variety, seed distribution to farmers, and strengthening farmer organisations.	Key targets include raising overall manufacturing sector's contribution to GDP to 15 per cent by the year 2022; development of industrial clusters; revitalization and modernization of Rift Valley Textiles (RIVATEX) and cotton ginneries; and training of 50,000 youth and women in textile and apparel skills particularly within MSEs. Much of these interventions are envisaged in the 3rd MTP.	3rd MTP seeks to increase export earnings from cotton-textile-apparel from Ksh 80 in 2017 billion to Ksh 200 billion in 2022, leveraging on AGOA. Envisaged construction of warehouses in the context of industrial crops can facilitate economies of scale in processing and exports. The 1st and the 2nd MTPs were not specific on cotton-textile-apparel sub-sector, but underscored agro-processing industries.	MTPs review progress of the Kenya Vision 2030 and mainstream recent developments and emerging issues.	<ul style="list-style-type: none"> <li>It is only the 3rd MTP that have interventions at the three levels. Constraints relate to insufficient funding of flagship projects; weak coordination among the stakeholders; and high costs of energy.</li> </ul>

Policy/legal Framework	Value chain level policy priorities identified and targets			Policy synergies	Policy gaps/constraints and implications
	Input Level	Processing Level	Market Level		
<p>Agricultural Sector Transformation and Growth Strategy 2019-2029</p>	<p>It identifies Coast region as a potential agro-processing hub for cotton. It also calls for research on Bt cotton seeds to encourage production that is resistant to pests, diseases and adverse agro-ecological conditions.</p>	<p>It envisages use of cotton seeds for textiles and feed.</p>	<p>A key target is to establish six large scale agro- and food processing hubs for domestic and export markets, though not explicit on cotton-textile-apparel sub-sector.</p>	<p>Targeting anchor investors for agro-processing is in line with the Big Four Agenda, but there is little explicit focus on cotton-textile-apparel value chain.</p>	<p>Although one of the anchors of this Strategy relates to increasing small scale farmer incomes, agricultural output and value addition, there is a scanty explicit focus on cotton-cotton-apparel value chain. This implies weak linkages with the Big Four Agenda priorities on agro-processing and manufacturing with one of the focus being cotton-textiles-apparel sub-sector.</p>
<p>Sessional Paper No. 9 of 2012 on National Industrialization Policy for Kenya 2012-2030</p>	<p>Measures for cotton production not explicit but has prioritized competitive prices for cotton farmers through the Cotton Development Authority (CODA), currently the Cotton Fibre Directorate under the Agriculture and Food Authority (AFA).</p>	<p>It acknowledges importance of manufacturing MSMEs and the need for their productivity growth. It also proposes revival of dormant textile mills and ginneries, provision of incentives to encourage private sector investments in weaving and milling plants, encouraging regional (EAC) development of a textiles sector to benefit from economies of scale, ban on exportation of raw and semi-processed cotton, and imposition of levy on the export of cotton lint to encourage local value addition.</p>	<p>Proposes a ban on importation of second-hand clothes (mikumba) to facilitate access to local manufactured cotton-textile-apparel products.</p>	<p>Seeks to create synergy with the Kenya Vision 2030 by encouraging export-push, development of labour-intensive industries and promotion of MSMEs.</p>	<p>Not holistic in value chain approach – There is more focus on value addition and access to markets. Measures to ban importation of second-hand clothes and a ban on exportation of raw and semi-processed cotton may be hard to implement under a free market economy and international trade treaties. Absence of implementation matrix blurs measurement indicators and responsible policy actors.</p>

Policy/legal framework	Value chain level policy priorities identified and targets			Policy synergies	Policy gaps/constraints and implications
	Input Level	Processing Level	Market Level		
The Kenya National Trade Policy 2017	While it acknowledges role of agro-industrial exports, it does not explicitly identify cotton production as a priority, unlike livestock, horticulture and fisheries.	It underscores production of agro-industrial exports with competitive advantage.	It seeks to leverage on the AGOA initiative to expand exports of textile and apparel to the US market.	It underscores linking trade with manufacturing and agriculture; coordination between the national (policy formulation) and county governments (devolved agriculture functions).	Despite the strength in recognising linkages across sectors and between the two levels of government, it has a weakness in providing detailed implementation framework that identify activities and policy actors with responsibilities.
European Union Economic Partnership Agreement (EU-EPA)	The agreement is envisaged to promote adoption of sustainable technologies and gainful employment throughout the value chain of a modernised agricultural sector.	The agreement is envisaged to develop modern and competitive agro-based industries.	EPA is intended to provide duty-free, quota-free access to the European Union (EU) markets for all (EAC) exports, combined with partial and gradual opening of the EAC markets to imports from the EU.	The agreement seeks to promote principles of regional integration.	Without fast-tracking competitiveness of the Kenyan industries, including those in the cotton-textile-apparel sub-sector, there is likely to be an intensified competition faced by local industries. This might weaken exports position of Kenyan products. Only Kenya and Rwanda have signed the agreement (though only Kenya has ratified), thus delaying the implementation at the regional level as envisaged.
Integrated National Export Development and Promotion Strategy (NEDPS) (2018)	It recognises the importance of developing upstream components of value chain including cotton production but is not explicit on specific interventions to realise this aspiration.	One of the objectives of NEDPS is to enhance the competitiveness of Kenyan exports through value addition, improved quality and reduced costs of production.	It seeks to increase Kenya's exports share in regional and global markets. Exports from textiles and apparel is among the priority manufacturing sub-sectors. Other interventions relate to strengthening of standards and quality institutions.	NEDPS identifies policy actors at the national, county and sectoral levels across state and non-state actors. This approach can enhance implementation strategies across the value chain.	While NEDPS recognises importance of value chain approach to exports push of the selected sub-sectors, there are inadequacies in holistically identifying required interventions at different levels of the value chain.

Policy/legal framework	Value chain level policy priorities identified and targets			Policy synergies	Policy gaps/constraints and implications
	Input Level	Processing Level	Market Level		
Kenya National AGOA Strategy 2018-2023	Not explicit on input level interventions.	Not explicit on input level interventions.	Seeks to improve exports supply chains and increase exports of prioritized products to the US by 10.4 per cent annually. These include exports of textile and apparel.	The policy is founded on the AGOA preferences leveraging on the provision of opportunities to attract investors that could strengthen market linkages, technology transfer and provide capital and know-how to Kenya.	It is a medium term (five-year) strategy, which may create uncertainties for long-term oriented investors exporting under AGOA. Since it is aligned to NEPPS, 2018; the uncertainties are partly mitigated. As articulated in review of the first Kenya National AGOA Strategy 2012-2016, limited resources in implementation of this Strategy remains a key impediment in actualisation of the intended outcomes.
Agriculture and Food Authority Act No. 13 of 2013	This Act consolidates laws on the regulation and promotion of agriculture and provides for roles of the national and county governments. It seeks to enhance coordination of policy implementation on agricultural production including those relating to cotton fibre.	One of the mandates AFA established under this Act is to promote best practices in grading and processing of agricultural products.	AFA established under this Act is also mandated to promote best practices in marketing of agricultural product.	This Act seeks to promote coordination of policy implementation in line with the Fourth Schedule of the Constitution of Kenya with regards to assignment of functions between the national and county governments under the devolved structure.	Development of agricultural sector policies for devolved functions at the county level sometimes diverge, posing bottlenecks in the working protocol with the county governments. The heterogeneity of counties in agricultural products pose challenges to the administration of the Act given that the counties are responsible for agricultural production in their jurisdiction.

Policy/legal Framework	Value chain level policy priorities identified and targets				Policy synergies	Policy gaps/ constraints and implications
	Input Level	Processing Level	Market Level			
Crops Act No. 16 of 2013	It seeks to provide for growth and development of agricultural crops. It designates cotton as a crop with breeding programme under compulsory certification. Thus, cotton is designated for licensing and promotion to facilitate productivity and market access. Key incentives identified include credit, farm equipment, research and extension services, infrastructure support post-harvest facilities and storage technologies, and firm inputs such as quality seeds and fertilisers. It also establishes a Commodities Fund and provides for incentives to growers and the registration of growers' associations.	The processing of scheduled crop products can only be done in accordance with provisions of this Act. AFA is to recommend general industry agreements between farmers and processors of scheduled crops. This provision is intended to provide a fair power balance between processors and farmers for a sustainable value chain development.	This Act seeks to promote institutional linkages for coordination and marketing of scheduled crop produce. It empowers the Cabinet Secretary responsible for matters of agriculture to establish mechanism for double taxation of agriculture products by the two levels of government. This is envisaged to lower costs and therefore competitiveness in access to markets.	This Act recognise the importance of coordinated functions between the national and county governments, and role of incentive mechanisms along value chain for the scheduled crops.	Development of agricultural sector policies for devolved functions at the county level sometimes diverge, posing bottlenecks in the working protocol with the county governments.	
(Fibre Crops) Regulations, 2020	It seeks to promote collection and maintenance of data on fibre crops. In promoting productivity and quality fibre crops seeds are to be sourced only from a source certified by the Kenya Plant Health Inspectorate Services (KEPHIS). It provides grading framework for seed cotton and cotton lint.	Prospective manufacturers of fibre crop products are required to first obtain certificate of compliance from AFA.	It seeks to promote marketing of fibre crops and fibre crops products including through pricing, licensing and grading frameworks for fibre crops and fibre crops products. Exporters and importers of fibre crops or fibre crops products are required to be registered licensed by AFA.	This Regulation is intended to operationalize the provisions of the Crops Act No. 16 of 2013 with regards to fibre crops (i.e. cotton and sisal).	As the case with its parent Act, the challenges relate to coordination of activities across the various counties. The various Counties specific requirements at input levels including small scale farmers trainings and awareness creation of Regulations to the different stakeholders in the fibre crops sub sectors worth to be well articulated. This implies that at the beginning of the value chain there exists gaps to address the farmer's needs.	

Policy/legal Framework	Value chain level policy priorities identified and targets			Policy synergies	Policy gaps/constraints and implications
	Input Level	Processing Level	Market Level		
<p>The Investment Promotion Act, 2004.</p>	<p>The potential benefits of investment to the economy is part of consideration for facilitation of investments. A key consideration relates to employment creation opportunities, for which cotton production can be considered suitable.</p>	<p>Other than employment creation potential, other considerations for considering an investment beneficial under this Act relates to utilisation of domestic raw materials and adoption of value addition in in the processing of local agricultural resources.</p>	<p>As noted earlier, textiles and apparel exports account for significant share of Kenya's manufacturing exports, making the sub-sector attractive for investment facilitation under the principles of this Act.</p>	<p>The Kenya Investment Authority (KenInvest) established under this Act is mandated to facilitate and promote investments in various sectors including priorities such as textile and apparel. This can range across value chains from raw material production, processing to marketing.</p>	<p>This legislation was enacted in 2004 and needs to be aligned to devolved governance structure under the Constitution of Kenya 2010. The minimum capital to qualify for facilitation (US\$ 100,000 for foreign investors and Ksh one million for local investors) may be prohibitive given that majority of enterprises in the cotton-textile-apparel sub-sector are MSEs.</p>
<p>AGOA Act (Enacted by the US in 2000, initially for 8 years up to 2008. Its expiry has been extended twice, first in 2004 to 2015, and then in 2015 by a further 10 years to 2025.</p>	<p>It is not explicit on input level but the qualifying conditions towards promoting rule of law and market-based economy with elimination of trade restrictions are expected to encourage investments along the value chain.</p>	<p>It is not explicit on input level but the qualifying conditions towards promoting rule of law and market-based economy with elimination of trade restrictions are expected to encourage investments along the value chain.</p>	<p>This Act seeks to promote market access to the US markets for qualifying Sub-Saharan African countries. The benefiting countries are expected to implement reforms such as rule of law, market-based economic reforms, respect for human rights, and elimination of barriers to the US trade and investments.</p>	<p>Textile and apparel exports dominates exports to the US markets under AGOA and is a priority under the Vision 2030 MTPs.</p>	<p>The Act's benefits are time-bound where beneficiary countries must exploit the opportunity within the limited time frame. Beneficiary status are reviewed on annual basis and renewal or withdrawal is at the discretion of the US president, thus the exporting countries under this Act are subject to uncertainties.</p>

*Source: Authors' review of respective policy and legal framework*

**Table 2.2: County governments' policy measures relevant to value chain development of cotton-textile-apparel sub-sector**

County	Value chain level (2018-2022 CIPDs)				Policy synergies	Policy gaps/constraints and implications
	Input Level	Processing Level	Market Level			
Tana River 2013-2017 CIPD: X 2018-2022 CIPD: X	No explicit interventions.	It only acknowledges the manufacture of textile is a priority under the Big Four Agenda, but not explicit on specific interventions.	No explicit interventions.	It seeks to create synergy with the Big Four Agenda but lacks specific interventions.	The value chain is not holistic, though for instance agriculture functions such as crop husbandry is devolved.	
Lamu 2013-2017 CIPD: ✓ 2018-2022 CIPD: ✓	2013-2017 CIPD suggests 42% of households' income come from cotton production, hence prioritizing to support cotton value chain through allocation of Ksh 4 million (cotton warehouse and capacity building of farmers) and increasing area under coverage, and yield to at least 2,500kg/hectare. The 2018-2022 CIPD priorities include: Annual production of 80 tonnes of seed cotton, with a projected budgetary support of Ksh 40 million by the county government. This is to be achieved by distribution of cotton seeds to farmers, training of farmers, and acquisition of cotton seeds for distribution to farmers.	Planned construction of a cotton industrial park during the 2013-2017 CIPD to facilitate value addition of cotton lint and seeds at a cost of Ksh 600 million.  2018-2022 planned to establish a cotton ginnery in Mpeketoni for value addition to seed cotton, projected to cost Ksh 100 million.	No explicit interventions.	There is an effort to link cotton production to processing. Prioritization of cotton production has been sustained during the first and the second CIPDs.	Challenges noted include collapse of ginneries due to inadequate raw materials and poor pay to the farmers. This therefore weakens the value chain development.	



County	Value chain level (2018-2022 CIPDs)			Policy synergies	Policy gaps/ constraints and implications
	Input Level	Processing Level	Market Level		
Menu 2013-2017 CIPD: X 2018-2022 CIPD: X	No explicit interventions.	Planned to establish special economic zones/industrial parks and sub-county industrial centres to support the Big Four Agenda priorities, but no specific interventions explicitly mentioned on cotton-textile-apparel. Identified partnership with the national government as a strategy for value addition in the Big Four priorities.	No explicit interventions on cotton-textile-apparel value chain apart from mentioning the need to partner with the national government in implementation of the Big Four Agenda priorities.	It acknowledges the manufacture of textile is a priority under the Big Four Agenda, and that the county government will seek partnership with the national government and private sector for processing and marketing of agricultural products.	Despite the broad priorities mentioned to promote cotton-textile-apparel value chain, there are no specific programmes mentioned to promote the sub-sector.
Tharaka Nithi 2013-2017 CIPD: ✓ 2018-2022 CIPD: ✓	2013-2017 CIPD targeted to increase cotton production through input supply and formation of marketing groups at a cost of Ksh 30 million. 2018-2022 CIPD targets to increase land under cotton production mainly in Tharaka and Igambo omba by 150 Hectares (30 Ha annually) at a projected cost of Ksh 100 million. The County seeks to promote B.T. cotton, targeting to benefit 5,000 farmers through distribution of 1,000 metric tonne of seeds and 10,000 litres of insecticides. Other interventions include training of farmers on cotton husbandry.	No explicit interventions identified.	No explicit interventions identified.	The county has sustained production of cotton during the first and the second CIPDs, though the focus is the input level.	The focus is largely at the input level – It is not clear how the county plans to support processing and marketing components of the value chain.



