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EVALUATION OF THE POTENTIAL OF ZAMBIA'S TEXTILE INDUSTRY FOR INDUSTRIALISATION

Opportunities and Challenges

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CONTENTS

GLOSSARY, ACRONYMS AND DEFINITION OF TERMS

Expression	Explanation
Acronym	Full Meaning
ACI	Agribusiness Consulting International
AfCFTA	African Continental Free Trade Area
CAZ	Cotton Association of Zambia
FAO	Food and Agriculture Organization
FTAs	Free Trade Agreements
GDP	Gross Domestic Product
IGC	International Growth Centre
ILO	International Labour Organization
ISI	Import Substitution Industrialization
MVA	Manufacturing Value Added
NAP	National Agricultural Policy
NWK	NWK Agri-Services
RCA	Revealed Comparative Advantage
SAPs	Structural Adjustment Programmes
SADC	Southern African Development Community
UNCTAD	United Nations Conference on Trade and Development
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNIDO	United Nations Industrial Development Organization
WTO	World Trade Organization
ZABS	Zambia Bureau of Standards

EXECUTIVE SUMMARY

This study assessed Zambia's potential to revitalise and industrialise its cotton–textile–garment (CTG) value chain. Using a mixed-methods approach combining quantitative and qualitative analyses, data were collected from 317 respondents—including 75 cotton farmers, 39 value chain actors, 190 consumers, and 13 informants drawn from government, industry, and associations. The research examined the decline of the textile sector, value chain opportunities, competitiveness, demand drivers, and sustainability practices. Secondary data from trade databases, including ITC Trade Map, FAO, WDI, CEPII, and UNCTAD, supplemented the analysis. Analytical tools included descriptive statistics, revealed comparative advantage (RCA), and a Gravity Model using Poisson Pseudo Maximum Likelihood (PPML) to assess drivers of demand for textile exports.

Findings reveal that Zambia's textile industry is heavily skewed toward upstream cotton production, with weak development in mid- and downstream stages such as spinning, weaving, fabric finishing, and garment manufacturing. Smallholder cotton farmers dominate production but face challenges including low prices, poor contract enforcement, limited market access, input shortages, and climate vulnerability. While cooperatives enhance collective bargaining and knowledge sharing, production remains low, with many farmers shifting to more profitable crops.

According to the 2022 Annual Report by the Cotton Association of Zambia, about nine active ginning companies operated in Zambia. The spinning and weaving segments are not well developed. There is only one industrial spinner producing acrylic yarn, while other spinning and weaving activities are undertaken by artisanal and small-scale operators. Although a few formal garment manufacturers remain, all garment producers rely entirely on imported fabrics due to the limited local supply of textiles. Garment manufacturers also face competition from second-hand clothing imports, cheaper cloths imports, high taxes on inputs, and weak enforcement of quality standards.

Despite these constraints, strong domestic demand exists, with over 94% of consumers willing to buy locally made textiles and garments. Awareness and consumption of local products are highest for school uniforms, traditional wear, and chitenge fabrics. RCA analysis shows that, Zambia has a sustained comparative advantage in raw cotton but is largely uncompetitive in downstream textile and garment products. Regional integration under Southern African Development Community (SADC) and the African Continental Free Trade Area (AfCFTA) offers significant potential to expand exports, particularly to neighbouring countries, while gravity model analysis highlights the importance of market size, proximity, and trade facilitation.

The study concludes that targeted interventions in the mid- and downstream segments of the value chain, supported by skills development, financial access, infrastructure improvements, and policy reforms, could unlock Zambia's industrial potential in textiles and garments. Sustainable practices, including organic production, renewable energy adoption, and recycling of by-products such as cottonseed oil and stalks, offer opportunities for green industrialisation and inclusive growth.

1. INTRODUCTION

The cotton, textile, and garment (CTG) value chain is a critical driver of industrialization, employment, and poverty reduction, particularly in developing countries. It is organized along an integrated continuum comprising design, raw material sourcing, textile production, garment manufacturing, distribution, and retail (Fernandez-Stark et al., 2022). In the value chain, cotton serves as a foundational raw material, engaging actors such as farmers, traders, and ginners, while the cotton-textile and apparel (CTA) value chain has the potential to absorb skilled, semi-skilled, and non-skilled workers across its production stages (Wario Malicha and Lawrence Njoroge, 2020). Despite competition from synthetic fibers, global cotton use is projected to grow by 1.2% annually, driven by rising textile demand in developing countries, with Asia - particularly Viet Nam, Bangladesh, and India - remaining the main processing hub (OECD/FAO, 2025). While China will remain the world's largest processor by 2034, its dominance is expected to gradually decline. Global production is also projected to increase by 1.3% annually to 29.5 metric tons, with India overtaking China as the leading producer, followed by Brazil and the United States, while global trade is expected to rise by 1.6% annually to 12.3 metric tons.

Textile and clothing production is widely regarded as a catalyst for economic growth and a "starter" industry for nations pursuing export-oriented industrialization, owing to its low fixed costs and labor-intensive nature (Gereffi and Meme, 2003). The industry employs over 90 million people globally, 75% of whom are women (ILO, 2025). The global textile market was valued at approximately US$1.6 trillion in 2023 and is projected to reach US$3.3 trillion by 2030 (UNCTAD, 2024). For developing countries such as Zambia, revitalizing the local textile value chain is both an industrial policy objective and a socio-economic imperative for employment generation, youth and women's inclusion, entrepreneurship, and local content development (AfDB, 2023).

In Africa, the CTG value chain mirrors global structures, spanning cotton cultivation, ginning, spinning, weaving, fabric production, garment manufacturing, and export (Fernandez-Stark et al., 2022; AfDB, 2023). Each stage offers opportunities for value addition, with up to 600% of value potentially created along the cotton-to-clothing continuum (AfDB, 2025). Although the continent produces high-quality cotton, most value-added processing occurs abroad, limiting economic capture. Structural constraints such as inadequate infrastructure, limited textile production capacity, and fragmented regional supply chains continue to impede competitiveness (EAC, 2019; COMESA, 2020). The African Continental Free Trade Area (AfCFTA) presents a transformative opportunity to build regional value chains by facilitating investment in textile manufacturing, harmonizing rules of origin, and promoting trade liberalization (Agarwal et al., 2023; Karkare et al., 2025). By linking cotton-producing countries like Zambia with textile and apparel hubs such as South Africa, Ethiopia, and Mauritius, the AfCFTA can foster a "hub-and-spoke" production model, strengthen industrialization, enhance intra-African trade, and enable greater value capture within the CTG chain. Rising global demand for sustainable and traceable fashion further positions Africa to expand its regional production networks and climb the global textile value chain (Whitfield, 2022).

1.1. Background and Context of the Cotton, Textiles and Clothing Sub-sectors in Zambia

The cotton, textiles and clothing sub-sectors are interlinked. Cotton is an important cash crop in Zambia and a key input into the textile and garment industry. A study by UNCTAD, (2017) contends that the cotton sector has three distinct value chains namely, "the seed cotton production value chain, the lint-to-textiles value chain and also the cotton by-product value chain." Besides being used for clothing and garment manufacture, cotton by products, the seed in particular, is used to produce various items such as cotton seed oil, livestock feed, linters, among other things.

Historically, Zambia's apparel and textile sector played a significant role in driving economic growth. Between 1965 and 1983, the industry expanded to become the largest contributor to manufacturing GDP, trailed by the food beverages and tobacco subsector (Word Bank, 1984; Turok, 1989). At its peak there were about 140 textile manufacturers in Zambia, supporting over 25,000 jobs (Hinh Dinh, 2013). This growth was largely driven by the Import Substitution Industrialisation (ISI) strategies of the 1960s to the mid-1980s, with the sector benefiting greatly from government led manufacturing incentives (Ministry of Commerce, Trade and Industry, 2009). However, the implementation of the Structural Adjustment Programmers (SAPs) in the 1990s liberalised the economy, which opened the Zambian market to an influx of cheaper goods from scale-economy producer nations. As a result, Zambia's textile industry shrunk from 140 companies in the 1980s to less than 50 companies in 2002 (Koyi, 2006). In addition, duty-free importation of second-hand clothes further eroded the market, contributing to the collapse of the sector (Zambia Association of Manufacturers, 2020). The textile and clothing manufacturing sector, once a major source of employment and industrial activity, began to weaken as the country could no longer subsidise owing to the liberalisation policies in the 1990s. Since then, the sector has barely recovered and has been characterised by use of obsolete machinery, few skilled workers, poor working capital and lack of competitive input industry. As of 2012, the sector consisted of 12 medium to large firms producing niche products for schools and industry uniforms whilst employing 1500 people, 75 percent of them being men (Dinh, 2017). Industries feeding into this sector are equally weak with spinning and weaving being a major missing link meriting the exportation of all ginned output, while yarn and apparel is imported. In Zambia, small-scale farmers contracted to ginning companies dominate cotton production (ACI and Agridev Consult, 2008).