County	Value chain level (2018-2022 CIPDs)			Policy synergies	Policy gaps/ constraints and implications
	Input Level	Processing Level	Market Level		
<p>Kitui 2013-2017 CIPD: ✓ 2018-2022 CIPD: ✓</p>	<p>Cotton production is supported by an irrigation scheme in Mwingi North Subcounty. Seeks to promote cotton production by annually procuring 60 metric tonnes of certified cotton seeds, 60,000 litres and training of farmers on valuation addition at a projected cumulative budget of Ksh 60 million. This is projected to benefit 10,000 households annually, producing 400 metric tonnes of cotton annually.</p>	<p>The 2013-2017 CIPD sought to exploit other uses of cotton. Textile is one of the priority value chain for wealth creation in the county, with a plan to develop a cottage industry at a projected cost of Ksh 150 million. The County has one established cotton-textile-apparel industry – Kitui Cotton Ginney.</p>	<p>No explicit interventions.</p>	<p>The county has sustained production of cotton during the first and the second CIPDs, with interventions at the input and processing levels.</p>	<p>Challenges contributing to poor performance of the cotton sub-sector include price instability and lack of certified seeds.</p>
<p>Makueni 2013-2017 CIPD: ✓ 2018-2022 CIPD: ✓</p>	<p>The County Government seeks to increase land under cotton production from 2,504 Ha to 4,500 Ha with production projected to increase from 1,830 metric tonnes in 2018 to 3,825 metric tonnes by 2022.</p>	<p>2013-2017 CIPD planned to five cotton cottage industries. Cotton production and value addition is one of the priorities for the County Government, espoused within the industrialisation agenda.</p>	<p>No explicit interventions.</p>	<p>The county has sustained production of cotton during the first and the second CIPDs, with specific interventions focused majorly on the input level.</p>	<p>Apart from the broad statement to support processing of cotton, there are no explicit interventions.</p>
<p>Bungoma 2013-2017 CIPD: ✓ 2018-2022 CIPD: ✓</p>	<p>Cotton is recognised as a cash crop in the County - The county Government targets to benefit 10,000 farmers through capacity building and grants and supply of cotton seeds at a cost of Ksh 100 million, aimed at cotton production.</p>	<p>Revival of Malakisi ginney has been a priority under the two CIPDs to support farmers improve their livelihoods.</p>	<p>No explicit interventions.</p>	<p>The county has sustained interventions to promote production of cotton during the first and the second CIPDs, with specific interventions focused at the input and processing levels.</p>	<p>Challenges identified include collapse of cotton ginney in 1990s due to low prices paid to farmers and overexploitation by middlemen</p>
<p>Busia 2013-2017 CIPD: ✓ 2018-2022 CIPD: ✓</p>	<p>Cotton production is recognised as a priority, though it is being undertaken in small-scale and no specific interventions or programmes were identified.</p>	<p>The County planned to revive cotton infrastructure, including revival of ginneries at a projected cost of Ksh 180 million over the five-year plan 2018-2022. Revival of cotton ginneries as was also a priority under the 2013-2017 CIPD though specific interventions/programmes were not explicit.</p>	<p>No explicit interventions.</p>	<p>Apart from the processing level the County lacks specific interventions or programmes at the input and market level.</p>	<p>Existing ginneries are non-functional, including those at Namhale, Amukura and Mulwanda. The cotton cooperatives are also noted to have remained dormant due to collapse of cotton industry over the years.</p>

County	Value chain level (2018-2022 CDDPs)			Policy synergies	Policy gaps/ constraints and implications
	Input Level	Processing Level	Market Level		
Siaya 2013-2017 CDDP: ✓ 2018-2022 CDDP: ✓	Although it is envisaged the County will be a provider of choice for commodities like cotton through value chain development, improved efficiency and competitiveness at the firm level, there were no specific interventions identified at the input level.	The County is already a home to some cotton ginning firms. There is one operational ginnery in Rarieta (Madhany Cotton Ginnery) and one non-operational in Alego-Usonga (Cotton Ginnery). Although there were no specific interventions for 2018-2022 CDDP, during 2013-2017 CDDP the County revived a cotton ginnery with the support of Western Kenya Community Development.	Although it has been acknowledged cotton production in the County has declined over the years owing to marketing problems, there no specific interventions identified at this level. There are however six active and one dormant cotton cooperative societies. The active cooperatives are spread across the following sub-counties: Alego-Usonga (1); Bondo (1); Rarieta (2); Gem (1) and Ugenya (1). The dormant one is located in Ugunja.	The County has some advantages related to existing infrastructure, low altitudes and cooperatives, though there is not much clarity on strategies to leverage on these factors holistically.	The disparate interventions weaken value chain development for the cotton-textile-apparel sub-sector.
Kisumu 2013-2017 CDDP: ✓ 2018-2022 CDDP: ✓	The County Government plans to revive cotton production through provision of input subsidies to farmers and giving farmers forward contracts within the commodities markets. The interventions under the 2013-2017 relate to liaising with research institutions for cotton varieties; supply of cotton seeds as well as liaising with ginneries to coordinate cotton marketing.	The County Government plans include setting up of a mini ginnery and setting up of a centre of excellence for value addition technologies at a cost of Ksh 500 million (together with input level support). There are also plans to promote value addition in cotton by-products such as cotton seed oil, cake, candles, and soaps. Notable planned intervention under the 2013-2017 CDDP was to build capacity for five cotton cooperative societies on value addition.	No explicit interventions.	The County has sustained efforts to promote cotton production and value addition during the two CDDPs, though focused largely on the input and processing levels. Nonetheless, efforts for value addition to cotton by-products can have positive effects on production by farmers.	The main textile industry, Kisumu Cotton Mills (KICOMI) has remained dormant despite favourable agro-ecological condition of the county that is suitable for cotton production. With the collapse of KICOMI, farmers in formerly main cotton growing areas such as Nyakach and Seme shifted from cash crop to subsistence farming. There are also concerns that tailoring skills within the fashion industry has dwindled as a result of collapse of the textile industry.

County	Value chain level (2018-2022 CDDPs)				Policy synergies	Policy gaps/ constraints and implications
	Input Level	Processing Level	Market Level			
Homa Bay 2013-2017 CDDP: ✓ 2018-2022 CDDP: ✓	Farmers are targeted to be incentivised through contract farming, provision of cotton seeds and capacity building	The County Government plans to construct and equip ginning and textile industries at Karachuonyo and Riva. Revival of ginneries was a priority under the 2013-2017 CDDP as well, particularly through a planned establishment of a cotton-textile-apparel industrial cluster at a cost of Ksh 698 million.	No explicit interventions.	The County has sustained efforts to promote cotton production and value addition during the two CDDPs, though focused largely on the input and processing levels.	While the County Government acknowledges opportunities inherent in high potential areas for cotton production (Suba North, Homa Bay town, Ndhiwa, Rangwe and Karachuonyo North Sub-Counties) and presence of jua kali associations and registered artisans, a holistic value chain development is not well articulated.	
Nyamira 2013-2017 CDDP: X 2018-2022 CDDP: X	No explicit interventions.	No explicit interventions.	No explicit interventions.	No explicit interventions.	Despite the 2015/2016 KIHBS revealing Nyamira County is among the counties with significant number of cotton growing farmers, interventions to promote cotton-textile-apparel value chain are not explicitly articulated in both the first and the second CDDPs.	
Other Counties Promoting Cotton Production Under 2018-2022 CDDPs						
Embu 2013-2017 CDDP: X 2018-2022 CDDP: ✓	Interventions include mobilisation of farmers and capacity building and supply of farm inputs.	Priorities include establishment of ginning facilities at Kamuniga.	No explicit interventions.	Value chain development is focused on input and processing levels.	Value chain across the three levels are not well articulated.	
Kwale 2013-2017 CDDP: X 2018-2022 CDDP: ✓	Cotton production is being introduced on trial basis in Msambweni.	The County plans to further construct cotton-textile-apparel industries.	No explicit interventions.	Value chain development is focused on input and processing levels.	Value chain across the three levels are not well articulated.	

County	Value chain level (2018-2022 CIDPs)			Policy synergies	Policy gaps/ constraints and implications
	Input Level	Processing Level	Market Level		
Kirinyaga 2013-2017 CIDP: ✓ 2018-2022 CIDP: ✓	No explicit interventions under the 2018-2022 CIDP. The 2013-2017 CIDP prioritized to enhance linkage between research institutions and farmers, and capacity building of farmers on cotton production.	The County Government has prioritized establishment of a cotton-textile-apparel cottage industry for production of hospital linen and other apparels.	No explicit interventions.	Value chain development is focused processing levels.	Value chain across the three levels are not well articulated.
Nakuru 2013-2017 CIDP: ✓ 2018-2022 CIDP: ✓	No explicit interventions.	The County Government has prioritized revival of cotton-textile-apparel industries through incentives for weaving and milling plants. Revival of cotton industries was also a planned priority under the 2013-2017 CIDP.	No explicit interventions.	Value chain development is focused on processing level.	Value chain across the three levels are not well articulated.
West Pokot 2013-2017 CIDP: ✓ 2018-2022 CIDP: ✓	The County Government plans to set aside 300 Ha of land under cotton production at a project cost of Ksh 50 million. Other strategies include mobilisation of farmers, purchase, and distribution of cotton seeds. The 2013-2017 CIDP sought to support cotton production through revival of cooperatives, extension services and training of farmers on emerging technologies.	There are plans to set up a cotton ginnery at a projected cost of Ksh 60 million.	No explicit interventions.	Value chain development is focused on input and processing levels.	Value chain across the three levels are not well articulated.
Nandi 2013-2017 CIDP: X 2018-2022 CIDP: ✓	No explicit interventions.	The County is setting up a cotton-textile-apparel plant and an EPZ.	No explicit interventions.	Value chain development is focused processing levels.	Value chain across the three levels are not well articulated.

County	Value chain level (2018-2022 CDDPs)			Policy synergies	Policy gaps/ constraints and implications
	Input Level	Processing Level	Market Level		
<p>Kilifi 2013-2017 CDDP: ✓ 2018-2022 CDDP: ✓</p>	<p>The County Government plans to increase cotton production through capacity building of farmers.</p>	<p>There are plans to promote value addition through cottage industries as articulated in the two CDDPs.</p>	<p>No explicit interventions.</p>	<p>Value chain development is focused on input and processing levels.</p>	<p>Value chain across the three levels are not well articulated.</p>
<p>Baringo 2013-2017 CDDP: ✓ 2018-2022 CDDP: ✓</p>	<p>The County Government plans to distribute cotton seeds to farmers. Under the 2013-2017 CDDP the County planned to increase land under cotton production to 25,000 hectares through farmer mobilisation, training and supply of farm inputs.</p>	<p>There exists one operational ginney (Salawa Cotton Ginney) that is privately owned. The County plans to further revive the cotton ginneries. Similar plan was articulated under the 2013-2017 CDDP, which was to be realised through Public Private Partnerships (PPPs).</p>	<p>No explicit interventions.</p>	<p>Value chain development is focused on input and processing levels.</p>	<p>Value chain across the three levels are not well articulated.</p>
<p>Taita Taveta 2013-2017 CDDP: ✓ 2018-2022 CDDP: X</p>	<p>No explicit interventions under the 2018-2022 CDDP. This contrasts with the 2013-2017 CDDP that identified priorities such as sensitization and training of farmers and marketing support.</p>	<p>The 2013-2017 CDDP sought to promote cotton value addition through purchase of handlooms.</p>	<p>No explicit interventions regarding cotton and apparel (apart from marketing of cotton at the farm level).</p>	<p>The first CDDP had proposed interventions at the input and processing levels.</p>	<p>Policy strategies to promote cotton-textile-apparel value chain is not sustained. As noted, there were specific plans under the first CDDP but no the second one.</p>

County	Value chain level (2018-2022 CIDPs)			Policy synergies	Policy gaps/ constraints and implications
	Input Level	Processing Level	Market Level		
Nairobi 2013-2017 CIDP: <b>X</b> 2018-2022 CIDP: ✓	No explicit interventions.	No explicit interventions.	The County Government has prioritized enforcement of market access through organizing exhibitions in textiles and training for youth and women on entrepreneurship activities in the same areas as an action based initiative in the branded Market Centre of Excellence to entrench these practices to spur the sector.	Value chain development is focused on the market level.	Value chain across the three levels are not well articulated.

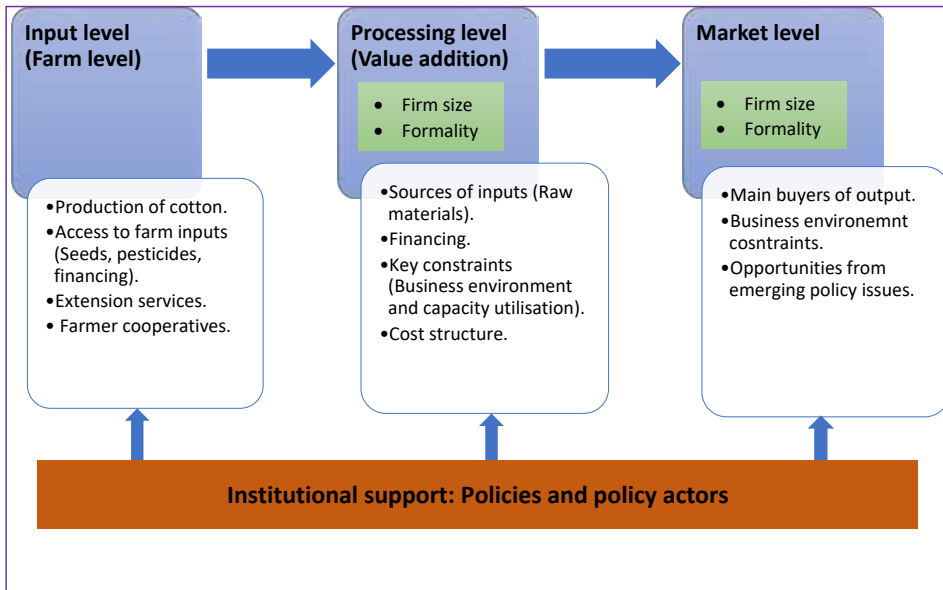
Source: Authors' compilations from 2013-2017 and 2018-2022 CIDPs as published on the Council of Governors website (Council of Governors, 2020). (✓) means CIDP provides for specific interventions on cotton-textile-apparel value chain development. (X) means no specific intervention is stated.

### **3. Methodology**

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

This study is anchored on the Value Chain Analysis (VCA), which is an analytical tool to assess constraints and competitiveness of a sector (World Bank, 2015). Value chain encompasses the range of activities that are required to source and transform inputs to final product and delivery to the final consumers (UNIDO, 2009a; 2009b). Although the concept of value chain approach dates to the 1960s and 1970s, it received increased attention with Michael Porter's (Porter, 1985) work, which analysed competitiveness of firms through sequential activities for sourcing inputs, transforming input through value addition and delivering to customers (UNIDO, 2009a). The initial formulation of VCA by Porter (Porter, 1985) was anchored on creating a competitive advantage for the firm as a strategy for superior performance. Over time, VCA has received extended application at firm level, sectoral level, country level or global level with respect to a particular product. From a theoretical development, VCA has been appreciated along various themes such as strategic positioning (how a firm differentiate itself from its rivals); vertical integration (synergy among different firms); and consideration of internal and external forces (Gooch, 2005). Rather than considering the sequence of activities and constraints within an enterprise as originally articulated (Porter, 1985), this study extends the analysis to interaction of enterprises with other enterprises and policy actors.

The VCA has particularly proved useful in instances where one is interested in identifying policy intervention opportunities in relation to participation of policy actors and improvements of their performances, interactions of actors and governance in the value chain, functioning and competitiveness of the value chain (UNIDO, 2009a). It is applied by various policy actors including public policy institutions, development partners, and private and industry-based organizations. This approach has been used globally to tackle various policy issues either by countries or by organizations. The VCA is increasingly applied in development of agro-industries to leverage role of agriculture in economic growth and poverty alleviation (UNIDO, 2009b). For instance, in the United States of America (USA) and neighbouring countries such as Mexico, Costa Rica and Dominican Republic, VCA was applied to firms in various industries ranging from high value agriculture to business services (Gereffi, 2020). The VCA carried out in these countries and their respective targeted sectors guided policy interventions for job creation, technological developments and further enhanced integrations into the global value chains. Within the local context, KIPPRA and World Bank studies employed value chain analysis to provide policy insights on cotton-textile-apparel sub-sector to inform development strategy for the sub-sector (Ikiara and Ndirangu, 2003; World Bank, 2015). The VCA in developing countries such as Kenya is relevant given that only about 40 per cent of agricultural production undergoes industrial processing, compared to 98 per cent for high income countries (UNIDO, 2009b). The consequences are significant if translated into value addition: the value addition of agricultural products per tonne of agricultural produce in developing countries is only 22 per cent that of high income countries (UNIDO, 2009b).

**Figure 3.1: VCA indicators for cotton-textile-apparel sub-sector in Kenya**

*Source: Author's conceptualization*

The VCA for this study is clustered into three levels: input, processing, and market, with the respective issues considered indicated in Figure 3.1. Input level relates to sourcing and production of raw materials, while processing relates to human and non-human resources required for transforming the raw materials and the associated constraints. The sources of raw materials is important in terms of constraints enterprises could face. Additionally, it can have implications particularly for Micro and Small Enterprises (MSEs) with regard to learning opportunities that are available, depending on nature of the suppliers of input. Market level issues relate to main buyers of products from textile and apparel enterprises, market access related constraints and opportunities from emerging policy developments. As in the case of input sourcing, linkages through market channels can have important implications for MSEs in terms of learning and market access opportunities. Institutional support in terms of policies and policy actors cut across the three clusters of VCA as conceptualized in this study.

### 3.2 Data and Data Sources

The contextual policy review background in Section 2 is enriched by stakeholder mapping and analysis to provide insights on the linkages among the industry actors to demonstrate strengths and weaknesses along the value chain. This qualitative analysis is corroborated by quantitative micro-level data, including the World Bank Enterprise Survey for Kenya 2018, and the 2016 Micro, Small and Medium Enterprises (MSMEs) Survey undertaken by the Kenya National Bureau of Statistics. The two micro-level survey data are complementary in that the World



Bank Enterprise Survey covers formal enterprises with five employees or more in 10 counties with a large share of industrial activities in the country (Nairobi, Kiambu, Nakuru, Mombasa, Kisumu, Kilifi, Machakos, Kirinyaga, Uasin Gishu and Trans Nzoia). The survey covered 1,001 enterprises in manufacturing and service sectors, of which 58 enterprises were in the textile and apparel manufacturing. The 2016 MSME Survey<sup>4</sup> covered enterprises with 1 to 99 employees in the formal and informal sectors across the 47 counties. It covered 974 MSMEs in the textile and apparel manufacturing. Thus, while the World Bank Enterprise Survey supports analyses on formal enterprises of 5+ employees the 2016 MSME survey supports analyses on Micro and Small Enterprises (MSEs) within formal and informal sectors. Additional aggregated secondary was sourced from Economic Surveys and Statistical Abstracts published by KNBS to show trends such as valued added and exports. Descriptive statistics are used for analysing the data.