Today, while Zambia's cotton sector continues to produce substantial lint and initiatives are underway to revive local processing and strengthen value chains, the textile and garment sub-sectors face structural challenges, yet present significant opportunities for revitalisation within the country's broader industrialisation agenda. Table 1.1 present the recent performance of cotton lint production and exports for Zambia relative to selected neighbouring countries. Analysis of cotton production and export trends from 1980 to 2022 reveals that Zambia's cotton sector has undergone significant fluctuations compared to Malawi, Tanzania, and Zimbabwe. Zambia's cotton production rose steadily from 5,400 tonnes in 1980 and rose to 34,200 tonnes in 2010. However, production declined sharply to 9,797.59 tonnes in 2020 and 7,500 tonnes in 2022, an indication of challenges in the sector. The export trend closely mirrors production, rising from 5,076 tonnes in 1980 to 94,748 tonnes to 2010 and then falling to 6,443 tonnes in 2022. Various factors including: inadequate farmer support systems, weak enforcement of quality standards, low and fluctuating prices, and weak domestic textile demand (UNCTAD, 2017). In comparison to other countries like Tanzania and Zimbabwe, Zambia's cotton lint production and exports remain low.

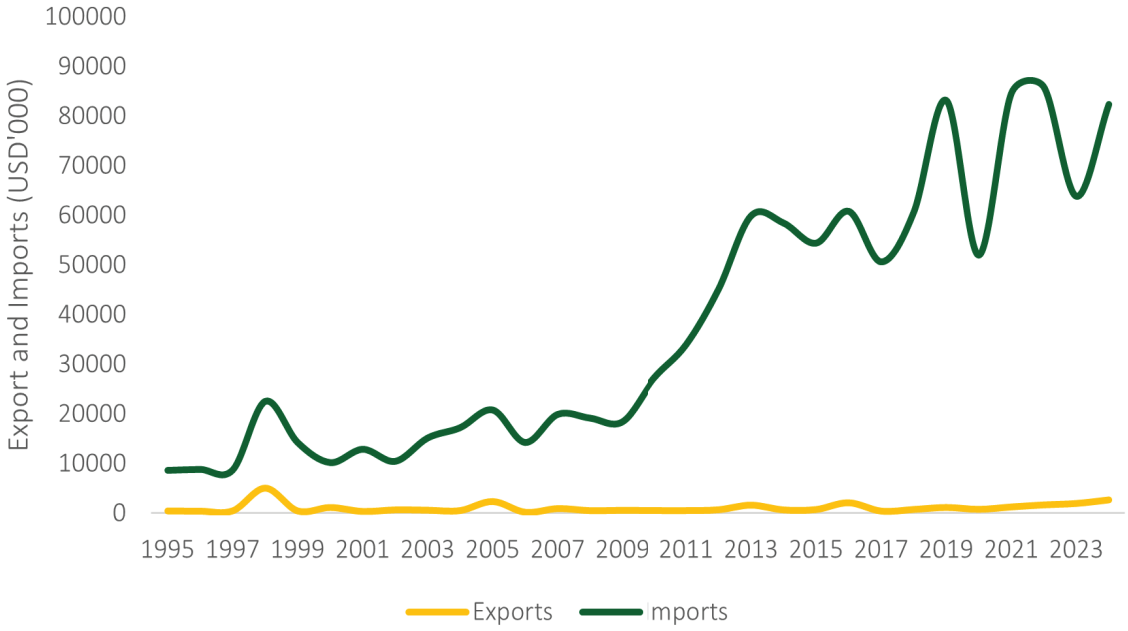
Table 1.1:Production and export quantity of cotton lint, ginned (Selected countries and Years)

	Production & Export (tonnes)	1980	1990	2000	2010	2020	2022
Malawi	Production	6,000	8,600	9,700	7,900	16,468.77	12,351.58
	Export quantity	2,985	3,372	6,800	9,525	2,196.96	4,410.28
Tanzania	Production	57,151	49,221	41,374	88,000	110,000	45,000
	Export quantity	31,475	46,292	29,627	55,305	44,147.19	33,078.91
Zambia	Production	5,400	11,000	20,000	34,200	9,797.59	7,500
	Export quantity	5,076	2,902	2,510	33,690	13,146.67	6,443.31
Zimbabwe	Production	53,561	66,903	127,530	70,200	47,100	52,516.82
	Export quantity	53,787	53,568	139,599.8	84,553	23,213.58	21,447.6

Source: FAO Statistics

Import and export of Zambia's Articles of Apparel and Clothing Accessories from 1995 to 2024 indicates that the country has been highly import dependent for apparel and accessories while exporting only modestly and erratically (Figure 1.1). From 1995 through the early 2000s, exports remained low or inconsistent (often under US$1 Million). By contrast, imports have generally risen exponentially from 1995 to 2019, only to decline sharply in 2020 owing to Covid-19. The trend shows a persistent and widening trade imbalance in apparel products. This trend reflects broader structural shifts in Zambia's textile and clothing sector: historically the country had a vibrant import substitution industry with many manufacturers, but trade liberalisation, competition from cheap imports (especially second hand clothing), and declining domestic manufacturing capacity led to the collapse of many local producers and greater reliance on imported garments and accessories. Imported clothing often comes from stronger manufacturing economies e.g., China and South Africa. The second hand clothing market ("salaula") has also grown due to consumer demand for affordable options.

Figure 1.1: Articles of apparel and clothing accessories



Source: UNCTAD Statistics

1.2. Policy, Institutional and Regulatory Framework for Cotton, Textile and Garments Sub-sectors

Zambia's textile and garment sub sector is explicitly recognised as a priority manufacturing subsector in the National Industrial Policy (2018- 2027)[1], which identifies it alongside processed foods, engineering products, wood products, leather products, mineral beneficiation, pharmaceuticals, and the blue economy as key drivers of industrialisation, job creation, and value added growth. Under this policy, textiles and garments receive strategic focus to stimulate manufacturing growth, reduce dependency on imports (including second hand clothing), strengthen backward and forward linkages with other industries, and increase their contribution to GDP and exports. The policy is part of a broader effort to transform Zambia into a diversified, competitive industrial economy which is integrated into regional and global markets. Ongoing mid term reviews and updated implementation planning (2024–2027) aim to better align it with Vision 2030 and commitments under regional frameworks such as COMESA and AfCFTA.

On the agricultural side, cotton is covered within Zambia's National Agricultural Policy (NAP) and its subsequent iterations (including the Second National Agricultural Policy)[2], which frame agriculture as a foundation for economic growth, rural development, and value addition. While the NAP itself focuses broadly on increasing productivity, competitiveness, food and nutrition security, private sector participation and employment, cotton- as a major cash crop- is implicitly supported through these objectives as it supplies raw material for textile and garment manufacturing and contributes to export earnings. The policy emphasises developing competitive agricultural value chains and expanding agricultural exports, which inherently supports cotton production as an input crop for manufacturing and agro industries.

Complementing these frameworks are sector specific legislative and regulatory instruments, such as the Cotton Act (No. 14 of 2025), under which the Cotton Board of Zambia (CBZ) is mandated to regulate cotton production, marketing, quality, and ongoing policy reforms. The Act aims to strengthen governance across the cotton value chain and better align it with industrialisation goals. The ealier Cotton Act of 2005 faced significant challenges, including limited scope confined to ginning, weak pricing mechanisms, poor regulation of seeds and inputs, and inadequate institutional governance. These gaps contributed to declining cotton production, farmer mistrust, and dominance by private ginners. To address these issues, the Cotton Act of 2025 was inacted to replace the 2005 Act, expanding the Cotton Board's mandate across the entire value chain. The Bill introduces a Price Consultative Forum, strengthens seed regulation, improves stakeholder coordination, and promotes productivity.

Besides the CBZ, are the Cotton Development Trust (CDT) mandated to produce seed and conduct research to improve cotton quality and productivity, and the Seed Control and Certification Institute (SCCI) mandated with seed production and quality control, and certification under the Plant Breeders Act and the Seed Production Act.

Furthermore, the Public Procurement (Preference and Reservation Schemes) Regulations 2025, promote local industry participation by granting procurement preference to domestic enterprises in strategic sectors such

1 *GRZ (2018) National Industrial Policy. https://www.zda.org.zm/wp-content/uploads/2020/09/National-Industrial-Policy.pdf*
2 *GRZ(2016) Second National Agriculture Policy https://faolex.fao.org/docs/pdf/zam183104.pdf*

as textiles. The Compulsory Standard ZS 559 (SI No. 120 of 2006) prohibits the importation and sale of certain used textile products, such as undergarments and nightwear, to protect public health and encourage local textile manufacturing.

Additionally, the Ministry of Labour and Social Security launched the Guidelines for Decent Work in the Cotton Subsector which ensure fair wages, freedom of association, safe workplaces and social protection for cotton workers (GRZ, 2025). The Ministry of Commerce, Trade and Industry is also a stakeholder as they are responsible for the Government's trade and industrialisation policy. What's more, the Zambia Bureau of Standards (ZABS) facilitates the development of standards for cotton, textiles and garments. The Ministry of Finance and National Planning is in responsible for tax policy

The overall policy direction is anchored in the Eighth National Development Plan (8NDP) and the National Industrial Policy both identifying textiles as a key driver of Zambia's economic diversification and industrialisation agenda.

1.3. Objectives and Scope of the Study

1.3.1 Research Objectives

Against this backdrop, the general objective of the study is to assess the potential of the cotton and textile value chain while the specific objectives are to:

i. Investigate the key factors contributing to the decline of the cotton, textile, and garment industries in Zambia.

ii. Map and analyse the growth opportunities and value-adding segments within the cotton-textile-garment value chain.

iii. Analyse the comparative advantages of the cotton, textile and apparel products

iv. Analyse the driver of demand for Zambia's textile and apparel exports

v. Evaluate the existing and emerging challenges and opportunities within the cotton, textile and garment value chain

2. LITERATURE REVIEW

The global textile industry has been extensively studied by various authors. This section analyses the factors influencing production and export of cotton, textiles and garment. The study draws literature from Zambia and elsewhere.

Literature on Cotton Production and Exports - Ginners

Cotton is a key cash crop in Zambia and a critical input for the textile and garment industry. A study by IGC (2012) highlighted that the cotton sector is a key contributor to Zambia's GDP and employment as it stimulates wide economic activity through input supply, extension services, ginning, lint and seed exports, and production of oil, oilcake, livestock feed, among others. A study by UNCTAD (2017) contends that the cotton sector has three distinct value chains namely, "the seed cotton production value chain, the lint-to-textiles value chain and also the cotton by-product value chain". Moreover, Zambian cotton is in high international demand due to its hand-picked, high-quality fibre. Almost all the cotton produced in Zambia is exported and this is due to the collapse of the weaving and textile sector (JICA, 2024; Kabwe, S et al. 2018). However, the sector faces low productivity which is generally driven by poor farming practices – late planting, weeding, spraying, and harvesting (IGC, 2012). Inadequate farmer support systems, weak enforcement of quality standards, low and fluctuating prices, and lack of strong domestic textile demand also provide an explanation for the low production of cotton (UNCTAD, 2017). Cotton also competes with other crops such as maize for land and labour, and maize is often favoured because of better market incentives and government support.

Literature on ginning, spinning and weaving

Zambia's cotton sub sector has experienced a significant contraction over the past decade, deeply affecting all stages of the textile value chain - particularly ginning, spinning, and weaving. Cotton production declined by nearly 80%, from 113,032 metric tons in 2014 to 22,638 metric tons in 2021, driven by low and unstable cotton prices, shifts to alternative crops (maize and soybean), poor input quality, and weak farm management practices (JICA, 2024; Kabwe et al., 2018).

Historically, cotton ginning was managed by the state-owned LINTCO, which provided inputs, extension services, and cotton marketing. After its privatisation in 1994, operations were taken over by Lonrho Cotton (now NWK Agri-Services) and Clark Cotton (now Cargill). By the 2014/2015 season, Zambia had eleven ginning companies with a combined capacity of 330,000 tonnes, though the market remained dominated by NWK and Cargill. Cargill later exited the market in 2017 after selling its ginnery to Parrogate Ginnery Ltd. (Kabwe et al., 2018).

As of 2024, Zambia has about ten operational ginneries, although several others remain idle due to financial or technical constraints. National ginning capacity is estimated at 396,000 tons, with some facilities such as Grafax Cotton and Mumbwa Farmers Ginning and Pressing Company inactive (Cotton Board of Zambia, 2022). Ginning typically produces 40% to 41% lint, with the remainder being seed and waste; most lint is exported rather than processed locally (Kabwe et al., 2018).

In contrast, spinning and weaving activities have almost completely collapsed. Zambia currently has no

operational cotton spinning mills (JICA, 2024). All former spinners—once integrated with weaving and garment production- have shut down due to high production costs, obsolete technology, and intense competition from cheap imported fabrics (UNCTAD, 2016; JICA, 2024). The absence of spinning capacity has created a critical bottleneck, forcing local garment and weaving firms to depend entirely on imported yarn and fabrics, mainly from China and South Africa. Weaving activities are limited to small-scale firms that mainly produce school uniforms, mining and public sector workwear, often using imported inputs. To support inclusive participation, the Cotton Association of Zambia (CAZ) has provided weaving training for female cotton farmers, but this has not translated into large-scale industrial revival (JICA, 2024).

Literature on textile and garment production

Zambia's textile and garment industry, once a cornerstone of the country's manufacturing sector, has undergone a dramatic decline since the 1990s. Despite the country's strong raw cotton base and strategic potential within the Southern African Development Community (SADC), the sector today remains weak, import-dependent, and underutilised (JICA, 2024; UNIDO, 2020).

In the 1980s, textiles were among Zambia's largest manufacturing industries, accounting for about 18% of Manufacturing Value Added (MVA) and employing nearly 25,000 workers across over 140 textile firms (JICA, 2024). However, the liberalisation policies under the Structural Adjustment Programme (SAP) in the early 1990s led to the removal of import tariffs, exposing local firms to cheap textile imports and triggering widespread factory closures. By the late 1990s, the number of textile firms had dropped to 50, and by 2018, only 12 firms remained operational (JICA, 2024).

According to Grayson Koyi (2006), Zambia initially possessed many of the prerequisites for a successful textile and clothing industry which included an abundant supply of cotton, existing infrastructure, and a relatively stable political environment. Yet, poor investment conditions, macroeconomic instability, and an influx of low-cost imports eroded competitiveness. While the yarn sub-sector managed modest success and continued to contribute positively to non-traditional exports, the fabric formation and clothing industries suffered major contraction, losing both domestic and export markets.

Zambia's textile and clothing imports, mainly from South Africa and China, are now seven times larger than exports (JICA, 2024). Compounding the problem, Zambia is among the few countries that permit unrestricted imports of second-hand clothing (known locally as Salaula), which expanded by 600% over 15 years and has had a devastating effect on the local garment industry (Dinh, 2013). These second-hand garments, often cheaper, dominate both urban and rural markets, leaving local manufacturers uncompetitive even in public procurements such as uniforms for schools and hospitals. Dinh (2013) argues that the government's failure to control second-hand imports, combined with high production costs, outdated equipment, and poor access to finance, has been "disastrous" for the garment sector. The expiration of the Multi-Fibre Arrangement in 2005 further intensified international competition, leading to the near-collapse of Zambia's apparel exports.

According to UNIDO (2020), Zambia's textiles and garments subsectors now operate far below potential. The country's Revealed Comparative Advantage (RCA) for textiles is 0.1, the lowest among priority manufacturing sectors, indicating very low international competitiveness. The dominance of salaula imports, which account for about 28% of all textile-related imports, further limits domestic recovery. Nonetheless, the textile industry retains a latent comparative advantage as a labour-intensive, low-technology sector with strong potential for

employment creation, particularly for semi-skilled workers (UNIDO, 2020). UNIDO (2020) and Dinh (2013) emphasize that while textiles can play a key role in employment generation and industrial diversification, Zambia's success will depend on policy coordination, trade safeguards, and cost-reduction measures to rebuild local manufacturing capacity. Without these interventions, the country risks remaining an exporter of raw cotton while importing finished fabrics and garments.

Determinants of Textile Exports

Zambia is a net importer of textile and garment products. It is thus important to analyse the drivers of Zambia's exports of textile and garment products with a view to identifying drivers and inhibitors of exports of textile and garment products. However, there is no study in Zambia that analysed the drivers of exports of textile and garment. Therefore, this study drew lessons from other countries.