Each of the objectives are analysed along the value chain concept clustered into input level, processing, and market. Objective (i) is addressed through review of institutional framework and literature. Stakeholder analysis first identifies the actors and then analyse their respective roles along the value chain. Objective (ii) is addressed using the 2016 MSME Survey data and the 2018 World Bank Enterprise Survey data for Kenya. Aggregate data from the Economic Surveys and Statistical Abstracts are used to augment objective (ii) with regard to market access trends. The three specific objectives are broadly mapped onto three broad value chain stages as shown in Table 3.1. The mapping of key stakeholders' cuts across the three broad value chain stages - input market, processing (value addition) and the product market.

**Table 3.1: Value chain thematic states, objectives and data sources**

Objective	Data Source
1. Mapping of stakeholders in the cotton-textile-apparel value chains.	<ul style="list-style-type: none"> <li>• Review of policy and legal framework.</li> <li>• Literature review</li> </ul>
2. Analysing constraints and opportunities along the cotton-textile-apparel sub-sector at the input, processing, and market access levels.	<ul style="list-style-type: none"> <li>• 2016 MSME Survey;</li> <li>• World Bank's 2018 Enterprise Survey;</li> <li>• Review of empirical literature.</li> <li>• KNBS Statistical Abstracts.</li> </ul>
3. Review and draw lessons from selected countries.	<ul style="list-style-type: none"> <li>• Review of empirical literature and policy documents.</li> </ul>

*Source: Authors' construct*

<sup>4</sup> MSMEs are defined by employment size: Micro enterprises (1-9 employees); small enterprises (10-49 employees); and medium enterprises (50-99 employees).

---

## **4. Results and Discussions**

### **4.1 Stakeholder Analysis**

Stakeholder analysis as a policy tool is used to generate knowledge about chain actors (individuals and organizations), their interactions and roles in development process (Varvasovszky and Brugha, 2000). The analysis in this section focuses on mapping and identifying the roles and relationships of stakeholders in the cotton-textile-apparel sub-sector. The analysis looks at these aspects of the stakeholders at the input, processing, and the market levels of the value chain. The roles of some actors, however, cut across the three levels of value chain (i.e. they have cross-cutting roles and contribute to the overall development of cotton-textile-apparel value chain) as shown in Figure 4.1.

#### **a) *Primary (input) level***

Cotton farming in Kenya is mainly practiced by small scale farmers in the rural areas. The 2019 Kenya Population and Housing Census shows there are 22,920 households practicing cotton farming in 12 counties (KNBS, 2019a), as illustrated in Appendix 2. Four counties (Homa Bay, Siaya, Kitui and Meru) accounts for about 50 per cent of these households.

The Ministry of Agriculture, Livestock, Fisheries and Cooperatives provide the overall policy formulation role in terms of agriculture and cooperative development. The Ministry closely work with the Agriculture and Food Authority (AFA). AFA resulted from consolidation of various agricultural sector institutions in 2013, including the Cotton Development Authority, Sisal Board of Kenya, Coffee Board of Kenya, Tea Board of Kenya, Kenya Sugar Board, Coconut Development Authority, Horticultural Crops Development Authority, and the Pyrethrum Board of Kenya. AFA currently operates through directorates aligned to these previous institutions and the one relevant to cotton is the Fibre Crops Directorate. Fibre crops include cotton and sisal. The Fibre Crops Directorate is mandated with regulation, development, and promotion of fibre crops through the Crops Act No. 16 of 2013 and the AFA Act No. 13 of 2013.

The cotton growers' cooperatives play a significant role in cotton production and marketing due to advantages in economies of scale and negotiation power. Cotton production is largely smallholder-based, characterized by high volatility of the commodity prices as one of the major constraints faced by farmers, which weakens its competitiveness, thus limiting their scale of participation in the value chain. The competitiveness bottlenecks stifling the smallholder production include limited access to markets, high inputs costs coupled with weak extension services and capacity building programmes. At the farm gate level, constraints emanate from various issues including transport logistics; marketplace traceability for raw cotton; minimum floor price before and after harvesting and further sanctity of the contracts that farmers face when such contracts are not honoured by their cotton buyers. Smallholder cotton farmers at the beginning of the value chain gain their institutional support under AFA through the Fibre Crops Directorate.

AFA collaborates with various institutions and government departments, including the Kenya Agriculture Research and Livestock Research Organization (KALRO), Kenya Industrial Research and Development Institute (KIRDI), Kenya Plant Health Inspectorate Service (KEPHIS), Kenya Bureau of Standards (KEBS), National Irrigation Board (NIB), Kenya Industrial Property Institute (KIPI), Kenya Industrial Estates (KIE), the Ministry of Industrialization, Trade and Enterprise Development (MOITED), Ministry of Water and Irrigation, the National Treasury and Planning, Ministry of Agriculture, Livestock, Fisheries and Cooperatives, Ministry of Labour, Co-operatives (Societies and Unions), cotton growers, ginners associations, spinners, weavers, development partners and Non-Governmental Organizations (NGOs). The mandates of some of these institutions, however, extend to other levels of the value chain. For instance, MOITED have policy roles in promoting investments, industrialization, and trade.

Besides national government institutions, county governments also play a vital role in value chain development at the input level through devolved functions, including agriculture (e.g. crop and animal husbandry and plant and animal disease control) and cooperatives under trade development. Provision of extension services, farm inputs and infrastructure such as storage facilities are vital support services by county governments at this level of the value chain. Mainstreaming these aspects in the county CIDPs can provide synergy with the national government policy interventions. However, as seen from review of CIDPs in Section 2 (Table 2.2), there are varied levels of interventions by county governments.

### ***b) Processing (value addition) level***

The MOITED plays a key role in formulation and implementation of industrialization and trade policies through its two state departments: The State Department for Industrialization and the State Department for Trade. MOITED closely works with state agencies such as KIRDI, KEBS, KenInvest; development partners such as the World Bank and Japan International Cooperation Agency (JICA); and private sector associations including Kenya Association of Manufacturers (KAM), and Kenya Private Sector Alliance (KEPSA). Other actors at this level include the Cotton Growers Association, and the Association of Fashion Designers.

Majority of the enterprises in the cotton-textile-apparel sub-sector operate within the informal sector. Within the formal sector, the report on the 2017 Kenya census of establishments shows that there are 139 textile manufacturing establishments, of which 55.4 per cent are MSEs and 44.6 per cent medium and large establishments (KNBS, 2017a). Regarding the manufacture of wearing apparel, there are 600 establishments, of which 92.7 per cent are MSEs and 7.3 per cent are medium and large establishments (KNBS, 2017a). The micro enterprises alone, which employ 10 persons or less, account for about 89 per cent of the formal apparel establishments. The 2016 MSME Survey (KNBS, 2016) shows that there are 2,734 textile MSMEs and 72,602 apparel enterprises, mostly within the informal sector. Combining the results from the 2016 MSME Survey and the Report on the 2017

Kenya Census of Establishments, it can be inferred that within the informal sector, there are 2,595 textile establishments and about 72,000 apparel establishments.

Cotton ginners who are tasked with the ginning of cotton into lint get support services from various research organizations, including KALRO, which is the umbrella body that brings together all the research institutions mandated to carry out research in food crops, horticultural and industrial crops, and further promotes robust agricultural research on these crops. The ginners also seek institutional support from the Kenya Cotton Ginners Association (KCGA). Just like farmers at the input level, ginners along the value chain are also constrained. The key bottlenecks faced by ginners result from managing cotton seed input supplies and cotton lint price, technology upgrade, financing costs both for capital expenditures (CAPEX) and operating expenditures (OPEX), and cost of doing business, with sanctity of contracts and commitments posing significant risks in their agility to do business (Regional Agricultural Trade Expansion Support Programme/RATES, 2003; Monroy, Mulinge and Witwer, 2012). At the core of the cotton-textile-apparel sub-sector value chain lies the spinners and integrated millers who do cotton importation and use locally processed products from ginners. There are also vibrant private sector associations including the Kenya Association of Manufacturers (KAM) and the Kenya Apparel Manufacturer Exporters Association (KAMEA). KAM ensures that the manufacturers' interests are safeguarded both locally and internationally by lobbying for conducive policies and market opportunities. The market access goals are achieved through various strategies, including trade information on local, regional and global markets such as East African Community (EAC), Common Market for Eastern and Southern Africa (COMESA), South African Development Community (SADC), African Caribbean and the Pacific-European Union (ACP-EU). The Association further pushes for exports under duty remission scheme, and the Africa Growth Opportunity Act (AGO). The advocacy/lobbying services on behalf of its members targets budgetary allocation to the manufacturing sector, business environment (Cost of doing business resulting from energy, taxation, illicit trade, and policy and regulatory issues). Textile mills are also faced with constraints along the value chain that include high cost of upgrading technology; cost of utilities and costs of managing effluent from the plants owing to increasing interests in environmental conservation. The textile mills also face unpredictable raw material traceability and supply with such sources being unsustainable.

### **c) *Market level***

The MOITED through the State Department for Trade formulates policies on domestic and international trade. The Ministry closely works with state agencies, including the Kenya Export Promotion and Branding Agency (KEPROBA). Some of the policy measures on markets include the "Buy Kenya Build Kenya" strategy that seeks to promote access to markets for domestically manufactured products. There are also regulatory interventions in terms of public procurement preference and reservations that require public institutions to allocate at least 30 per cent of their procurement value to enterprises owned by women, youth, and persons

with disabilities. These measures are particularly intended to benefit MSEs owned by this target group. The State Department for Trade also facilitates access to international market opportunities through trade negotiations and export fairs. Further, it hosts the Kenya Trade Portal – an online information platform with market access requirements for exports and information on Kenyan suppliers. Local suppliers can post their products on the portal for viewing by internal and local buyers.

The county governments also play significant role in trade development. Under the Fourth Schedule of the Constitution of Kenya, trade development and regulation functions are devolved. The devolved functions under trade include markets, trade licenses, fair trading practices and cooperative societies. The county governments also have a vital role of improving the business environment regarding aspects such as county roads, street lighting and solid waste disposal.

The private sector associations including the Kenya National Chamber of Commerce and Industry (KNCCI), KEPSA and the Handloom Weavers' Marketing Cooperative lobby for policies on market developments and access to the national, regional, and international markets. The Association of Fashion Designers, and Handloom Weavers' Marketing Cooperative were formed to promote the fashion industry. This role, however, lags despite the many existing opportunities the industry provides through current initiatives such as the AGOA.

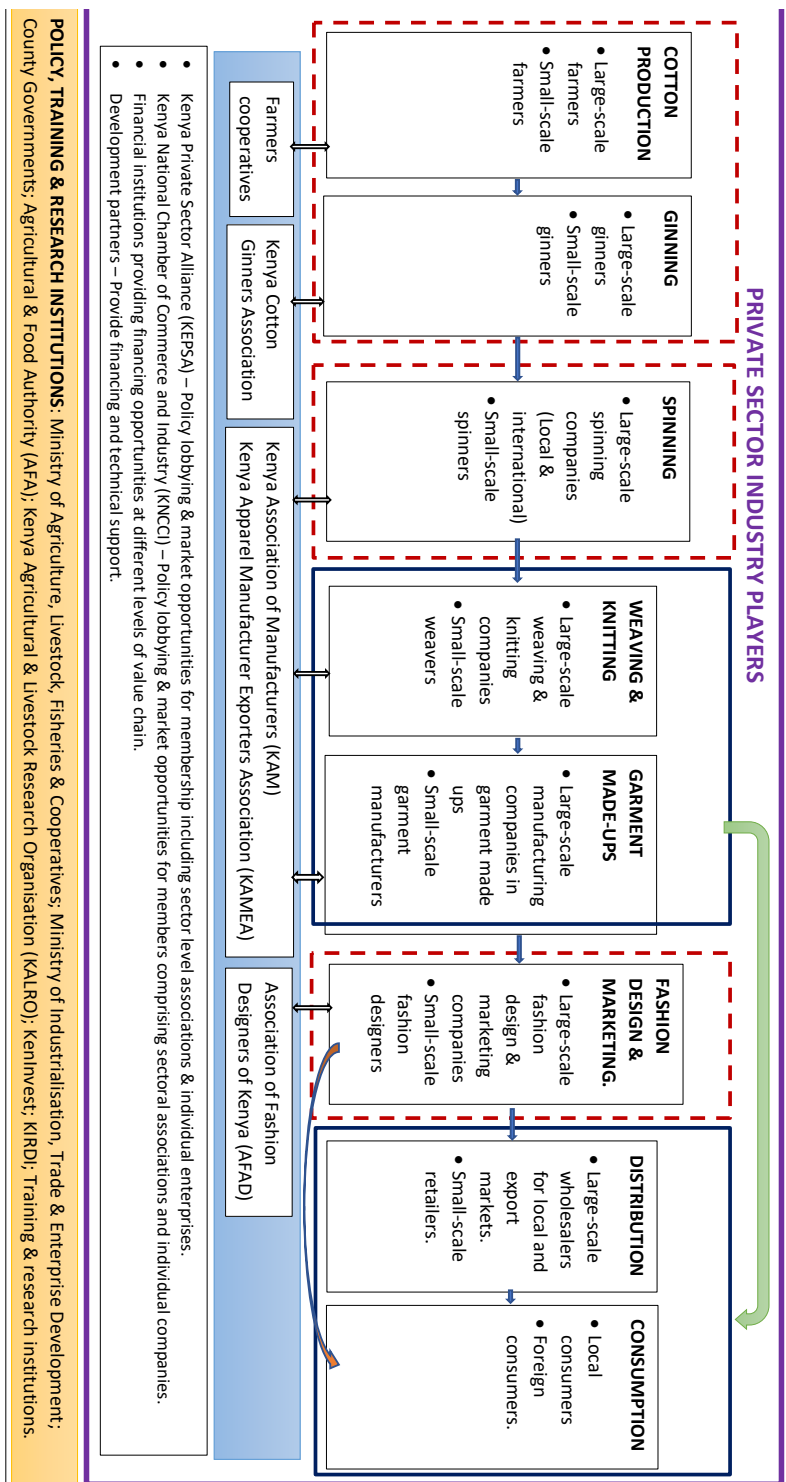
The challenges at this level of the value chain include inadequate institutional capacity due to weak collaborative networks. The fashion and design industry specific constraints include limited access to finance, which hinders the exploitation of available opportunities. Furthermore, weak business management skills render the industry less competitive within increasingly competitive international markets. Other related constraints that are external include supply and costs of fashion fabrics, and market access logistics and shipping outside the domestic market, which generally hump value chain participation. There is also low awareness on some of the existing opportunities. Non-tariff barriers within the regional and international markets such as COMESA, EAC and tripartite agreements with the Southern African Development Community and AfCFTA further limit the gains at the market level.

### **Summary of stakeholder Aanalysis**

The stakeholder analysis demonstrates potentially significant roles of various stakeholders along the value chain, ranging from private sector (farmers, cooperatives, enterprises, and private sector associations), government institutions at the national and county levels. There are also financial institutions and development partners that provide financing and technical support at various levels of the value chain.

Some of the gaps relate to input level in terms of support to the farmers, bargaining power of farmers due to weak organizational structure, and market access challenges owing to weak networks and access to information on available opportunities.

**Figure 4.1: Cotton-textile-apparel stakeholder mapping along the value chain**



## **4.2 Constraints and Opportunities Along the Cotton-Textile-Apparel Value Chain**

This section provides analysis of the constraints and opportunities of the Kenyan cotton-textile-apparel sub-sector at three levels: input, processing (value addition) and market access. Additional details on constraints and cost structure at the processing level are provided in Appendix 3 and Appendix 4.

### **4.2.1 Farm (input) level constraints and opportunities**

Cotton production in Kenya has diminished in recent decades compared to the 1980s and 1990s. As illustrated in Table 4.1, seed cotton production has declined from about 38,000 tonnes in 1980 to 3,000 tonnes as of 2019; over 90 per cent decline in quantity produced. Associated with this reduction is also the dwindling of cotton cooperative societies and the membership of those societies. At least two factors perhaps explain these trends. First, investments in agriculture have generally been on a declining trend as reflected by share of agricultural input to GDP. This share has declined from 3.4 per cent in 1990 to 0.8 per cent in 2019. Second, market liberalization in the early 1990s dampened growth of local industries and therefore farm-level production through weakened backward linkages. The statistics in Table 4.1 generally show improvements from 1980 to 1990, then declining trends afterwards, suggesting possible impacts of market liberalization.