Chen et al. (2023) employed a gravity model approach to examine the predictors of textile exports among the top 10 global textile producers. The study found that real exchange rates, real GDP, preferential trade agreements, and shared borders significantly enhanced textile exports. Conversely, distance, tariffs, and language barriers negatively affected exports. These findings indicate that economy size and trade facilitation mechanisms play a crucial role in determining textile trade flows. Similarly, Rahman et al. (2019) analysed Bangladesh's textile and clothing exports using a panel gravity model covering 40 trade partners. Their results substantiated the significance of GDP, real exchange rate, and per capita GDP of importing countries as primary determinants. They study also found that Bangladesh's World Trade Organization (WTO) membership positively influenced exports, while geographical distance had an insignificant effect.

Role of Trade Agreements and Policy Support

Trade agreements can also influence exports performance. The impact of trade agreements on textile exports has also been widely examined. Masood et al. (2024) investigated Pakistan's textile exports under different Free Trade Agreements (FTAs), finding that FTAs significantly enhanced export performance, particularly for high-value-added products under the Pakistan-China FTA. However, the study highlighted that policy gaps and limited support for high-value exports contributed to Pakistan's reliance on low-value-added textile exports. Van Biesebroeck and Zaurino (2019) analysed trade liberalisation effects on Sub-Saharan Africa's textile exports, showing that unilateral trade liberalisation measures such as the African Growth and Opportunity Act (AGOA) and the European Union's Everything-But-Arms initiative had strong positive effects on textile exports. However, competition from Chinese imports posed challenges for African exporters in leveraging these trade preferences fully.

Export Performance and Industrial Competitiveness

In the context of industrial competitiveness, de Moura (2024) examined Portuguese textile export performance and found that financial resources, productivity, and firm size were key determinants of success in international markets. This aligns with Gebre et al. (2024), who assessed Ethiopia's textile and apparel export performance, revealing fluctuating export trends and a weak comparative advantage relative to competitors such as Madagascar and Cambodia.

A number of studies have noted the challenges faced by textile industries in sub-Saharan Africa. Van Biesebroeck and Zaurino (2019) investigated the effects of trade liberalisation in high-income countries on sub-Saharan

African exports, including textiles. Their results showed that reductions in import tariffs significantly increased textile exports, especially for countries like Ethiopia and Ghana, which experienced notable improvements in export performance post-liberalisation. In Ethiopia's textile sector, Gebre et al. (2024), highlighted the challenges and opportunities for emerging textile exporters in Africa. While Ethiopia faced fluctuating export performance, it made progress in improving its comparative advantage, particularly in textiles and apparel. A study in India by Gautam and Lal (2020) revealed that the country's comparative advantage in textiles improved significantly over time, especially for low-value-added products.

3. METHODOLOGY

3.1. Type of Study

This study adopted a mixed-methods approach, combining both qualitative and quantitative techniques to analyse performance, opportunities and challenges in the cotton-textile and garment value chain, by leveraging numerical data alongside in-depth insights from stakeholders.

3.2. Population and Sampling

The study population consisted of stakeholders across the cotton-textile-garment value chain, including cotton farmers, ginners, spinners, weavers, textile manufacturers, garment producers, government officials, and private sector actors. Participants were distributed across major cotton-producing and textile-processing regions.

A purposive sampling technique was employed to ensure participants possessed relevant knowledge and experience. Cotton farmers and other value chain actors were identified through industry associations. Key informants from government and private sector were chosen based on their expertise and direct involvement in the sector. For the online consumer survey, purposive sampling targeted individuals with smartphones and internet access, with the aim to capture consumer perceptions of locally produced textiles and garments as well as their willingness to buy the products. Table 3.1. presents the distribution of the sample:

Table 3.1: Sample Distribution

Category	Sample Size
Cotton Farmers	75
Value Chain Actors	39
Consumers of textile/garment	190
Key Informants	13

It is worth noting that purposive sampling approach may introduce selection bias, limiting generalisability to all stakeholders or consumers. The online survey further excluded participants without internet access, potentially underrepresenting rural populations and those with limited technological resources.

3.3. Data Collection and Sources

Both quantitative and qualitative data were used in this study.

a. Quantitative Data: Quantitative data was obtained from both primary and secondary sources. Primary data was collected using a semi- structured questionnaires administered to cotton farmers and other players in the value chain through face-to-face interviews and online interviews. Secondary data was collected from trade databases such as the ITC Trade Map, World Bank Development Indicators (WDI), FAO Statistics, Centre for Prospective Studies and International Information (CEPII), FAO Statistics and UNCTAD Statistics. This data encompassed trade and production statistics along the textile value chain.

b. Qualitative Data: Qualitative data was collected mainly through key informant interviews with Government Ministries and its Agencies relevant to the textile subsector and the private sector. These interviews were carried out in Eastern, Copperbelt, Central and Lusaka Provinces

3.4. Data Analysis

Considering that the various objectives and different types of data used, the study employed various methods and tools for data analysis as described below:

a. Descriptive analyses: This analysis examined trends in key indicators such as textile and apparel production and exports over time. This involved summarising data using statistical measures such as percentages and growth rates to identify patterns and variations and these are presented in form of tables, cross-tabulations and charts. In addition to the trends in growth rates and percentages, the study also undertook the revealed comparative advantage (RCA) trends in textile and apparel products. The concept of RCA employs trade patterns to pinpoint the sectors in which an economy holds a comparative advantage. This is achieved by contrasting the trade profile of the country of interest with the global average. The formula used is as indicated below. Zambia is said to have a revealed comparative advantage in textile products (t) when its ratio (see formula below) of exports of textile products (t) to its total exports of all goods exceeds the same ratio for the world as a whole. Thus, Zambia is said to have a comparative advantage in textile products when the RCA is greater than one

$$\mathrm{RCA}_{\mathrm{t}}^{\mathrm{z}} = \frac{\mathrm{X}_{\mathrm{t}}^{\mathrm{z}}/\mathrm{X}^{\mathrm{z}}}{\mathrm{X}_{\mathrm{t}}/\mathrm{X}}$$

(RCA > 1). A higher RCAs indicates that a country has higher export strength in that product. Revealed comparative advantage formula[3]:

3 *WTO and UNCATAD(2012)*

Where X_t^z is Zambia's exports of good t (textile products), $X^z = \sum_t X_t^z$ is Zambia's total exports, $X_t = \sum_z X_t^z$ is the world exports of good t and $X = \sum_z \sum_t X_t^z$ is total world exports.

b. Regression Analysis – The Gravity Model: The Gravity model has been widely used under different scenarios to describe trade flows as a function of various factors such as GDP, distance, relations (ties), and changes in trade policy among others. Due to its utility, the Gravity model has been described as the "empirical workhorse" in international trade analysis. This study employed the gravity model as the econometric framework to analyse the drivers of demand for Zambias exports of textiles and garments. This approach enabled us to assess the influence of factors such as economic size, distance, and trade policies on export flows. The gravity model was estimated using the Poisson Pseudo Maximum Likelihood (PPML) approach considering that the dependent variable-trade has many zero values. One advantage of the PPML approach is that it produces estimates that are robust to heteroskedasticity. The specification of the basic gravity model using the PPML is shown in the appendix.

Thematic Analysis: Qualitative data was analysed using thematic analysis. Thematic analysis involves analysing qualitative data to identify and understand themes that are relevant to the research objectives or questions. Widely adopted for its versatility, it offers a framework for researchers to organize qualitative data and extract meaningful insights through pattern recognition (Ahmed et al, 2025).

4. STUDY FINDINGS

This section presents the findings and interpretations of the study. Considering that the various objectives and different types of data used, the study used various methods of analysis. The finding from the quantitative and qualitative analyses are presented concurrently – findings from the qualitative analysis were used to qualify the quantitative data findings.