**Table 4.1: Cotton production indicators**

	<b>1980</b>	<b>1990</b>	<b>2000</b>	<b>2010</b>	<b>2019</b>
Seed cotton production ('000 tonnes)	38.1	18.8	0.5	18.1	3.0
Membership of cotton cooperative societies and unions ('000)	115.0	168.0	29.0	34.0	33.0
Number of cotton cooperative societies and unions	39.0	81.0	86.0	59.0	62.0
Agriculture input (total) as per cent of GDP*	0.2	3.4	1.3	1.0	0.8

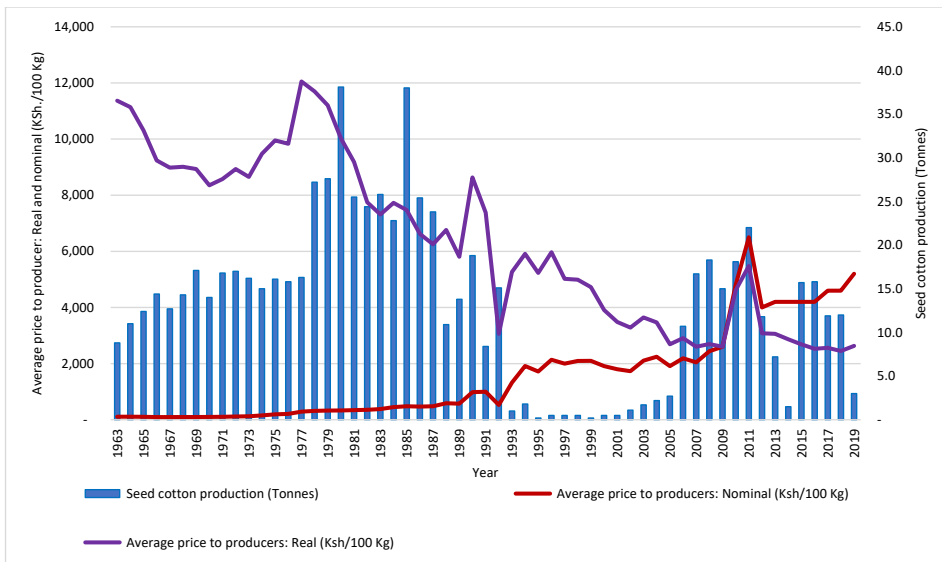
*Source: KNBS (1995, 2005, 2018 and 2019), Statistical Abstracts (*

*Note: \* Refers to input for the overall agriculture sector.*

While the average nominal price to producers for cotton has generally demonstrated upward trends, there has been a deprivation of the producer incomes in real terms over the years. Figure 4.2 shows the seed cotton production and the real and nominal average price to producers for cotton from 1963 to 2019. The production of seed cotton was highest in 1978 and 1987, and lowest post-market liberalization was witnessed in the early 1990s. The market liberalization improved producer incomes as reflected in growth of the real price to producers between 1993 and 1997. There have been some improvements under two policy regimes post-2000 Economic Recovery Strategy for Wealth and Employment Creation 2003-2007

(Government of Kenya, 2003), and the Kenya Vision 2030 (Government of Kenya, 2007) from 2008 onwards. There have been some transient decline in production between 2013 and 2014, which coincides with the period the county governments were being rolled out. Some coordination challenges were perhaps experienced during this period of devolution, as some functions such as agriculture (including crop husbandry) and trade development were devolved as provided for in the Fourth Schedule of the Constitution of Kenya. The dampened production in 2013-2014 (and in 2017-2018) also coincides with election years, in which private sector investors may postpone some of the investment decisions.

**Figure 4.2: Seed cotton production trends and average price to producers: 1963-2019**



*Data source: KNBS (Various), Statistical Abstracts; Real price is based on the annual consumer price index for Kenya, with 2009 as the base year.*

#### 4.2.2 Processing level constraints and opportunities

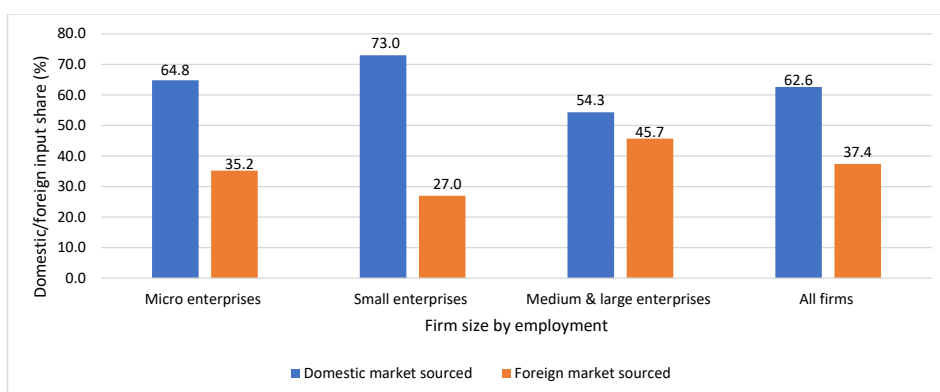
##### a) *Sourcing of inputs*

Formal firms in the cotton-textile-apparel sub-sector largely source their intermediate inputs from domestic markets, though the magnitude of dependence varies by firm size (Figure 4.3). The MSEs tend to have relatively higher share of domestic intermediate inputs compared to medium and larger enterprises. These patterns can have implications in terms of the nature and magnitude of constraints the firms in the sub-sector face, depending on how challenges emanate from local or international markets. Given that medium and large firms have relatively



higher share of imported intermediate inputs, they are likely to experience constraints such as those related to international trade with respect to issues such as global supply chain disruptions. For instance, as a result of the COVID-19 pandemic in 2020, the cotton-textile-apparel value chain was severely affected due to disruptions of global supply chains and depressed demand in major export destinations such as the European and the US markets (Teodoro and Rodriguez, 2020). On the contrary, shocks that impact intermediate inputs originating from the domestic market are expected to disproportionately impact on MSEs. This, for instance, includes effects of floods experienced in Kenya during the first half of 2020, which aggravated the adverse impacts of the COVID-19 pandemic.

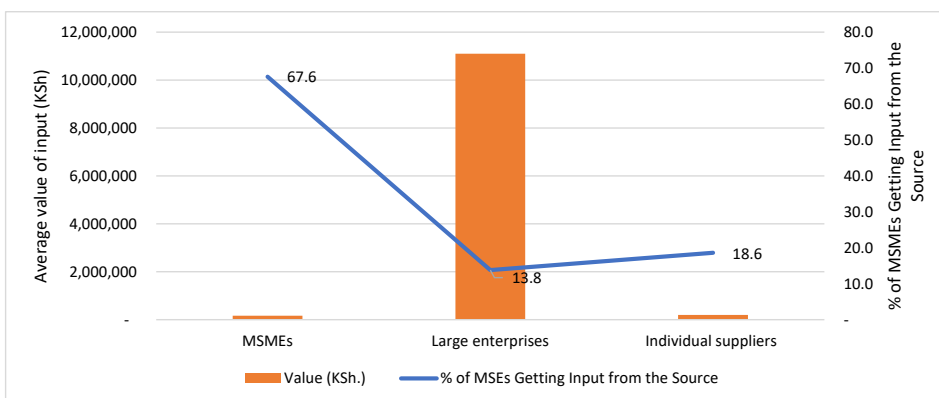
**Figure 4.3: Source of inputs by firm size - formal sector textile and apparel manufacture**



*Data Source: World Bank (2019), Micro-enterprises: < 10 employees; Small enterprises: 10-49 employees; Medium and larger enterprises: 50+ employees*

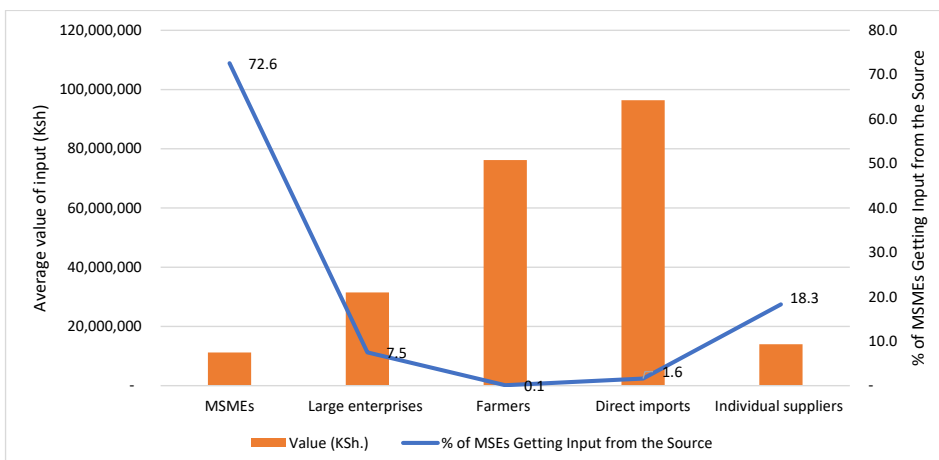
Both formal and informal MSEs source their inputs largely from MSMEs, but informal ones rely on more diversified input sources. Figures 4.4a and 4.4b elaborate on the main sources of inputs for formal and informal MSEs. Informal textile and apparel MSEs sourcing inputs from MSMEs are slightly higher (72.6%) compared to formal ones at 67.6 per cent. This suggests limited opportunities for textile and apparel MSEs to benefit from linkages with large enterprises, say through technology embedded in supply chain networks. Formal textile and apparel MSEs report that they source inputs from only three sources (MSMEs, large enterprises and individual suppliers) compared to five sources reported by informal textile and apparel MSEs. In terms of value of inputs (proxying intensity of linkages), formal MSEs access inputs largely from large enterprises, compared to informal MSEs whose magnitude of inputs is diversified among large enterprises, farmers, and direct imports. On the positive side, it means that informal MSEs have potential for higher backward linkages through input sourcing from farmers locally.

**Figure 4.4a: Main source of inputs for formal textile and apparel manufacturing MSEs**



Data Source: KNBS (2017b)

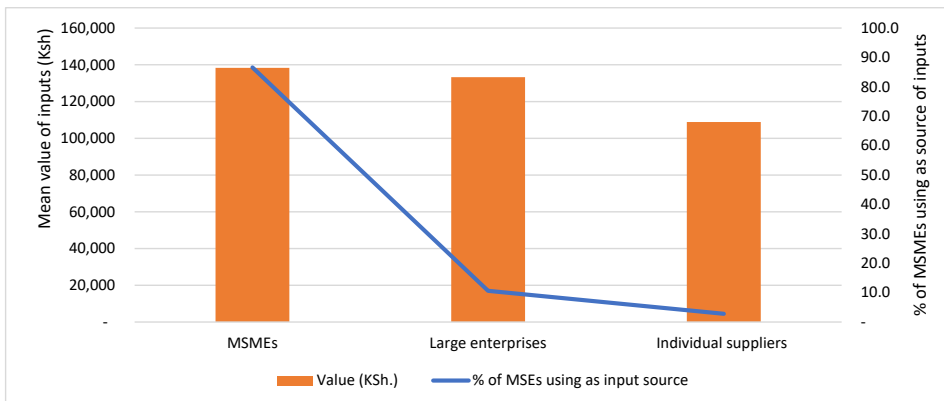
**Figure 4.4b: Main source of inputs for informal textile and apparel manufacturing MSEs**



Data Source: KNBS (2017b)

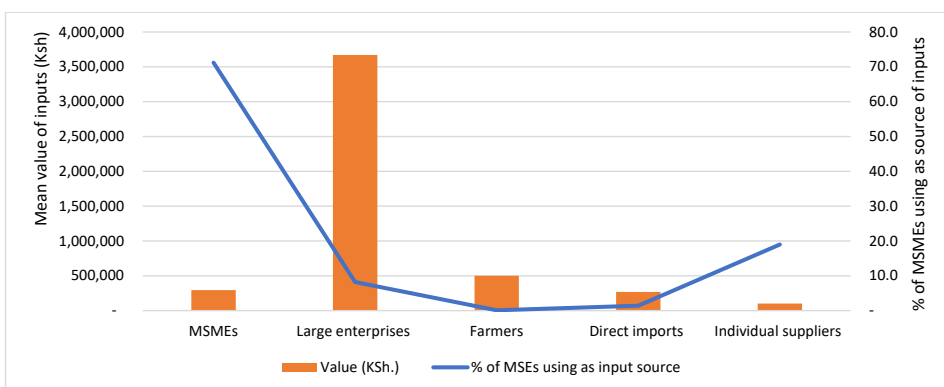
The apparel sub-sector has more diversified input sources than the textile sub-sector. These aspects are illustrated in Figures 4.5a and 4.5b. While both textile and apparel MSEs majorly cite MSMEs as their source of inputs, they differ in terms of value used from different sources. For textile MSEs, the value of inputs is diversified among MSMEs, large enterprises and individual suppliers. In contrast, apparel MSEs disproportionately source from large enterprises. This observation can be explained by the fact that apparel enterprises operate towards the end of the value chain and source inputs from larger textile manufacturers.

**Figure 4.5a: Main source of inputs - Textile manufacturing MSEs**



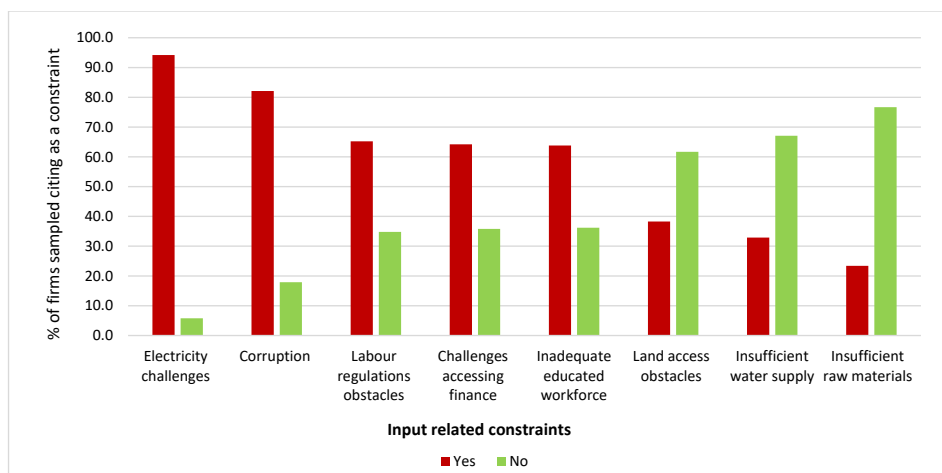
Data Source: KNBS (2017b)

**Figure 4.5b: Main source of inputs – Apparel manufacturing MSEs**



Data Source: KNBS (2017b)

The main input constraints faced by formal textile and apparel manufacturers relate to electricity, corruption, finance, shortage of skilled workforce, labour regulations and challenges accessing industrial land (Figure 4.6). These factors increase the cost of production and, therefore, hinder the competitiveness of locally manufactured products. Weak skills development can also indirectly affect productivity growth of enterprises and, therefore, hinder the competitiveness through depressed economies of scale; that is lost savings in costs that would have been gained through increased level of production for the same level of inputs. Training and education levels are a key driver of Kenya’s manufacturing firms (Heshmati and Rashidghalam, 2016). Corruption is cited by majority of the enterprises after electricity, perhaps as it may be a hindrance to accessing the required public services besides being a direct cost. Certainly, it is acknowledged that the challenge of corruption can also apply at other levels of the value chain, such as access to markets.

**Figure 4.6: Input related constraints faced by textile and apparel enterprises**

*Data Source: World Bank (2019)*

Firm-size disaggregated analyses suggests some variations of input level constraints (Table 4.2). For medium and large firms, the main constraints relate to electricity, access to finance, labour-related issues, and insufficient water supply. For small enterprises, the main constraints relate to electricity, labour regulations, inadequate educated workforce, access to finance and access to land. For micro enterprises, the main challenges cited relate to constraints related to electricity, inadequately educated workforce, access to finance, and labour regulations. The proportion of Micro and Small Enterprises (MSEs) that cite inadequately educated workforce is disproportionately high, perhaps due to their inability to attract skilled workforce as a result of weak resource base. Electricity-related constraints are peculiarly high across the three categories of firm sizes. The other main constraints common to the three categories of firm sizes are access to finance and labour-related issues.

**Table 4.2: Constraints facing formal textile and apparel manufacturing enterprises**

Firm size	Constraint ratings (Yes/No)	Insufficient raw materials	Insufficient water supply	Land access obstacles	Labour regulation obstacles	Inadequate educated workforce	Challenges accessing finance	Electricity challenges	Corruption
Micro enterprises	Yes	21.8	17.2	17.2	39.0	62.9	45.7	78.1	71.6
	No	78.2	82.8	82.8	61.0	37.1	54.3	21.9	28.4
Small enterprises	Yes	29.4	23.0	63.5	93.8	87.5	75.2	100.0	96.2
	No	70.6	77.0	36.5	6.2	12.5	24.8	0.00	3.8
Medium and large enterprises	Yes	19.7	40.7	24.6	49.8	49.1	59.1	92.1	73.8
	No	80.3	59.3	75.4	50.2	50.9	40.9	7.9	26.2

*Data Source :World Bank (2019)*

It is important for policy to gain deeper insights on input-related constraints cited by firms, notably electricity, finance and labour/skills as the key constraints. Among the sampled textile and apparel firms, 89.8 per cent reported they experienced power outages during the past year, with an average of 6.1 monthly outages lasting 3.8 hours, on average. Table 4.3 shows the main cost components of the cotton-textile-apparel manufacturing sub-sector as computed from the World Bank Enterprise Survey 2018 for Kenya. On average, the share of labour costs in annual sales is 32.6 per cent while the share of raw material inputs and electricity are 43 per cent and 9.4 per cent, respectively. The cost structure varies by firm sizes. While in absolute terms, medium and large enterprises have larger average magnitude of the labour, raw material and electricity costs, there are variations when costs are scaled for annual sales. Small enterprises have relatively higher share of labour costs compared to micro enterprises, and medium and large enterprises. Medium and large enterprises have relatively higher share of costs of electricity and raw materials in annual sales. These results show that larger firm size is associated with higher intensity in usage of electricity. The cost of electricity can therefore pose relatively greater constraints to larger firms compared to smaller firms.

Regarding financing, the firms in the cotton-textile-apparel manufacturing sub-sector largely rely on retained earnings for working capital financing, especially by small enterprises (Table 4.4). Medium and large enterprises have relatively higher usage of bank financing of working capital, relative to MSEs. Micro enterprises have peculiarly higher usage of ‘other’ sources of working capital financing, which include money lenders, friends, relatives and other informal social networks.

**Table 4.3: Main cost components of cotton-textile-apparel manufacturing sub-sector**

	Average Costs (Ksh millions)			Costs as % of annual sales		
	Labour	Raw materials	Electricity	Labour	Raw materials	Electricity
Micro enterprises	2.0	2.9	0.2	26.3	22.0	1.9
Small enterprises	11.5	26.1	3.0	35.9	42.7	5.9
Medium and large enterprises	160.0	148.0	77.7	31.7	49.5	14.4
All firm sizes	86.3	80.8	41.5	32.6	43.0	9.4

*Data Source: World Bank (2019)*

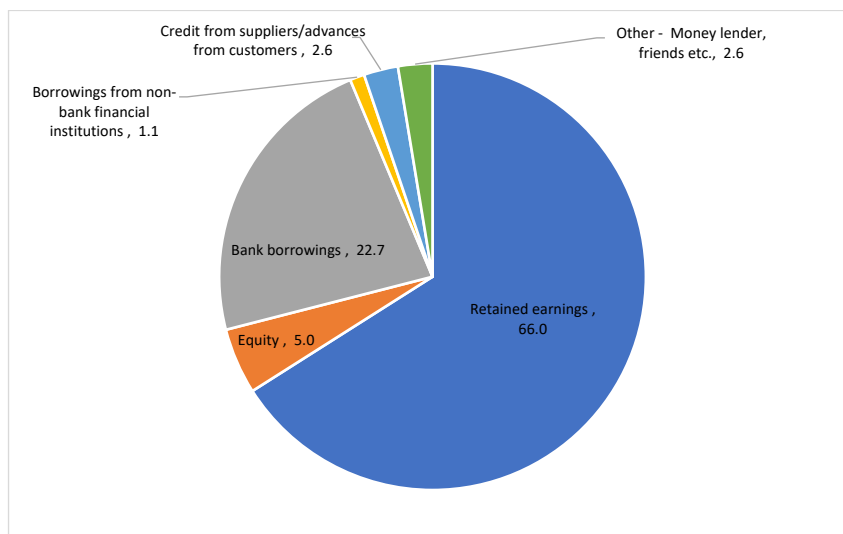
**Table 4.4: Working capital financing by textile and apparel firms**

	Retained earnings	Bank borrowings	Borrowings from non-bank financial institutions	Credit from suppliers/ advances from customers	Other - Money lender, friends etc.
Micro enterprises	56.6	16.6	2.8	8.9	15.2
Small enterprises	81	4.7	6.7	6.6	1.1
Medium and large enterprises	61.9	27.2	0.5	6.8	3.6
All firms	68.5	17.5	3.1	7	3.9

*Data Source (World Bank, 2019)*

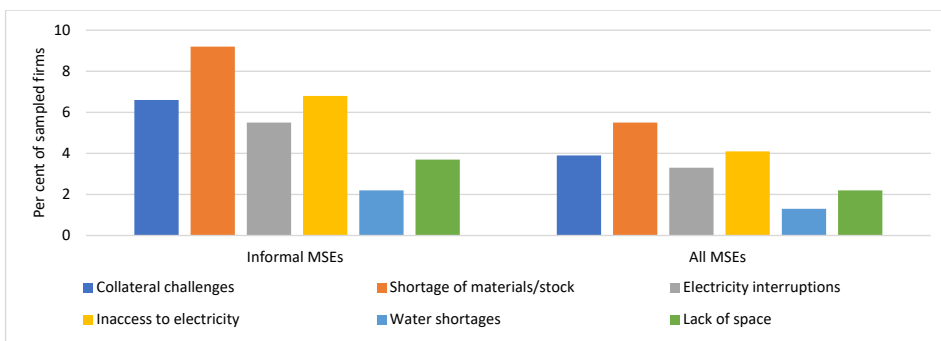
Fixed asset financing (Figure 4.7) is largely dependent on retained earnings (66%) and bank borrowing (22.7%). The fixed asset financing structure mirrors the pecking order theory (Jensen and Meckling, 1976), which asserts that firms chose financing sources according to costs in a hierarchical manner, starting with cheaper sources in the following order: internal financing, debt and equity. Debt financing (bank, non-bank, credit and advances from suppliers and customers, and informal sources) accounts for 29 per cent of fixed asset financing, only second after use of retained earnings. The differences in costs of finance among the three sources is expected to increase with asymmetric information.

Input constraints, particularly financing, is more severe among informal MSEs. Constraints related to collateral, shortage of raw materials, access to electricity and electricity interruptions and lack of space/worksites is about cited by about 67 per cent more informal MSEs compared to all MSEs.

**Figure 4.7: Capital structure of cotton-textile-apparel manufacturing sub-sector**

*Data Source: (World Bank, 2019)*

**Figure 4.8: Input-related constraints facing MSEs**

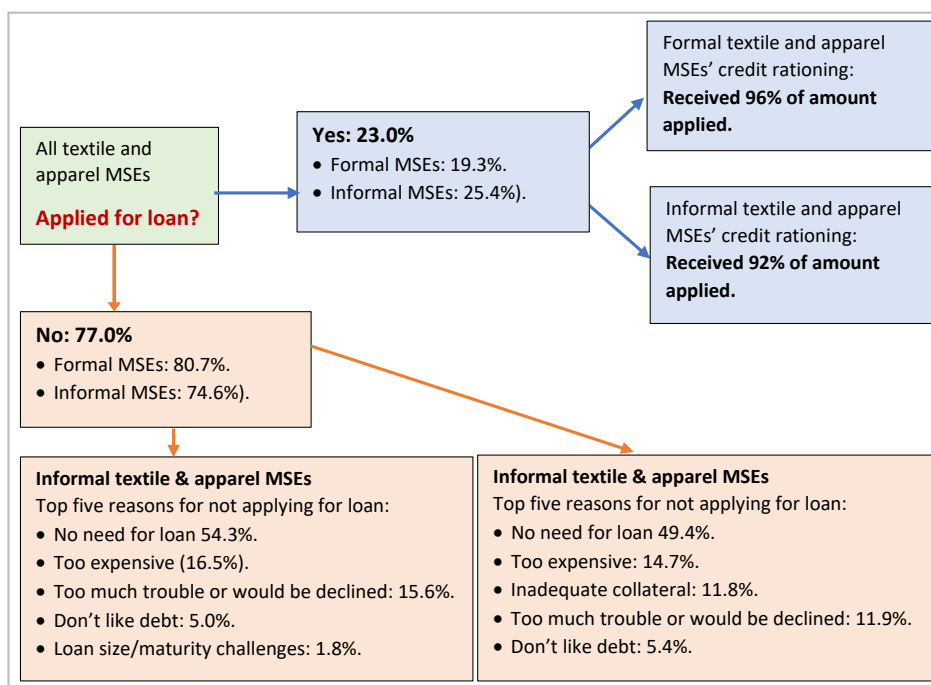


Data Source: (KNBS, 2017b)

While there is a high demand for credit among the informal textile and apparel MSEs, they face disproportionately high levels of credit rationing. As illustrated in Figure 4.9, informal textile and apparel MSEs on average receive only 92 per cent of amount of credit they apply for compared to formal textile and apparel MSEs at 96 per cent. This is even though 25.4 per cent of informal textile and apparel applied for credit compared to a lower proportion of 19.3 per cent of formal textile and apparel enterprises. As shown in Figure 4.9, one reason why informal textile and apparel MSEs access lower credit is attributed to limitations imposed by collateral challenges.

Among the textile and apparel MSEs that do not demand credit, while there are common reasons among formal and informal enterprises, there are also few peculiarities. Lack of interest in credit and high costs of borrowing seems to be common. However, lack of collateral is peculiar to informal enterprises while loan size or maturity challenges rank among the top five challenges for formal MSEs.

**Figure 4.9: Access to credit and credit rationing among textile and apparel MSEs**



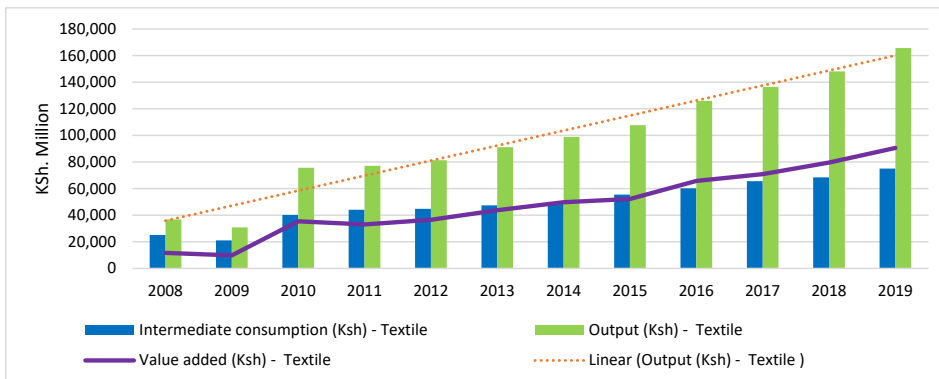
*Source: Authors' calculations and illustration based on 2016 MSME Survey (KNBS, 2017b).*

### **b) Processing/Value Addition Constraints and Opportunities**

Manufacturing value addition is defined as the net output of manufacturing activities, which is sector (or sub-sector) output net of intermediate inputs (Andreoni and Upadhyaya, 2014). From this conceptual definition, undertaking analyses of manufacturing value addition would require inquiry into its constituent components (output and intermediate consumptions) and the factors that affect the wedge between them. From Figure 4.10, it is evident that the growth of the sub-sector value added lags that of the output, perhaps an indication of increasing costs of production. The trend observed between 2009 and 2010 reflects recovery from the 2008/2009 global financial crisis.



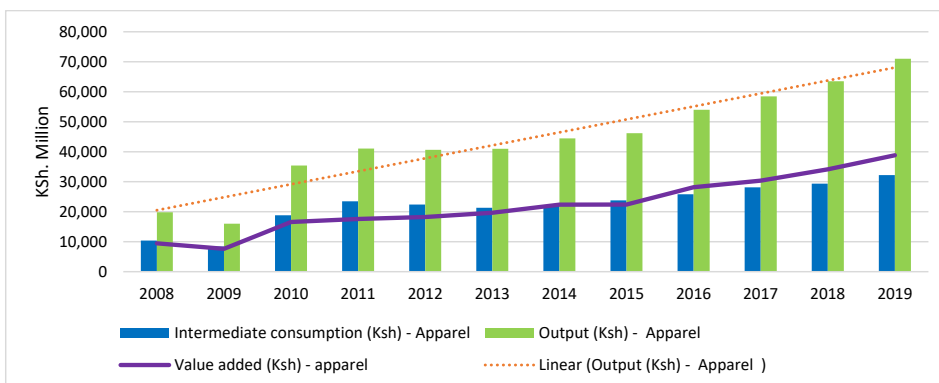
**Figure 4.10: Textile sub-sector output, intermediate consumption, and value additions**



Data Source: KNBS (Various), Statistical Abstracts 2013-2020

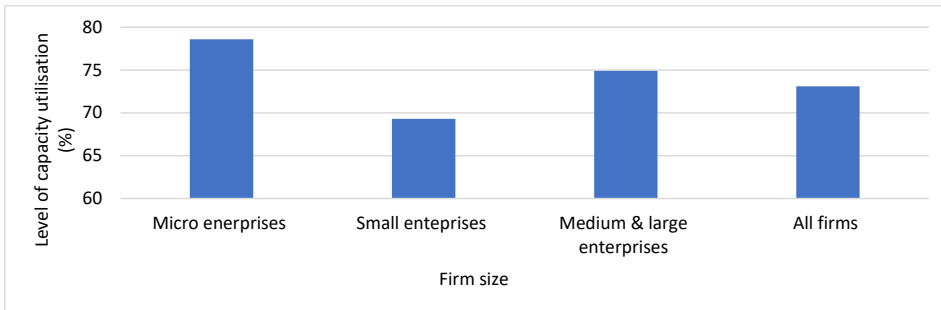
The value-added trend for the apparel sub-sector *vis a vis* output is illustrated in Figure 4.11. Similar patterns are observed as the one for the textile sub-sector. The growth of the value added is generally slowing down.

**Figure 4.11: Apparel sub-sector output, intermediate consumption, and value addition**



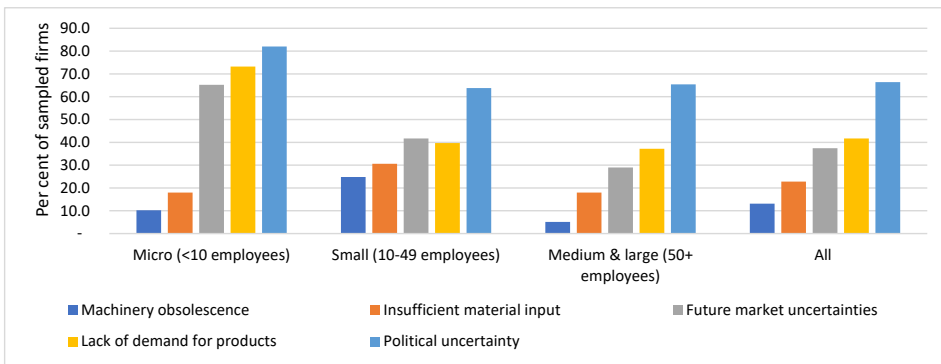
Data Source: KNBS (Various), Statistical Abstracts 2013-2020

Figure 4.12 shows the level of capacity utilization by firm size as reported by the sampled textile and apparel firms. The level of capacity utilization as estimated by sampled firms, ranging between 69.3 per cent for small enterprises to 78.6 per cent for large enterprises, with an average of 73.1 per cent for all the sampled firms in the cotton-textile-apparel manufacturing sub-sector.

**Figure 4.12: Level of capacity utilization by firm size**

*Data Source: World Bank (2019)*

Analysis of the World Bank Enterprise Survey further sought to understand the factors contributing to capacity under-utilization by the sampled firms. The results are shown in Figure 4.13. Political uncertainty, suppressed demand, and uncertainties related to future market prospects were reported as the main reasons for capacity under-utilization among all the textile and apparel enterprises. These constraints are, however, disproportionately cited by a higher number of MSEs compared to medium and large enterprises. Regarding machinery obsolescence, there are more small enterprises citing it as a challenge followed by micro enterprises and medium and large enterprises. A possible explanation regarding small enterprises versus micro enterprises is that the latter use simple technologies and, therefore, they may not experience it as a more pressing challenge compared to small enterprises. Overall, fewer medium and large enterprise cite machinery obsolescence as a constraint to capacity utilization, compared to MSEs.

**Figure 4.13: Reasons for capacity under-utilization**

*Data Source: World Bank (2019)*

### 4.2.3 Market access constraints and opportunities

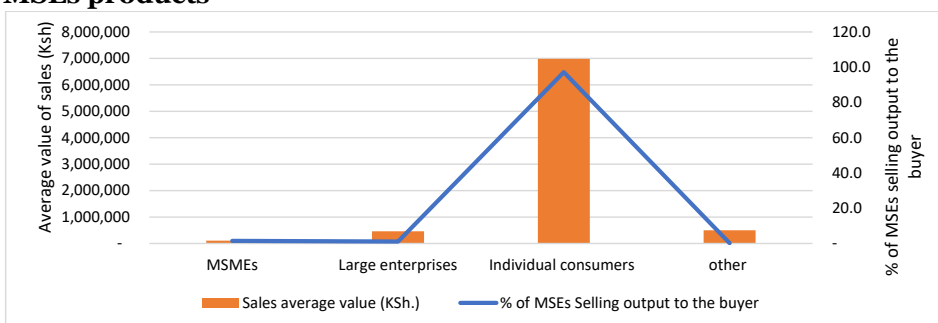
#### a) Market access constraints

Market access has three dimensions regarding harnessing opportunities for manufactured products: local market, regional markets and global markets. The extent to which the opportunities for expanding these markets, to a large extent, depends on cost advantages, trade policies and consumer tastes and preferences.

One of the Kenya Vision 2030 aspirations under the manufacturing sector is growth of exports, particularly in the EAC market. The key constraints emanate from high costs of production that makes the Kenyan products less competitive in the international markets and influx of second-hand products (*mitumba*) and cheaper imports particularly from China. The EAC region imports comprise over US\$ 150 million worth of *mitumba* with the demand projected to increase over the years with the main driving factors being lower costs, quality and durability and widespread availability in urban and rural areas (Katende-Magezi, 2017). In Kenya alone, imports of *mitumba* clothes have growth from about Ksh 2 billion in 2005 to over Ksh 10 billion by 2015 (Katende-Magezi, 2017) and in 2018 was valued at US\$ 167.2 (Ksh 17 billion) (UN Comtrade, 2020). Most of the *mitumba* clothes originate from the United States, the United Kingdom, Germany, China, the Netherlands, Belgium, Canada, Poland and Italy. Thus, domestic market can provide immense opportunities to support growth of the cotton-textile-apparel sub-sector in Kenya.