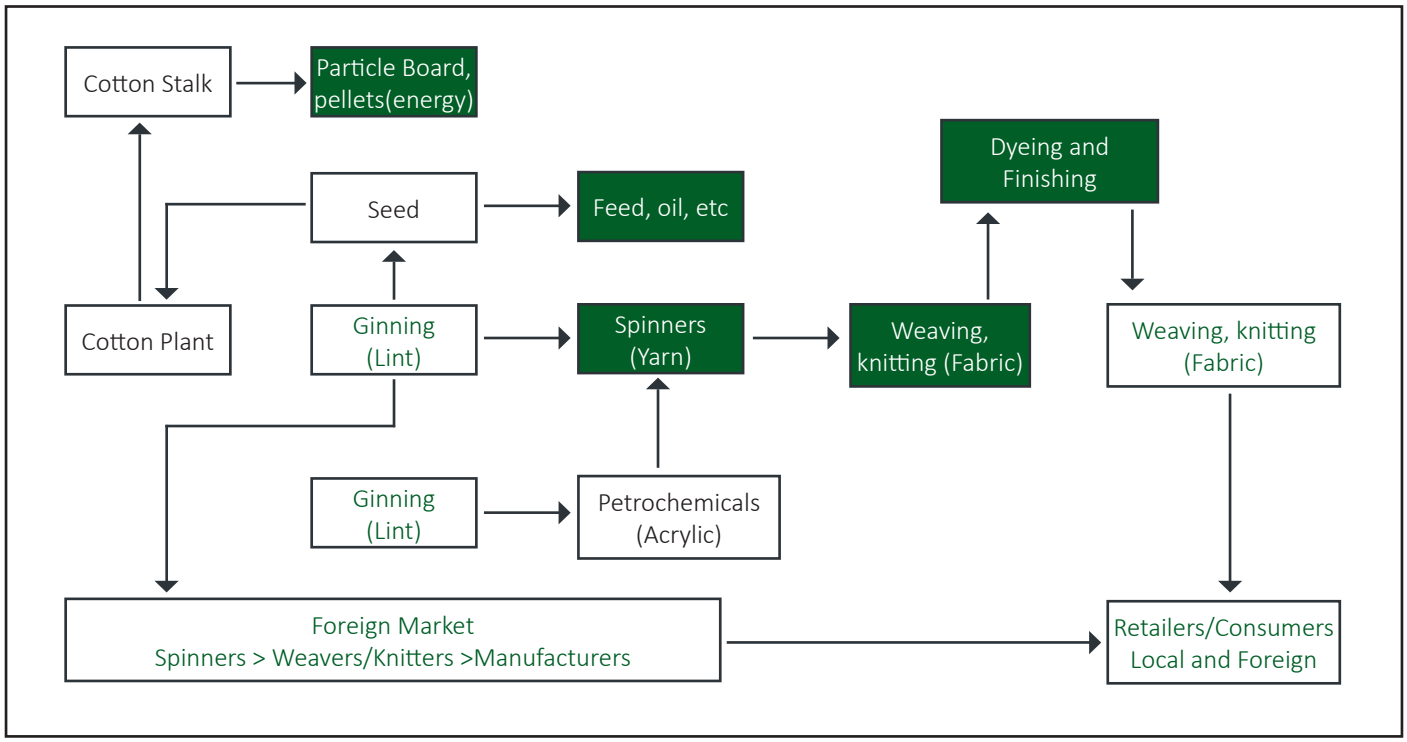
4.1. Cotton, textile and garment value chain - Broadly

A general cotton to garment value chain is illustrated in the figure 4.1. Analysis of the value chain shows that Zambia participates at the upstream end of the cotton-textile-garment value chain but weakly at the downstream end. Cotton is grown largely by smallholder farmers and ginned locally to produce lint, seed, and stalk by-products; these by-products present an opportunity for value addition into livestock feed, oil extraction, and energy/particle boards. However, a significant share of Zambia's lint cotton is exported in raw or minimally processed form, rather than being transformed domestically into yarn, fabric, or garments. Empirical trade evidence and data (check Table 1.1 and Figure 1.1) confirms that Zambia exports raw cotton while importing most finished textiles and garments. This trade pattern reflects the absence of competitive large-scale spinning, weaving, dyeing, and garment manufacturing capacity.

Midstream stages in the diagram - spinning (yarn), weaving/knitting (fabric), and dyeing and finishing - represent the most critical gaps in Zambia's value chain. Although these stages exist conceptually, they are underdeveloped. Local garment manufacturers therefore rely heavily on imported fabrics, before assembling garments for the domestic market. As a result, Zambia captures only a small portion of the total value generated along the chain, while employment and industrial capabilities associated with textile processing are lost. This incomplete integration explains why Zambia exports cotton to foreign spinners and weavers and then re-imports textiles and finished garments and at higher prices, reinforcing trade deficits and limiting industrial development.

Based on the analysis, the segments with the greatest growth potential are those that can reduce Zambia's reliance on imports and retain value locally. These include (i) expanded ginning and by-product utilisation (cottonseed oil, animal feed, energy pellets from stalks), (ii) revival of spinning and weaving capacity, which would directly address the export-import imbalance, and (iii) fabric finishing and garment manufacturing, especially for uniforms, workwear, and regional export markets under SADC and AfCFTA. Integrating the synthetic fibre segment through imports for blending, while anchoring production in local cotton, could further enhance competitiveness. Without strengthening these mid- and downstream segments, Zambia is likely to remain locked into a pattern of exporting raw cotton and importing finished textiles and garments, with limited industrial upgrading and employment creation.

Figure 4.1: Cotton, textile and garment value chain



Source: Author constructed based on literature reviewed

4.2. Analysis of the Key Segments of the Value Chain – Cotton Segment

The cotton sector is a key segment of the cotton-textile-garment value chain as it provides a critical input for the textile and garment production. This section provides the findings and analysis based on the survey of cotton farmers in Eastern and Central Provinces. According to Table 4.1, the survey results reveal several key insights into their employment patterns, production trends, and operational challenges. Majority of cotton farmers reported no seasonal employees (78.7%) and no permanent employees (76%) on their farms. Only 17.3% hired a small number of seasonal workers (1 to 10) and 24% had 1 to 10 permanent workers. This pattern reflects the predominantly small scale nature of cotton farming in Zambia, where most households rely on family labour and do not operate at a scale that supports regular wage labour. Nationally, cotton farming is dominated by smallholders, and the sector is not yet a significant source of formal rural employment compared with larger agricultural industries like maize or tobacco.

A significant percentage (84%) of farmers belonged to a cooperative, while only 16% did not. This high cooperative participation aligns with efforts by organisations such as the Cotton Association of Zambia to provide farmers with a collective voice, training, market access, and bargaining power in a sector historically dominated by a small number of ginners. However, despite this cooperative participation, production performance has been poor, with 76% of respondents reported a decrease in production over the period 2023 to 2025, and only 12% reporting no change and 12% reporting an increase. Cotton production in Zambia has declined significantly from historical levels, in part due to poor input quality, low yields, and unattractive prices

that discourage continued cultivation. Many farmers have shifted to more profitable or less risky crops as a result. Finally, 56% of respondents practiced environmentally sustainable methods, whereas 44% did not. This shows that some farmers have adopted sustainable practices, although there is need to enhance the adoption across all farmers.

Table 4.1: Characteristics of Cotton Farmers

Variable Name	Frequency	Percentage
Seasonal Employees		
0	59	78.67
1–10	13	17.33
11–50	2	2.67
Permanent Employees		
0	57	76
1–10	18	24
Belonged to a cooperative		
No	12	16
Yes	63	84
Change in Production		
Decreased	57	76
Remained the same	9	12
Increased	9	12
Government Policy Awareness		
No	73	97.33
Yes	2	2.67
Environmentally Sustainable Practice		
No	33	44
Yes	42	56

Source: Analysis by Author using Survey data

4.2.1 Challenges and Opportunities in the Cotton Segment

Challenges

The multiple response data indicate that cotton farmers face a combination of economic, environmental, and operational challenges. According to Table 4.2, access to quality inputs—including seeds, fertilizers, and pesticides—was cited as one of the major concerns (reported by about 90%), underscoring that timely and adequate inputs are critical for productivity. Additionally, labour intensity and high costs (9.3%) as well as limited access to finance (22.7%) further constrain farmers' capacity to produce efficiently. Other minor factors such as soil fertility, government policies, and miscellaneous operational issues also contribute to these challenges but are less frequently mentioned.

Furthermore, nearly half of the respondents (48%) identified weather conditions as a major constraint, highlighting the vulnerability of cotton to climatic risks. Similarly, low cotton prices and weak market demand were reported by almost half (49.3%) of respondents, indicating that profitability strongly influences production decisions.

Key informants further emphasized that the low cotton price offered to farmers remains a major challenge, as Zambia has some of the lowest cotton prices in the region. In the past, farmers had a say in cotton pricing through the Cotton Association of Zambia (CAZ), which engaged with the Zambia Cotton Ginners Association (ZCGA) to set prices. However, about five to seven years ago, the Competition and Consumer Protection Commission (CCPC) deemed this practice collusive and ruled that farmers must negotiate directly with ginners. Since farmers lack sufficient bargaining power, ginners now determine the price, putting farmers at a disadvantage. Informants noted that ginners tend to offer low prices at harvest time and higher prices when supply is scarce. Consequently, many farmers have shifted to alternative crops offering better returns, such as soya beans, maize, and tobacco.