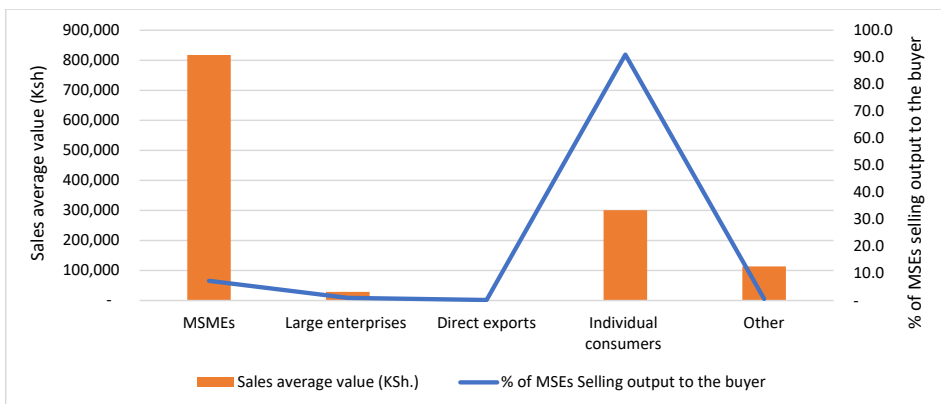
Majority of the Kenyan formal and informal MSEs sell their products to individual consumers. However, as shown in Figure 4.14a and Figure 4.14b in terms of value, formal MSEs sell large quantities to individual consumers compared to informal MSEs who sell large quantities to MSMEs. This means that formal MSEs sell a larger value of their output to individual consumers, unlike informal MSEs that supply large quantities of their output to other MSEs and medium enterprises.

**Figure 4.14a: Main buyers of products from formal textile and apparel MSEs products**



Data Source: KNBS (2017b)

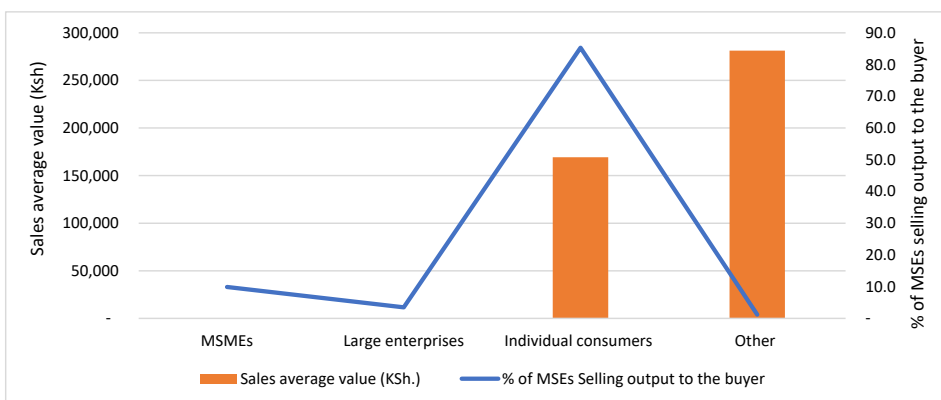
**Figure 4.14b: Main buyers of products from informal textile and apparel MSEs products**



Data Source: KNBS (2017b)

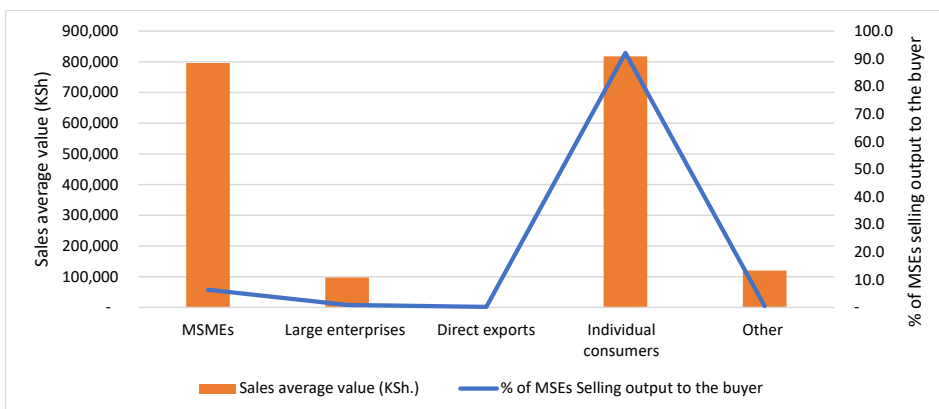
While large proportions of textile and apparel MSEs sell their products to individual consumers, their variations in terms of value sold (Figure 4.15a and Figure 4.15b). Large value of output from textile MSEs is sold to individual consumers and ‘other’ non-disaggregated buyers. For apparel MSEs, output in terms of value is largely sold to MSMEs and individual consumers. Textile MSEs also sell some moderate value of output to large enterprises compared to textile MSEs.

**Figure 4.15a: Main buyers to which textile MSEs sell products**



Data Source: KNBS (2017b)

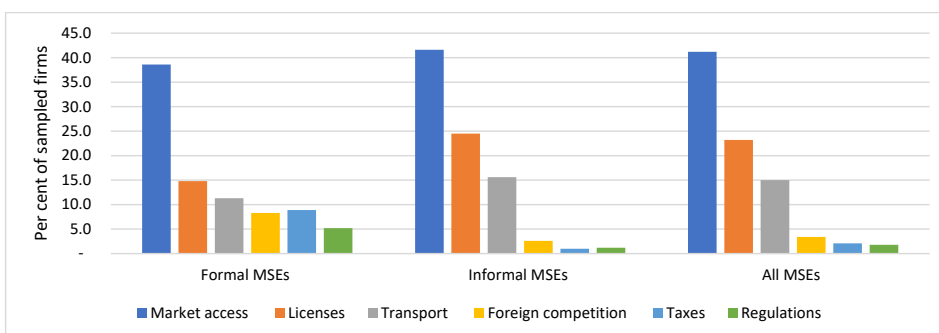
**Figure 4.15b: Main buyers to which apparel MSEs sell products**



Data Source: KNBS (2017b)

The analysis sought to understand constraints faced by the textile and apparel firms in access to markets. The constraints relate to six issues: constrained market access opportunities; foreign competition; poor transport infrastructure; taxes and regulatory framework. The main cross cutting constraints include access to markets, multiple licenses and poor transport, although informal MSEs are disproportionately affected. Foreign competition and taxation challenges are relatively higher among formal textile and apparel MSEs compared to the informal ones. The taxation challenges can, therefore, partly explain why some MSEs remain informal. Foreign competition can be interpreted within export market contexts, or within domestic markets, to the extent that it imposes additional competition and therefore market access challenges locally.

**Figure 4.16: Market level constraints reported by textile and apparel MSEs**



Data Source: KNBS (2017b)

## b) *Market access opportunities*

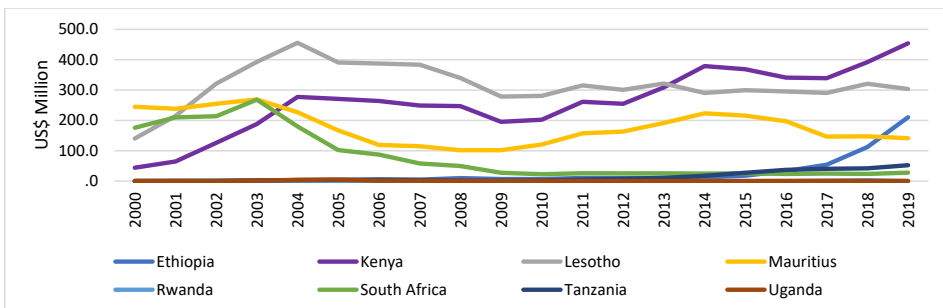
The cotton-textile-apparel value chain faces challenges related to quality of inputs, compliance to standards, costs, capacity utilization and access to markets. As Kenya manufacturing industry seeks to differentiate its products among competitors, there is need to concentrate on the aspects mentioned above to attain a competitive edge. The main opportunities relate to policy developments at the national level and bilateral and multilateral contexts.

At the national level, some of the opportunities relate to construction of SME parks and Special Economic Zones (SEZs); implementation of the "Big Four" agenda through Third MTP of the Kenya Vision 2030; and roll-out of industrial clusters and incubators in the textile industry.

At the regional level, the Africa Continental Free Trade Area (AfCFTA) is an opportunity for attracting investment as a way of harnessing opportunities for an expanded market. The key incentives under AfCFTA relates to expanded supply market, reduced trade restrictions in form of harmonized rules of origin and elimination of non-tariff barriers, and free movement of human capital and raw materials that can support industrial growth.

At the international level, the African Growth and Opportunities Act (AGOA) that has been extended in 2015 by 10 years to 2025 provides a boon for export markets in the US. AGOA provides for duty free and quota free exports of eligible products to the US market from eligible Sub-Saharan African (SSA) economies. Such trade agreement has had a pivotal role in attaining sustainable growth in the cotton-textile-apparel sector. Kenya has been a beneficiary of AGOA since its inception in the year 2000. After the 2008/2010 global financial crisis, Kenya has realized a steady growth in AGOA exports of textile and apparel products (Figure 4.17). However, despite the trade agreement, Kenya pales when compared to other developing countries such as Bangladesh. Other close competitors including Lesotho and Mauritius demonstrate sluggish performance post the global financial crisis compared to Kenya.

**Figure 4.17: Textile and apparel exports to the US under AGOA (US\$): 2000-2019**



Data Source: United States International Trade Commission (2020)

### **4.3 Lessons from Review of Selected Countries**

- i) Lessons from other countries are drawn from Vietnam, Ethiopia and India. As revealed in Table 1.1 of the Introduction section, the three countries have experienced significant growth in employment and export earnings from development of the cotton-textile-apparel sub-sector. Policy prioritization of the cotton-textile-apparel sub-sector in the Kenya Vision 2030 and its implementing MTPs are premised on the similar agenda of employment growth and income generation. The reviews are detailed in Table 4.5, reveal the following insights: at the input level, it is imperative to support production of cotton through access to suitable land and development of the value chain downstream (processing level) to provide market assurance for farmers.
- ii) At the processing level, key interventions include provision of favourable business environment that promotes low cost of production through industrial clusters, low cost of energy, skills availability and upgrading, Research and Development (R&D) investments, innovation and technology upgrading. Further, the findings reveal that increased Foreign Direct Investment (FDI) and presence of global brands manufacturers that facilitate knowledge and technology transfer through linkages with local smaller enterprises is critical in upscaling learning for exploiting opportunities in international competitive markets.
- iii) At the market access level, key insights include the importance of leveraging on domestic demand and international markets. Serving domestic markets can be anchored on production of competitive products (low cost of production and innovation), use of fiscal incentives such as anti-dumping import duty and promotion of culture of demand for locally produced products as in the case of Ethiopia. Harnessing the opportunities in the international markets require expansion of reliable trade agreements; technology upgrading at the input and processing levels to meet international quality standards; and linkages with global brands through sub-contracting arrangements.
- iv) Efficient and dedicated coordination of policy support in investment promotion and trade is also an important element for the cotton-textile-apparel value chain development.

Table 4.5: Review of cotton-textile-apparel value chain practices in other countries

Input Level	Processing Level	Market Level
<p>Vietnam</p> <p>From 2015 the Vietnamese Government is pursuing policy to expand domestic content of cotton-textile-apparel sub-sector. Key strategies include expanding land under cotton production and support to farmers.</p>	<p>Increased FDI and relocation of manufacturing base from economies such as South Korea, Taiwan, Hong Kong, Singapore and China to Vietnam has facilitated investment growth, technology and skills transfer for cotton-textile-apparel sub-sector.</p> <p>Key incentive includes the exemption from import duty for machinery and equipment for textile and apparel manufacturing. Other incentives relate to production of weaving fabrics and waste management equipment. The incentives have facilitated upgrading of machinery and equipment for manufacture of textile and apparel industries to meet international quality standards.</p> <p>There are also initiatives to promote productivity improvements through R&amp;D investments, training and enhanced vertical integration of enterprises. The training interventions seek to enhance supply of skilful low-cost labour while the policy on vertical integration seeks to promote linkages of domestic small enterprises with large foreign-owned exporters. Small enterprises largely supply accessories to the large export-oriented foreign-owned enterprises.</p> <p>These initiatives have been critical for Vietnam given that local manufacturers are largely small and medium enterprises that lack adequate resource base for investment in technology and equipment.</p>	<p>There has been significant export push through multilateral free trade agreements that provide access to international market opportunities such as the Association of South East Asian Nations (ASEAN) Free Trade Area. Further, Vietnam signed trade agreements with the United States and the European Union. The interventions at the processing level, particularly upgrading of technology and supply of skilful low-cost labour seek to enhance exploitation of opportunities in these markets. Vietnamese textile and apparel export markets are diversified across the United States, the European Union, South Korea and Japan. The country employed a strategy of gradual shift from lower end market to high quality markets, anchored on policy support at the processing level.</p>
<p>Ethiopia</p> <p>Interventions at the input (farm level) include low cost of leasing land suitable for cotton production.</p>	<p>Low labour cost in Ethiopia makes textile and apparel products cheaper compared to competitor economies. Further, Ethiopia has low cost of electricity compared to the East African countries such as Kenya.</p> <p>The textile and apparel industries in Ethiopia benefit from increased FDI (through industrial parks, customs duty and income tax exemptions, attractive lease terms in industrial parks), with a focus on creating linkages and skills transfer with local enterprises. The Ethiopian Government initiative reforms to strengthen investment promotion institutions such as the Ethiopian Investment Board, chaired by the Prime Minister. Direct involvement of top government officials enhances facilitative roles to attract investments by lowering bureaucratic decision-making procedures. Further, the Ethiopian Textile Industries Development Institute that was established in 2010 supports development of the sector through investment promotion, training, technical assistance to the firms; Research and Development (R&amp;D) and innovation. These initiatives are aimed at overcoming challenges related to weak skills base and innovation.</p> <p>Other interventions relate to provision of attractive incentives to investors. These include access to subsidised credit by priority sectors such as textile and apparel through the state-owned Development Bank of Ethiopia. Supply of credit is targeted at plant expansion, technology upgrading and working capital financing, thus seeking to address challenges around these areas.</p>	<p>There has been export push interventions; which include policy focus on labour-intensive export-led industrialisation model commencing in 1990s; clearly set targets in export earnings and share of textiles and apparel in total exports; and support for trade logistics through duty drawback, voucher schemes and bonded warehouses. Further, export-oriented incentives for firms are performance-based i.e. incentives are granted once export targets are achieved. This implicit incentive mechanisms push firms towards achieving efficiency in production.</p> <p>Incentives have evolved over time. Initially there has been tariff-based protection of local industries, which have been lessened over the years. Preferential access to export markets such as AGOA and the EU markets have pull effects on the upstream cotton-textile-apparel value chain. Other interventions relate to enhanced value chain linkages with global brands (e.g. Tesco, Walmart, H&amp;M, Primark) who subcontract Ethiopian manufacturers for sourcing inputs.</p> <p>A vibrant demand for locally manufactured traditional wear anchored on indigenous expertise also boosts access to domestic markets. Based on this history, locally owned enterprises largely focus on serving the domestic market, while large foreign-owned enterprises focus on exploiting the export markets.</p>



	<b>Input Level</b>	<b>Processing Level</b>	<b>Market Level</b>
India	<p>India is the World's second producer of cotton. The Indian Government historically promoted use of domestically produced raw materials for textile and apparel manufacture, thus incentivizing local production of cotton. The vast raw material base supports growth of downstream manufacturing value chain.</p>	<p>FDI has been a critical success factor post 2000, incentivized by the Indian Government campaign on "Make in India". This has led to growth of new products and international brands manufactured locally to meet varied consumer tastes.</p> <p>The textile and apparel industries in India are largely indigenous owned due to a national legislation that until 2001 reserved garment manufacture for small-scale industries. Well-developed textile and apparel clusters that specialise in domestic and export markets facilitate exploitation of opportunities in the local and international markets.</p> <p>The Technology Upgradation Fund Scheme provides access to low cost capital for modernisation of textile industry including technology upgrading and investments in common manufacturing facilities. Further, India has a well-developed textile engineering industry that supply low-cost state of the art machinery for technology upgrading, cost and quality competitiveness of the local textile and apparel industries.</p> <p>Special economic zones and special textile parks promote development of textile and apparel clusters – with some specialising in serving domestic markets while others focus on export markets. The Scheme for Integrated Textile Parks (SITP) promotes growth of textile and apparel industries through financing of infrastructure and common user facilities such as machinery and design and training centres that support development of smaller enterprises.</p> <p>Availability of youthful and low-cost skilled manpower meets the needs of the labour-intensive textile and apparel sector. The Indian Government supports skills development for textile and apparel industries through the Integrated Skill Development Scheme for the Textiles and Apparel Sector (ISDS), which provide tailor-made skills development along the value chain. Further, the Scheme for Capacity Building in Textile and Apparel Sector (SAMARTH) supports supply of demand-driven skills.</p>	<p>The Indian Government leveraged on the country's vast youthful population to promote textile and apparel manufacturing to serve the local markets.</p> <p>Import duties on selected textile and apparel products and anti-dumping duties on import of synthetic fibres (e.g. polyester yarn, nylon filament yarn) support access to the domestic market for locally manufactured products.</p> <p>India has a dedicated Ministry of Textiles, with a key mandate of policy formulation, planning, development and market access promotion activities.</p>

Source: Authors' compilation from review of literature: (Roy, 2009; Hossain, 2010; Chemengich, Vaid, Oluwuyi, and Karuiki, 2013; Ray, Mukherjee and Mehta, 2016; Balchin and Caldbrese, 2019; Kabir, Singh and Ferrantino, 2019; Nayyar, Chawla and Pagaria, 2020)

---

## **5. Conclusion and Policy Recommendations**

### **5.1 Conclusion**

The cotton-textile-apparel sub-sector value chain in Kenya presents immense opportunities for the country's industrialization and job creation agenda. The sub-sector revival is anchored on the government's agenda of improving the business environment and private sector investments. Despite various interventions by the government to support the cotton-textile-apparel sub-sector through the Kenya Vision 2030 flagship projects and reforms in business environment for the private sector, the contributions of this sub-sector to the GDP and formal employment has largely remained stagnant with tendencies to marginally decline. The cotton-textile-apparel value chain cuts across roles of various actors at the national and county levels, commencing from agriculture, manufacturing to trade. The private sector firms involved are also diverse in terms of size, with some operating in the formal sector and a majority of MSEs operating in the informal sector. This makes it important to address constraints at multiple levels, including policy frameworks across the value chain.