Furthermore, key informants (KIs) indicated that ginners enter into contracts with farmers, under which they provide inputs such as cotton seed and pesticides on loan. Farmers are then required to sell their cotton to the ginners to repay the value of the loan. However, it was reported that some ginners take advantage of this input loan arrangement by supplying substandard inputs, such as untested seed or ineffective pesticides, which ultimately result in low cotton yields. On the other hand, it was also highlighted that some cotton farmers misuse the input loans by applying the chemicals provided for cotton on other crops they cultivate. For example, farmers may use pesticides supplied by ginners to control armyworms in their maize fields. Additionally, it was noted that cotton seed is available exclusively through ginners

Table 4.2: Operational Challenges facing cotton farmers in Zambia

Variable Name	Frequency	Percentage
Low cotton prices / Market demand	37	49.30%
Labour intensive / High labour costs	7	9.30%
Lack or late supply of seeds, fertilizer, pesticides	68	90.70%
Weather conditions	36	48%
Low soil fertility / Low yields / Losses	3	4%
Access to finance / Input costs	17	22.70%
Policy and other factors	6	8%

Note: Qualitative responses from the "Other (please specify)" field were coded and integrated into the corresponding structured response categories to provide comprehensive analysis.

With regard to challenges relating to the current legal and regulatory environment, farmers cited low prices and lack of price regulation as the most significant challenge, cited by 40% of respondents, reflecting farmers' dissatisfaction with ginners controlling cotton prices and limiting bargaining power. Contract enforcement issues (12.9%) are also a key challenge, with farmers reporting that ginners sometimes fail to honour agreements or only buy enough cotton to recover input loans. However, 24.3% of respondents reported no challenges or were unaware. Other issues include limited access to inputs, market information, and soil fertility constraints, which cumulatively impact production and profitability.

The findings further revealed a financing gap affecting both farmers and regulatory bodies such as the Cotton Board of Zambia (CBZ), which undermines their capacity to support farmers and enforce compliance. There is also a need for improved infrastructure and equipment for research at the Cotton Development Trust (CDT), including the establishment of a modern laboratory to enhance seed production. Key informants explained that CDT currently produces seed up to the pre-basic stage, after which ginners multiply it into basic and commercial seed. A significant challenge in this process is the limited capacity of the Seed Control and Certification Institute (SCCI) to inspect the vast number of small-scale farmers' fields, which often leads to compromised seed quality. It was suggested that providing full funding to CDT to manage the entire seed production chain could help ensure quality control and reduce farmers' dependence on ginners for input loans.

Another challenge highlighted by key informants was the insufficient number of extension workers serving cotton farmers. The ratio of extension officers to farmers is extremely high, with some cases where a single officer supports as many as 3,000 cotton farmers, thereby limiting the provision of adequate technical support. Moreover, some extension officers employed by ginners are not trained in agriculture and may lack comprehensive knowledge of cotton production. However, it was noted that a standard training manual for cotton extension officers has been developed by the CDT and CBZ, with support from the development cooperation organisation We Effect.

Opportunities

Most cotton farmers (about 40%) identified cotton farming/production as the main area of growth, reflecting confidence in the primary production stage if better prices and input support are provided. Approximately 19% pointed to ginning, showing recognition of midstream processing potential. About 11% mentioned weaving and textile manufacturing and only 8% cited garment production and value addition. Key informants noted that the production of high-quality cotton, due to the use of open-pollinated varieties (OPVs) and manual harvesting, gives Zambia a competitive advantage in niche global markets that value organic and ethically sourced cotton. This quality opens up premium markets, particularly in Europe and the Americas, where brands like H&M have already sourced cotton-based products from Zambia through partnerships with the Handloom and Textile Technologies of Zambia (HATAZ).

On the downstream side, the key informants noted that while Zambia exports a large share of its lint, it fails to maximise the value of cotton by-products such as cottonseed oil and stock feed, which remain underutilised. Developing these by-product value chains could diversify income sources and strengthen agro-processing industries. The key informants emphasised the significant potential for Zambia to export organic cotton regionally and globally due to its high quality. They noted that almost all cotton-related products used in Zambia, including clothing and blankets, are imported, indicating a large domestic market for locally produced goods if the value chain is completed within the country. Additionally, the regional market, particularly under the African Continental Free Trade Area Agreement, as the most promising for Zambia's cotton exports. They explained that Zambia primarily exports lint, missing opportunities for higher value-added products and job creation. It was also confirmed that Zambia imports more finished textile products and agricultural inputs like fertilizers and chemicals for cotton production than it exports, creating a significant trade imbalance.

Key informant further indicated that Zambia's textile sector is currently far below its potential, with a significant decline across the entire value chain from cotton production to fabric manufacturing, resulting in greater dependence on imports. Most stakeholders are now engaged mainly in finished garment production, while only a few small players, primarily weavers under CAZ, remain active in the earlier stages of the value chain. The sector currently extends only up to the ginning stage, where seed cotton is separated to produce lint. About 99% of the lint is exported, with very little retained for local value addition. This lack of domestic processing has hindered the development of a sustainable textile industry. The cotton sub-sector is also largely privately run, with ginners setting prices that, although influenced by international market trends, tend to favour them. As a result, prices fluctuate significantly each season, ranging from K15 per kg in 2021–2022, to K6 the following year, K10 the year before the current, and K8.15 in the current season. This fluctuation discourages many farmers and leads to a steady decline in cotton production.

Some KI's noted that the industry is currently undergoing a revival, driven by the government's plan to operationalise the Zambia–China Mulungushi Textiles. This initiative holds great potential to stimulate growth across the textile value chain by creating a local market for farmers and strengthening their bargaining power for better prices.

4.3. Analysis of the Key Segments of the Value Chain – Value Adding Segments

The cotton value chain involves interconnected processes that transform raw seed cotton into textiles and garments through ginning, spinning, weaving or knitting, fabric finishing, and garment production. Each stage adds value, creates jobs, and supports industrial growth. This section provides the findings based on the survey of businesses that add value to the raw seed cotton. It should be noted that this analysis includes some farmers that add value to the seed cotton as well as a spinning company that specialises in the manufacture of acrylic yarn used for both hand and machine knitting. The analysis under this section focuses more on the broad opportunities and challenges.

Opportunities

Various opportunities exist for investment and growth along the cotton-textile-garment value chain as highlighted in Table 4.3. Respondents identified fabric production (48.72%), spinning (43.59%), and ginning (38.46%) as high-potential segments for investment (Table 4.3). These findings are consistent with the responses from key informant interviews. These stages hold the greatest potential for value addition. Respondents also highlighted products with export potential such as cotton yarn (56.41%), woven/knitted fabrics (41.03%), finished garments (41.03%), and branded apparel (38.46%). Developing skills in advanced tailoring, machine operation, digital design, and trade logistics could strengthen production capacity, improve quality, and enhance competitiveness. With targeted interventions addressing finance, infrastructure, technology, and regulatory support, the sector can leverage these opportunities to expand domestic production, generate employment, and increase both local and export market share.

Table 4.3: Opportunities in the Zambian Cotton-Textile-Garment Value Chain

Variable Name	Percentage
Local Demand	
High	33.33
Moderate	30.77
Low	17.95
Very high	15.38
Very low	2.56
High potential segments for investment/growth	
Fabric production (weaving/knitting)	48.72
Spinning	43.59
Ginning	38.46
Apparel design and manufacturing	30.77
Cotton production	30.77
Fabric finishing	5.13
Export/retail	5.13

Branding and marketing	5.13

Potential Export Commodities	
Cotton yarn	56.41
Woven/knitted fabric	41.03
Finished garments (uniforms, fashion, etc.)	41.03
Branded Zambian apparel (e.g., chitenge designs)	38.46
Raw cotton	33.33

Challenges

The Zambian cotton-textile-garment value chain faces multiple challenges that constrain growth and competitiveness. Results in Table 4.4 presents a breakdown of the multi-dimensional challenges facing the Cotton-Textile-Garment value chain, categorized by operational hurdles, regulatory environments, market access, and specific technical skill gaps. Operationally, businesses are faced with limited skilled labour (48.72%), limited access to finance (46.15%), regular power outages (38.46%), and outdated machinery (30.77%). Legal and regulatory constraints are also significant, including weak enforcement of quality standards (38.46%), poor contract protection and intellectual property enforcement (28.21%), and high taxes on raw materials and equipment (28.21%). Export market access is further limited by lack of market information (46.15%), high logistics costs, low production scale, and trade barriers. Domestically, firms face competition from cheap imports and second-hand clothes. Skills shortages, particularly in advanced tailoring, machine operation, digital design, and export logistics, exacerbate operational inefficiencies and limit the industry's ability to scale.