This study is, therefore, anchored on value chain framework to provide insights on constraints facing the cotton-textile-apparel sub-sector, unpacking the issues by firm size and enterprise formality. To provide policy insights, this study employed review of policy framework, literature review and analysis of secondary firm-level survey data and sector aggregate data and lessons drawn from other countries. The analysis is undertaken along the value chain at three broad levels: input (cotton production), processing and marketing. The findings reveal various challenges along the value chain from input, processing and marketing.

Review of policy documents reveal challenges at both the national and county government levels. Weaknesses are noted in the policy documents with regard to clearly articulating specific interventions (e.g. programmes, budgetary allocations etc) along the value chain, thus raising concerns in policy implementation challenges owing to blurred measurable indicators and responsible policy actors. The county governments demonstrate tendencies of weak mainstreaming of the "Big Four" agenda priorities through the CIDPs regarding to the cotton-textile-apparel sub-sector under the manufacturing pillar. Among the county governments that do provide for specific interventions on cotton-textile-apparel value chain, there are disproportionately more emphasis on processing level compared to input (cotton production) and marketing levels. This evidence reveals weaknesses in holistically developing the cotton-textile-apparel value chain. Some counties also reveal inconsistencies in supporting the sub-sector over time. For instance, some of them provided for interventions during the first CIDP (2013-2017) and not during the second CIDP (2018-2022).

The analysis reveals that at the input (cotton production) level, budgetary allocation to agricultural extension services have generally slowed since 1990s. Investment in agricultural inputs, including extension services, has declined from 3.4 per cent in 1990 to 0.8 per cent as of 2019. Associated with this reduction is also the dwindling of cotton cooperative societies and the membership of those

societies. The number of cotton cooperatives has declined from 81 in 1990 to 62 in 2019 while its membership has declined from 168,000 framers to 33,000 farmers in 2019. The weakening of cotton cooperatives have eroded benefits of economies of scale and lobbying opportunities by farmers. While the average nominal price to cotton farmers has generally demonstrated upward trends, there has been a deprivation of the producer incomes in real terms over the years. In tandem with these trends, cotton production in Kenya has persistently declined from about 38,000 tonnes in 1980 to 3,000 tonnes as of 2019.

At the processing level, constraints relate to limited availability of quality cotton lint, challenges accessing finance and labour-related constraints such as availability of relevant skills. Labour, raw materials and electricity account for significant share of costs of textile and apparel enterprises. In relative terms, the cost of electricity is highest for medium and large enterprises, an indication that use of electricity in production is firm-size related. Informal textile and apparel enterprises uniquely face collateral-related constraints in access to credit, compared to formal enterprises. Overall, high costs of credit, cumbersome procedures, and loan size/maturity mismatch are among the top constrains stifling MSEs' access to loan. These challenges have pushed MSEs to finance investments using limited internally generated funds, with depressed opportunities to supplement it with external finance. This means MSEs' production levels are constrained by obsolete technology they employ owing to financing challenges. Besides financing challenges, uncertainties (political and market conditions) and low demand for products are cited as some of the key reasons for low capacity utilization by textile and apparel enterprises. This points to the importance of broader business environment to promote private sector confidence for investment commitments over longer time horizon. By firm characteristics, the constraints are disproportionately high among MSEs compared to medium and large enterprises. Moreover, processing level input constraints are severe among the informal enterprises (that also generally tend to be micro enterprises) compared to formal ones.

At the market level, key constraints relate to competition in the local, regional and international markets. The constraints emanate from high costs of production faced by local firms, growth of second hand (*mitumba*) industry, and competition from firms in low cost countries. High costs of production result from costs of electricity, taxation, multiple licensing and poor transport infrastructure. These business environment constraints are more severe among MSEs. The constraints emanating from depressed access to markets, multiple licenses and poor transport was relatively high among informal sector MSEs compared to those operating in the formal sector. Among the MSEs operating in the formal sector, taxation challenges was relatively high compared to those operating in the informal sector. There are also limited value chain linkages among MSEs and large enterprises, which can constrain market access and technology learning opportunities for smaller enterprises.

Review of other country experiences from Vietnam, Ethiopia and India reveals lessons for policy interventions in the cotton-textile-apparel value chain. Efficient coordination of policy support in investment promotion, technology upgrading, and trade is seen as an important cross-cutting element for the cotton-textile-

apparel value chain development. At the input level, it is imperative to support production of cotton through access to suitable land, extension support and development of the value chain downstream (processing level) to provide market assurance for farmers. At the processing level, the key interventions include provision of favourable business environment that promotes low cost of production through industrial clusters, low cost of energy, skills availability and upgrading, Research and Development (R&D) investments, innovation and technology upgrading. Further, increased Foreign Direct Investment (FDI) and presence of global brands manufacturers that facilitate knowledge and technology transfer through linkages with local smaller enterprises is critical in upscaling learning for exploiting opportunities in international competitive markets. At the market access level, key insights include the importance of leveraging on domestic demand and international markets. Serving domestic markets can be anchored on production of competitive products (low cost of production and innovation), use of fiscal incentives such as anti-dumping import duty and promotion of culture of demand for locally produced products as in the case of Ethiopia. Harnessing the opportunities in the international markets require expansion of reliable trade agreements; technology upgrading to meet international quality standards; and linkages with global brands through sub-contracting arrangements.

## **5.2 Policy Recommendations**

To facilitate revival of the textile and apparel industry, there is need to adopt several strategies that will offer sustainable growth of the cotton-textile-apparel value chain while ensuring high contribution to the economy. These include:

### ***i) Promote sustainable investments at input level of the value chain***

The cotton-textile-apparel value chain begins with inputs at the farm level. Farmers play a key role in this value chain by ensuring the quality lint is produced. Improved farming practices are, therefore, recommended, which should cover aspects of modern farming technologies to navigate existing and emerging challenges. Inputs such as fertilizers, quality/certified seed and farm equipment are key in ensuring quality products and efficiency at this stage of the value chain. Support institutions, both government and non-government actors, need to be incorporated at various stages. For instance, roles of research institutions and universities in research and capacity building of industry players (e.g. farmers, and technical personnel at the value addition level) can be strengthened and backed with a framework for engagement and resource mobilization. Further, strong partnerships between the various sector players and stakeholders, anchored on success models of coordination between public and private sector actors is key for the industry growth. The following specific interventions are suggested:

- (a) Enhance extension services through the county governments in promoting improved practices in cotton production. Under the Fourth Schedule of the

Constitution of Kenya county governments undertake devolved functions relating to crop husbandry and plant disease control, that can be supported through mainstreaming in CIDPs and budgetary allocations.

- b) Support farmers in adopting cotton varieties that have higher yields of cotton lint, which can be resistant to pests and diseases and better adapt to local climatic conditions. It is also imperative to enhance investments in irrigation schemes to mitigate losses suffered by farmers due to erratic rainfall and prolonged droughts. This can be achieved through partnerships of national government agriculture institutions (e.g. AFA, KALRO, National Irrigation Authority, universities) county governments and development partners such as the Food and Agriculture Organization (FAO), the Alliance for a Green Revolution in Africa (AGRA) and the International Fund for Agricultural Development (IFAD). Given agriculture is a devolved function, national government research institutions can support county governments with research on seed varieties with resource support from development partners.
- c) Enhance support for cotton production through improved value addition to incentivize farmers to invest more in cotton production. Key national government institutions that play a role at this level include State Department for Industrialization regarding industrial policies, development of cottage industry, industrial training and capacity development; KenInvest for promoting and facilitating domestic and foreign investments; and KIRDI to facilitate Research and Development (R&D) in industrial and allied technologies.
- d) Revive cotton cooperatives at the county levels, in line with Cooperative Development Policy 2019, that is cognizant of the devolved governance structure and aims to strengthen and modernize cooperatives through Information and Communication Technology (ICT), enhanced governance structure, improved value addition of agro-based cooperatives, capacity building and research. As noted from review of the county CIDPs, most of the cooperatives have become dormant. In the absence of strong cooperatives with good governance structures, it is costly to reach farmers regarding aspects such as supply of farm inputs, capacity building, and access to markets for farm produce. With stronger cooperatives, farmers can have a better bargaining power in accessing quality farm inputs and marketing of produce. Given that trade development including cooperative societies is a devolved function, county governments can play a key role in actualizing this recommendation in partnership with the State Department of Cooperatives. Key strategies that can be employed include facilitation of cooperatives formation and sensitization of farmers and supporting large-scale cotton production for economies of scale required for sustainable cooperatives.

**ii) Promote productivity and competitiveness at processing (value addition) level**

As noted from the analysis, the key constraints relate to access to finance, costs of electricity, low innovation and technology upgrading, inadequate skills and low capacity utilization owing to equipment obsolescence and market uncertainties. These constraints are more pronounced among MSEs, particularly those that operate informally. The policy interventions at value addition level should therefore be geared towards these constraints and adapted to enterprise characteristics. The key institutions that can play important roles in addressing these challenges include those involved in training (university and technical training institutions), the national treasury and county governments (e.g. for investment-related fiscal incentives), financial institutions and institutions involved in electricity generation and distribution. The following specific interventions are suggested:

- (a) Promote supply of industry-relevant skills for textile and apparel industries through enhanced linkages between technical training institutions and the industries.
- (b) Adopt innovative approaches to facilitate access to finance particularly by textile and apparel MSEs. Insufficiency or lack of non-bankable collateral remains a key hindrance for MSEs to access credit. This can, for instance, be achieved by leveraging on the National Credit Guarantee Scheme. The public credit guarantee scheme can serve as a benchmark and learning experiences for establishment of other forms of credit guarantee schemes such as public-private sector partnership schemes and those funded by private sector associations.
- (c) Promote innovation and technology upgrading through incentives for R&D investments, technology transfer/learning, and enhanced linkages involving the industry, research institutions and universities.
- (d) Promote lease-financing of modern equipment to support MSEs in the cotton-textile-apparel sub-sector. This would, however, require sustainable value chain, including reliable supply of raw materials to prove viable to lease financiers.
- (e) Improve market certainties through contract farming and value chain development. This would induce more long-term oriented investment behaviour of the enterprises and fully exploit existing capacities.
- (f) Lower costs of electricity generation and distribution. These initiatives would make medium and large firms at processing level lower costs attributed to electricity.

**iii) Expanding market opportunities**

The government under the "Big Four" agenda has prioritized the "Buy Kenya Build Kenya" strategy to create demand for locally manufactured products. Regionally,

the EAC market presents the country with an array of opportunities as part of the wider domestic market. The challenges faced by local firms, for instance high costs of production, make locally manufactured products less competitive particularly against cheaper imports from competitor countries such as China and India. The extension of AGOA (in 2015) up to 2025 and the coming into force of AfCFTA provide expanded opportunities. The EU-EAC Economic Partnership Agreement (EPA) would further provide added opportunities but is anchored on competitiveness of Kenyan products both in term of costs and quality. Tapping into these opportunities requires locally manufactured products to have a competitive edge. The following specific measures are proposed in these regards:

- a) Aggressively pursue innovative approaches for tapping into the local and regional markets, including EAC and AfCFTA and other international markets, particularly AGOA. Some of the measures can include sustained favourable electricity tariffs for the firms and fiscal incentives for machinery and technology that can promote efficiencies in production.
- b) Building competitiveness in the local, regional and international markets should include firm-level competitiveness in terms of skills, technology absorption and innovation. These measures are partly linked to those proposed on skills development at the input level, which can be further supported through establishing centres of excellence for knowledge sharing. Such measures require concerted efforts of national government institutions (e.g. KIRDI, KenInvest), county governments, private sector (e.g. Kenya Private Sector Alliance, Kenya Association of Manufacturers, Kenya National Chamber of Commerce and Industry, textile and fashion industry association) and development partners.
- c) Implementation of existing strategies such as the "Buy Kenya Build Kenya" strategy, particularly by encouraging 'Made in Kenya' clothes can help expand domestic demand for locally manufactured textile and apparel products. The extent of implementation of this intervention would be to some extent dependent of measures to address the costs of production, quality corroborated by promotional strategies such as brand ambassadors, particularly among the youth and the general citizen.

***iv) Promote policies that encourage a wholistic value chain development***

The cotton-textile-apparel sub-sector has a long value chain from cotton production, value addition to marketing of processed products. The development of the sub-sector requires a seamless policy synergy across the value chain in terms of agricultural production, investments, value addition and trade. The following specific interventions are suggested:

- (a) Promote policy measures that develop the value chain holistically to incentivize cotton farmers and other actors in the value chain at both the national and county government levels. These could include agricultural policies,

investment promotion, industrialization and trade. For instance, value chain development of wool is vital and should be considered as complementary input to cotton-originated textiles. Moreover, at the ginning stage of textile processing, cotton seed can have other value addition opportunities such as cooking oil and animal feeds. Review of the county CIDPs reveals that only Kisumu County has explicitly recognized this opportunity, which can be explored among others. Developing these complementary value chains can serve to incentivize farmers and ginners. The interventions would require enhanced coordination and synergy of actors at the agricultural, investment, industry, and market levels. An important element of policy interventions also relates to having clear implementation frameworks in terms of indicators, resource requirements, programmes and actors involved with regard to both national and county governments policy documents.

- b) Strengthen policy and institutional frameworks along the value chain to enhance governance. This could be borrowed from the experiences in other developing countries; for instance, India and Ethiopia have enhanced policy and coordination in the cotton-textile-apparel value chain.

### **5.3 Areas for Future Research**

1. Future research should consider exploring textile and apparel value chain from the perspective of other input sources, particularly wool and sisal. Owing to the focused nature of value chain analysis, this study concentrated on the cotton-textile-apparel value chain. The focus of this study also reflects current government priority on developing the cotton-textile-apparel value chain.
2. Due to firm-level data limitations at more disaggregated stages, the current study focused on textile and apparel industry while clustering the value chain at the three key levels – input/farm, value addition (processing) and market. This is as a result of the available surveys used in this study aggregating responses for firms at only two levels: textile and apparel. Future research could consider extending the current study by assessing the constraints at more disaggregated levels, such as ginning, spinning, knitting, and garment and apparel production considering different clusters such as formal and informal sectors, and firm size. This would require micro-level survey data that elicits responses from firms at these detailed levels.
3. Future research could also consider value chain analysis regarding uses of cotton seed. This study focused on lint component once at the ginning stage cotton lint (white fibre component and the seeds from the farm) is separated into lint and cotton seed.
4. Future research could further consider collecting primary data from the county and national government institutions to assess the extent of implementation of various flagship programmes, their success and challenges. This approach would provide more current contexts on actual status of policy implementation and guide further interventions.



## References

- Andreoni, A. and Upadhyaya, S. (2014), Growth and distribution pattern of the world manufacturing output: A statistical profile. UNIDO Working Paper 02/2014.
- Atkinson, M.M. and Coleman, W.D. (1997), "Policy networks, policy communities and the problem of governance". *Governance* , 5(2): 154-180.
- Balchin, N. and Calabrese, L. (2019), *Comparative country study of the development of textile and garment sectors: Lessons for Tanzania*. London: Overseas Development Institute (ODI).
- Chemengich, M., Vaid, V., Olweny, H. and Karuiki, F.G. (2013), *Policy research on the Kenyan textile industry: Findings and recommendations*. Nairobi: African Cotton and Textile Industries Federation.
- Council of Governors (2020), Reports retrieved June 7, 2020, from Council of Governors Website : <https://www.cog.go.ke/downloads/category/>
- Gereffi, G. (2020), "Global value chains, development, and emerging economies". In P. Lund-Thomsen, M.W. Hansen and A. Lindgreen (eds.), *Business and development studies: Issues and perspectives*. London: Routledge.
- Government of Kenya (2003), *Economic Recovery Strategy for Wealth and Employment Creation 2003-2007*. Nairobi: Ministry of Planning and National Development.
- Government of Kenya (2007), *Kenya Vision 2030: A Globally Competitive and Prosperous Kenya*. Nairobi: Ministry of Planning and National Development .
- Government of Kenya (2012), *Sessional Paper No. 9 of 2012 on the National Industrialization Policy Framework for Kenya 2012-2030*. Nairobi: Ministry for Industrialization.
- Government of Kenya (2018), *Medium-Term Plan 2018-2022: Transforming lives - advancing socio-economic development through the "Big Four"*. Nairobi: The National Treasury and Planning.
- Gooch, M. (2005), *Drivers, benefits and critical success factors of developing closely-aligned agri-food value chains*. George Morris Centre Working Paper.
- Haraguchi, N. (2012), *Pro-employment manufacturing development in large countries*. United Nations Industrial Development Organization Working Paper 4/2012.
- Heshmati, A. and Rashidghalam, M. (2016), Labour productivity in Kenyan manufacturing and service industries. The Institute for the Study of Labour (IZA) Discussion Paper No. 9923.
- Hossain, M.Z. (2010), *Report on Vietnam textile and garment industry*. Nairobi: African Cotton and Textile Industries Federation.

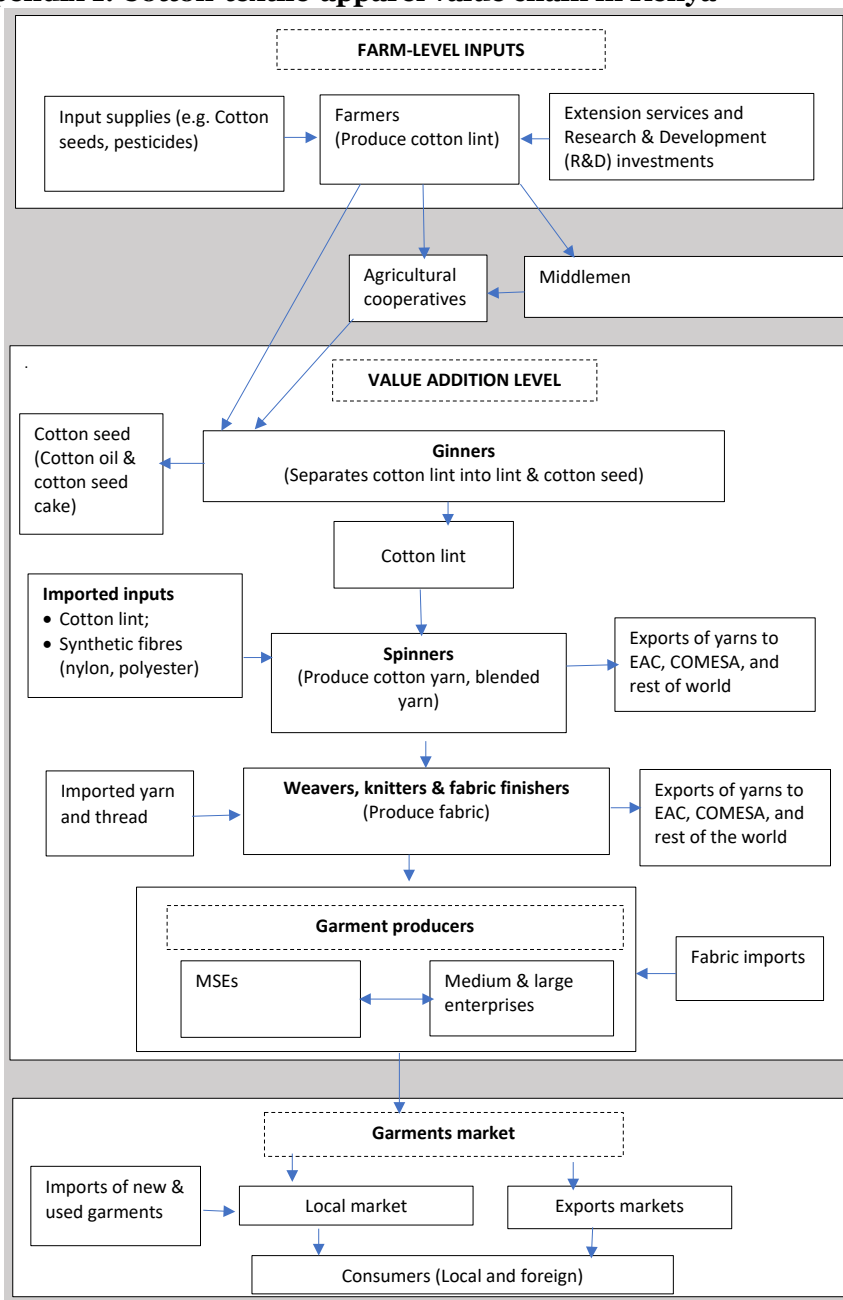
- Ikiara, M.M. and Ndirangu, L.K. (2003), *Developing a revival strategy for Kenya's cotton-textile industry: A value chain approach*. KIPPRA Discussion Working Paper No. 8. Nairobi: Kenya Institute for Public Policy Research and Analysis.
- Internal Labour Organization (2018), *Global wage report 2018/19: What lies behind gender pay gaps*. Geneva: International Labour Organization.
- Jensen, M.C. and Meckling, W.H. (1976), "Theory of the firm: Managerial behavior, agency costs and ownership structure". *Journal of Financial Economics*, 3(4): 305-360.
- Kabir, M., Singh, S. and Ferrantino, M.J. (2019), *The textile-clothing value chain in India and Bangladesh: How appropriate policies can promote (or inhibit) trade and investment*. Washington, DC: World Bank Group.
- Katende-Magezi, E. (2017), *The impact of second-hand clothes and shoes in East Africa*. Geneva: CUTS International.
- Kenya National Bureau of Statistics - KNBS (2016), *Micro, Small and Medium Establishments (MSME) Survey Basic Report*. Nairobi: Kenya National Bureau of Statistics.
- Kenya National Bureau of Statistics - KNBS (2020b), *Statistical Abstract 2020*. Nairobi: Kenya National Bureau of Statistics.
- Kenya National Bureau of Statistics - KNBS (2017a), *Report on the 2017 Kenya Census of Establishments (COE)*. Nairobi: Kenya National Bureau of Statistics.
- Kenya National Bureau of Statistics - KNBS (2017b), 2016 MSME Survey Establishments Dataset. Retrieved from [http://statistics.knbs.or.ke/nada/index.php/catalog/91/data\\_dictionary](http://statistics.knbs.or.ke/nada/index.php/catalog/91/data_dictionary)
- Kenya National Bureau of Statistics - KNBS (2019a), *2019 Kenya Population and Housing Census Volume IV: Distribution of Population by Socio-Economic Characteristics*. Nairobi: Kenya National Bureau of Statistics.
- Kenya National Bureau of Statistics - KNBS (2019b), *Statistical Abstract 2019*. Nairobi: Kenya National Bureau of Statistics - KNBS.
- Kenya National Bureau of Statistics - KNBS (2020a). *Economic Survey 2020*. Nairobi: Kenya National Bureau of Statistics - KNBS.
- Lopez-Acevedo, G. and Robertson, R. (Eds) (2016), *Stitches to Riches? Apparel Employment, Trade, and Economic Development in South Asia*. Washington, DC: World Bank.
- Malicha, W. and Njoroge, L. (2020), *Assessing the cotton, textile and apparel sector employment potential in Kenya*. KIPPRA Discussion Paper No. 229. Nairobi: Kenya Institute for Public Policy Research and Analysis.

- Monroy, L., Mulinge, W. and Witwer, M. (2012), *Analysis of incentives and disincentives for cotton in Kenya*. Rome: Technical Notes Series, MAFAP, FAO.
- Nadvi, K., Thoburn, J.T., Thang, B.T., Ha, N.T., Hoa, N.T., Le, H. and Armas, E. B. (2004), "Vietnam in the global garment and textile value chain: Impacts on firms and workers". *Journal of International Development*, 16(1): 111-123.
- Nayyar, M., Chawla, A. and Pagaria, A. (2020). *Textile and apparel industry: The change agent of India* (Invest India). Retrieved August 31, 2020, from Team India Blogs: <https://www.investindia.gov.in/siru/textile-apparel-industry-change-agent-india>.
- Porter, M.E. (1985), *The competitive advantage: Creating and sustaining superior performance*. New York: Free Press.
- Ray, S., Mukherjee, P. and Mehra, M. (2016), Upgrading the Indian garment industry: A study of three clusters. Asian Development Bank (ADB) Working Paper Series No. 43.
- Regional Agricultural Trade Expansion Support Program/RATES (2003), *Cotton-textile and apparel value chain report for Kenya*. Nairobi: RATES.
- Robertson, R. (2012), *Sewing success? Employment, wages, and poverty following the end of the Multi-Fibre Arrangement*. G. Lopez-Acevedo, and R. Robertson (Eds). Washington DC: World Bank.
- Rodrik, D. (2016), "Premature de-industrialization". *Journal of Economic Growth*, 21(1): 1-33.
- Roy, S. (2009), Garments industry in India: Lessons from two clusters. ISID Working Paper 2009/01.
- Teodoro, A. and Rodriguez, L. (2020). Textile and garment supply chains in times of COVID-19: Challenges for developing countries. Retrieved June 2nd, 2020 from UNCTAD Transport and Trade Facilitation Newsletter N°86 - Second Quarter 2020: [https://unctad.org/en/pages/newsdetails.aspx?OriginalVersionID=2380#\\_ednref1](https://unctad.org/en/pages/newsdetails.aspx?OriginalVersionID=2380#_ednref1).
- UN Comtrade (2020), *Commodity Trade Statistics Database*. United Nations Statistics Division. Retrieved August 31, 2020, from [http://data.un.org/Data.aspx?d=ComTrade&f=\\_l1Code%3A64%3BrtCode%3A842%3BcmdCode%3A630900&c=2,3,4,5,7,8,9,11,12&s=\\_crEngNameOrderBy:asc,yr:desc,\\_l2Code:asc&v=1](http://data.un.org/Data.aspx?d=ComTrade&f=_l1Code%3A64%3BrtCode%3A842%3BcmdCode%3A630900&c=2,3,4,5,7,8,9,11,12&s=_crEngNameOrderBy:asc,yr:desc,_l2Code:asc&v=1).
- UNIDO (2009a), *Value chain diagnostics for industrial development: Building blocks for a holistic and rapid analytical tool*. Vienna: UNIDO.
- UNIDO (2009b), *Agro-value chain analysis and development: The UNIDO approach*. Vienna: UNIDO.
- UNIDO (2011), *Diagnostics for industrial value chain development: An integrated tool*. Vienna: UNIDO.

- UNIDO (2013), *Industrial development report 2013: Sustaining employment growth: The role of manufacturing and structural change*. Vienna: UNIDO.
- United States International Trade Commission (2020), *Trade Data* . Retrieved May 15, 2020, from <https://dataweb.usitc.gov/trade/search/GenImp/HTS>.
- Varvasovszky, Z. and Brugha, R. (2000), "A stakeholder analysis". *Health Policy and Planning*, 15(3): 338-345.
- World Bank (2015), *Kenya apparel and textile industry: Diagnosis, strategy and action plan*. Washington DC: World Bank.
- World Bank (2019), *Enterprise Surveys*. Retrieved May 31, 2019, from Kenya (2018): <http://www.enterprisesurveys.org>.
- World Trade Organization - WTO (2019b), *World Trade Statistics Review 2019*. Geneva: World Trade Organization .
- World Trade Organization - WTO (2020), *WTO Database*. Retrieved March 1, 2020, from World Trade Organisation: <https://data.wto.org/>

## Appendices

### Appendix 1: Cotton-textile-apparel value chain in Kenya



Source: Authors' elaboration

## Appendix 2: Cotton growing households across counties

County	Cotton growing	Total		Labour force (No.)	Labour force seeking for work/no work available (No.)	Cotton growing households in total (%)	Cotton growing HHS in rural (%)	Proportion in labour force looking for work (%)	Distribution of cotton growing households across counties (%)
		households	Rural households						
Tana River	384.0	66,984.0	47,670.0	143,877.0	25,851.0	0.6	0.8	18.0	1.7
Lamu	1,574.0	34,231.0	24,161.0	67,250.0	7,228.0	4.6	6.5	10.7	6.9
Meru	2,428.0	423,931.0	373,302.0	776,662.0	76,275.0	0.6	0.7	9.8	10.6
Tharaka Nithi	616.0	109,450.0	97,614.0	204,938.0	13,707.0	0.6	0.6	6.7	2.7
Kitui	2,711.0	261,814.0	242,607.0	518,388.0	31,902.0	1.0	1.1	6.2	11.8
Makueni	1,564.0	243,979.0	217,052.0	488,397.0	32,008.0	0.6	0.7	6.6	6.8
Bungoma	2,169.0	357,714.0	307,149.0	670,234.0	40,627.0	0.6	0.7	6.1	9.5
Busia	2,109.0	197,944.0	167,184.0	373,732.0	22,325.0	1.1	1.3	6.0	9.2
Siaya	3,125.0	249,341.0	224,404.0	435,155.0	22,225.0	1.3	1.4	5.1	13.6
Kisumu	2,174.0	296,846.0	168,796.0	485,155.0	50,843.0	0.7	1.3	10.5	9.5
Homa Bay	3,263.0	260,290.0	229,176.0	446,552.0	27,424.0	1.3	1.4	6.1	14.2
Nyamira	803.0	150,499.0	137,451.0	269,037.0	18,614.0	0.5	0.6	6.9	3.5
Total (12 counties)	22,920.0	2,653,023.0	2,236,566.0	4,879,287.0	369,029.0	0.9	1.0	7.6	
Kenya	22,920.0	12,043,016.0	7,379,283.0	22,298,559.0	2,621,158.0	0.2	0.3	11.8	

Source: KNBS (2019d), 2019 Kenya Population and Housing Census

**Appendix 3: Constraints faced by textile and apparel manufacturing MSMEs**

<b>Constraints</b>	<b>1st Main constraint</b>	<b>2nd Main constraint</b>	<b>3rd Main constraint</b>
Lack/poor access to markets	27.3	11.1	7.1
Local competition	14.5	10.9	7.0
Licences	11.0	10.2	4.5
Lack of collateral for credit	5.7	4.8	5.1
Poor roads/transport	5.6	6.7	5.3
Shortage of raw materials/stock	4.2	4.1	4.1
Poor security	3.6	4.0	4.9
Power interruptions	2.8	2.2	4.3
Foreign competition	1.7	1.1	1.1
Interference from Authorities	1.5	0.7	1.5
Taxes	1.2	0.8	0.1
Lack/inadequate skilled manpower	0.9	1.5	1.2
Poor access to water supply	0.8	1.9	2.1
Lack of space	0.8	1.0	1.2
Inaccessibility to electricity	0.5	1.5	1.7
Other government regulations	0.1	0.5	2.0
Other	8.4	5.7	5.3
None	9.7	31.2	41.5

*Data Source: KNBS (2017b)*

#### Appendix 4: Cost structure of textile and apparel manufacturing MSMEs (Ksh)

Cost Item	All Enterprises	Micro Enterprises	Small Enterprises	Medium/ large Enterprises
Purchase of goods for resale	64,365.50	31,677.47	932,098.50	2,660.01
Salaries and wages	15,430.92	2,435.94	90,853.93	1,778,647.00
Purchase of material inputs	13,545.42	2,936.35	282,925.80	1,375.01
Cost of credit	4,895.27	4,794.78	10,327.96	-
Taxes	3,725.77	55.27	111,132.70	-
Rent	1,891.72	1,235.09	20,317.88	906.57
Electricity	1,057.05	243.55	10,479.15	50,193.65
Cost of licenses	527.86	298.81	6,302.72	2,632.89
Other operating costs	520.21	535.13	118.14	-
Advertising costs	433.49	5.03	16,365.82	-
Telephone	308.74	209.49	777.52	8,577.31
Transport and storage	276.15	278.26	251.71	108.70
Repairs/maintenance	205.94	187.14	919.50	115.36
Office supplies	181.98	40.55	1,854.57	8,411.63
NSSF/Health insurance	162.01	25.75	3,963.43	-
Additional equipment/asset	158.91	136.80	1,155.41	-
Social responsibility	87.82	47.72	80.04	4,262.22
Business insurance	82.32	61.90	915.67	-
Water	77.28	43.20	204.14	3,147.80
Product innovation	30.79	31.87	-	-
Internet costs	27.93	9.27	549.87	-
Process innovation	11.10	11.50	-	-
Fines	5.51	5.26	16.67	-

Data Source: KNBS (2016)

(-) reflect insufficient responses to compute meaningful statistics





**ISBN 978 9966 817 64 8**

**Kenya Institute for Public Policy Research and Analysis  
Bishops Garden Towers, Bishops Road  
PO Box 56445, Nairobi, Kenya  
tel: +254 20 2719933/4, 2714714/5, 2721654, 2721110  
fax: +254 20 2719951  
email: [admin@kippra.or.ke](mailto:admin@kippra.or.ke)  
website: <http://www.kippra.org>**