Table 4.4: Challenges in the Cotton-Textile-Garment Value Chain

Variable Name	Percentage
Operational Challenges	
Lack of skilled labour	48.72
Limited access to finance	46.15
Power outages	38.46
Outdated technology/machinery	30.77
Competition from imports	25.64
Policy/regulatory issues	23.08
Poor infrastructure (etc.)	15.38
Legal and regulatory environment Challenges	
Absence or weak enforcement of quality standards	38.46
Lack of enforcement of contracts or intellectual property rights	28.21
High taxes and import duties on raw materials or equipment	28.21
No major challenges experienced	20.51

Limited regulation on imported second hand clothes	15.38
Limited access to regulatory information or guidance	12.82
Complex or unclear business registration/licensing procedures	12.82
Price controls or government interference in pricing	10.26
Frequent changes in policies or regulations	7.69
Bureaucratic delays in customs or approvals	7.69
Challenges Accessing Export Markets	
Lack of market information	46.15
High export costs/logistics	23.08
Low production scale	23.08
Trade barriers	20.51
Lack of certification/standards	7.69
Local Market Challenges	
Price competitiveness from other local producers	43.59
Payment terms	41.03
Competition from cheap imports	33.33
Competition from second hand clothes	28.21
Transport and logistics	25.64
Quality requirements	15.38
No challenges	10.26
Skills in limited Supply	
Advanced tailoring/design	56.41
Machine operation/maintenance	56.41
Digital design	53.85
Export logistics and trade knowledge	43.59
Industrial textile production skills	35.9
Fabric dyeing and finishing techniques	28.21
Quality assurance and standards compliance	12.82

4.3.1 Analysis of the Ginning Segment

Data collected from cotton ginners provides an overview of their operational landscape, market dynamics, and the significant challenges they face. The ginneries source their primary raw material, cotton from local Zambian farmers. To process this cotton, the industry employs a range of technology, with different operators utilising both semi-automated and fully automated machinery. This variation in equipment suggests differing scales of operation and levels of capital investment across the sector.

High international demand and premium pricing lead ginners to export the bulk of Zambia's cotton lint to mainly Asian countries. Consequently, the domestic spinning industry suffers from a chronic shortage of raw materials for their operations.

Ginners highlighted the various challenges they face in their day-to-day operations. A critical issue is the instability of their raw material supply. Ginners noted that good quality cotton is difficult to access and that there has been an insufficient supply of cotton on the Zambian market. This supply-side challenge is exacerbated by some farmers defaulting on their input loans. Compounding these issues are persistent power outages, which disrupt production and hinder growth. One ginner specifically mentioned that plans to vertically integrate and expand into spinning were abandoned precisely because of the unreliable power supply.

The legal and regulatory environment presents further hurdles. Ginners expressed frustration over frequent policy and regulation changes, which create an unstable business environment. They also cited concerns over price controls or government interference in pricing. A specific tax issue highlighted was the expectation by the Zambia Revenue Authority (ZRA) for ginners to pay value added tax (VAT) on cotton cake, a by-product used for stock feed. Regarding exports, the feedback was mixed. Some ginners reported no challenges, noting that they trade through a middleman who handles the export logistics. Conversely, other operators identified a major barrier: their lack of the necessary certifications and standards compliance required to access international markets directly.

Key informants highlighted several underexplored opportunities with regards to ginning and spinning. One key potential area would be to introduce mini ginning and spinning machines at the community level, an approach already successful in countries like India and Brazil. These technologies would enable farmers and cooperatives to add value locally, reduce dependency on external buyers, and establish rural economies that support income generation and local development. In addition, out-grower schemes linked to facilities such as the Zambia-China Mulungushi Textiles were noted as a way to increase raw cotton supply while creating jobs and offering predictable markets for smallholder farmers. The participants also stressed that cotton should be seen not only as a raw material for textiles but also as a contributor to the bioeconomy, due to its carbon sequestration potential, which could position it as a strategic crop in Zambia's green growth and carbon market initiatives. Another potential area suggested is the establishment of textile industrial parks in non-cotton-growing provinces, where lint could be transported from producing areas for further processing. This would decentralise industrial activity and ensure broader regional benefits.

4.3.2 Analysis of the Spinning Segment

After ginning, spinning is the next step in the value chain. There are currently no cotton spinning mills processing lint into yarn. The spinning mill currently operational on the Copperbelt produces acrylic yarn. Weaving activity is mostly limited to weavers working on a small scale; however, they use handlooms which hampers their ability to produce in bulk.

The Spinner producing acrylic yarn and other textile and garment products in Zambia affirmed of high local demand, indicating a strong, active downstream industry of local weavers and knitters. However, the spinner, faces challenges as it imports the primary raw materials (synthetic fibre) from international markets. This dependency exposes the business to foreign exchange volatility, high shipping costs, and global supply chain delays. This challenge with inputs is mirrored in its difficulty in accessing essential equipment and machinery, which must also be imported. The most significant barrier, however, is a severe limitation in accessing

finance, which is necessary for both working capital -to pay for these raw material imports upfront - and capital expenditure to upgrade to more efficient, automated machinery. High running costs, driven by energy consumption and labour, are compounded by intense competition.

Locally, the spinner faces competition from imports. The market is flooded with low-cost imported yarn and finished fabrics from large-scale international producers, as well as a massive, unregulated influx of second-hand clothing, which decimates the demand for new, locally-made textiles. The legal and regulatory environment exacerbates these challenges rather than alleviating them. The spinners reported that the government levies high taxes and import duties on the very raw materials and equipment the spinner needs to operate, further inflating production costs. Simultaneously, a weak enforcement of quality standards allows substandard imported goods to compete unfairly on price. The failure to regulate second-hand clothing imports effectively hollows out the domestic market, rendering the spinner's output less viable.

The Spinner has attempted to find growth in regional export markets within the SADC and COMESA trade blocs, targeting countries like Congo, Malawi, and Zambia. However, this strategy faces its own set of barriers. The company's low, semi-automated production scale makes it difficult to achieve the economies of scale needed to compete on price or fill large export orders. Furthermore, high logistical costs, significant non-tariff barriers at borders, and a critical lack of market information on potential buyers and pricing make accessing these regional markets incredibly difficult.

4.3.3 Analysis of the Weaving and Knitting Segment

The weavers that were surveyed face interconnected challenges that stifle their growth, competitiveness, and modernisation. The segment operates with a fragmented and inconsistent production base. While the weaving value chain draws raw materials from diverse international markets (including Egypt, Taiwan, Turkey, and Portugal) as well as local sources, it simultaneously faces a critical short supply of local cotton. This suggests a weak domestic supply chain for its primary material.

The majority still rely on manual handlooms, while others use a mix of semi-automated and fully automated machinery. Locally, demand is perceived inconsistently - some report it as high, others as low - which likely means that potential demand is being lost to intense competition from imports, especially poorly regulated second-hand clothing. Power outages and the absence of complementary industries (like knitting) further dampen local market success. While businesses access regional export markets (Democratic Republic of Congo, COMESA, SADC), they face significant barriers, including high transport costs, low production scale, and an inability to meet international quality requirements, all compounded by a lack of market information.

Operationally, the industry is constrained by severe deficits in both human and physical capital. The lack of skilled labour is a primary challenge, encompassing everything from basic machine operation and maintenance to advanced material and digital design. This skills gap is directly linked to the prevalence of outdated machinery and difficulties in maintenance. Furthermore, access to key inputs like quality seeds, cotton, and chemicals (dyes) is sometimes a challenge and a lack of finance prevents businesses from investing in solutions to these problems.

These operational issues are exacerbated by a difficult legal and regulatory environment. Businesses report high taxes and import duties on essential materials and equipment, which raises costs and hinders technology upgrades. This financial burden is paired with a weak institutional framework, notably a lack of enforcement for contracts, intellectual property rights, and quality standards. This creates an unpredictable and high-risk environment that discourages investment and favours unregulated, low-quality imports over local production.

The weavers indicated that there is an urgent need to address the skills gap through dedicated training, such as industrial training centres, Technical Education, Vocational and Entrepreneurship Training (TEVET) support, and specialised university programs This must be paired with financial solutions, such as affordable financing and leasing schemes, to allow businesses to upgrade their capital equipment. Without this dual investment in both people (skills) and technology (machinery), the industry will remain unable to scale, improve quality, or compete effectively against imports, either locally or regionally. Key informants suggested that weaving clusters in rural areas implemented through "village parks" could provide employment and skills training for women and youth, effectively bringing industrialisation closer to the grassroots.

4.3.4 Analysis of the Textile and Garment Manufacturing

Garment production in Zambia is characterised by a small number of formal sector producers alongside a large informal sector. Most formal sector producers rely heavily on imported textiles, threads, and trims due to limited local supply. The technological landscape among formal sector producers is highly fragmented, reflecting varying levels of capital investment and modernisation. Many firms operate using semi-automated machinery, while others employ a combination of semi-automated and fully automated equipment.

The domestic market for garments is a significant driver for the industry, with producers reporting uniformly high local demand. This strong consumer base indicates a substantial opportunity for local manufacturers to build a stable business, provided they can effectively compete on price, quality, and style against other market players.

Garment producers face a multitude of persistent operational challenges that hinder their efficiency and growth. A primary constraint is the lack of skilled labour, which impacts productivity and quality. This is exacerbated by limited access to finance, making it difficult for businesses to invest in necessary upgrades or manage cash flow. Consequently, many producers operate with outdated technology and machinery. Systemic issues such as poor infrastructure (e.g., road networks) and chronic power outages disrupt production schedules and increase costs. These issues are further compounded by an unpredictable policy environment and intense competition from cheap imports.

The legal and regulatory framework is cited as a significant barrier to business. Producers feel burdened by high taxes and import duties on essential raw materials and equipment, which inflates costs and reduces competitiveness. A critical vulnerability cited is the lack of enforcement of contracts and perceived absence of copyright protection for designs, which discourages innovation and allows for designs to be easily copied. The market is further distorted by the limited regulation on imported second-hand clothes and the high cost of fabric.

Several critical inputs for production are consistently difficult to access, creating significant bottlenecks. These include specialised chemicals, such as high-quality dyes and finishing agents, which are often imported. The equipment and machinery needed to modernise are also hard to obtain, a problem directly linked to the widespread difficulty in accessing finance. Perhaps most critically, the shortage of skilled labour itself making it a scarce input, limits the industry's capacity to scale or improve quality.

Producers are actively engaged in exploring export markets as a key channel for growth. When attempting to serve international clients, producers face specific challenges related to production flexibility and inventory management. A common problem occurs when export customers request a specific print or material. Producers may be unable to fulfil these orders because the specific prints run out leading to missed opportunities and difficulty in establishing reliable, long-term buyer relationships.

Despite high domestic demand, producers face significant competition particularly from imported clothes and second-hand clothes, which often flood the market at prices that formal producers cannot match. As highlighted by key informants, second hand clothes are cheaper than locally made clothes. Furthermore, respondents highlighted competition from imported cheaper textile and garments. Furthermore, transport and logistics issues within the country make it costly and difficult to distribute finished goods efficiently.

A significant skills gap undermines the sector's potential at nearly every level. There is a shortage of technicians trained in basic machine operation and maintenance, as well as a lack of workers with industrial textile production skills suitable for a factory setting. More advanced expertise is also missing, including modern fabric dyeing and finishing techniques, advanced tailoring and design, and quality assurance processes required to meet international standards. Garment producers also cited the lack of capacity in digital design and the specialised knowledge of export logistics and trade compliance.

To overcome the identified technological gaps, producers indicated a clear need for targeted support. The most crucial intervention would be the creation of affordable financing or leasing schemes to facilitate the purchase of modern machines. This financial support must be paired with robust skills training and certification programs, potentially delivered through revitalised industrial training centres or TEVET support. To lower the initial investment barrier, producers also advocate for import tax waivers on industrial equipment. Finally, public-private partnerships (PPPs) with training institutions are seen as essential to ensure that educational curricula are aligned with the practical, evolving needs of the garment industry.

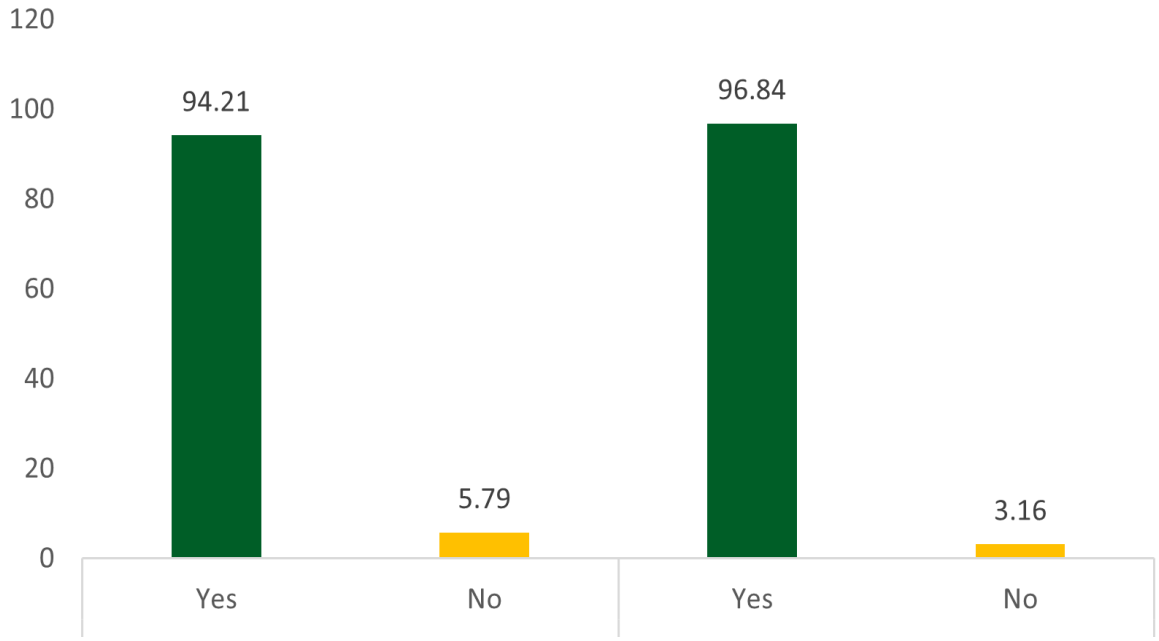
4.3.5 Analysis of the Domestic and Export Markets for Textile and Garment

Domestic Market: Willingness to Buy Locally made Textile and garment

According to Figure 4.2, there is a very strong willingness among consumers to support locally made textile and garment products. About 94.21% of respondents expressed willingness to buy locally made textiles, while an even higher 96.84% indicated willingness to buy locally made garments. Only 5.79% and 3.16%, respectively, were unwilling to purchase these products. This high level of willingness suggests that consumers in Zambia generally hold positive attitudes toward domestically produced textiles and garments. It also reflects strong

support for local industry and highlights significant potential for growth in the local textile and apparel market, particularly if issues such as product quality, design, and pricing are addressed.

Figure 4.2: Willingness to Buy Locally made Textiles and Garments



The study findings in Table 4.5 reveal that the majority of respondents perceived the quality of locally made textile and garment products as average (54.74%) or good (27.37%). Actual purchase frequency remains occasional, as most buy locally made textiles and garments "sometimes" or "rarely." Meanwhile, second-hand clothing remained popular, with 61.57% buying "sometimes" or "often." These results suggest that although consumers are highly willing to support Zambian textile and garment products, factors such as quality, price, and product availability continue to affect regular purchasing behaviour.

Table 4.5 : Buying Preferences for Textile and Garment: Local vs. Second-Hand Clothing

Variable Name	Frequency	Percentage
Quality rating of locally made textile products and garment		
Average	104	54.74
Good	52	27.37
Poor	23	12.11
Very poor	7	3.68
Excellent	4	2.11
Frequency of buying locally made textile products		
Sometimes	78	41.05
Rarely	73	38.42
Often	26	13.68
Never	11	5.79
Frequency of buying locally made Garments		
Sometimes	80	42.11
Rarely	65	34.21
Often	30	15.79
Never	11	5.79
Very often	4	2.11
Frequency of buying Second-Hand Clothes		
Sometimes	64	33.68
Often	53	27.89
Rarely	41	21.58
Never	17	8.95
Very often	15	7.89

In addition to the findings in Table 4.5, Table 4.6 shows the awareness of locally made textile and garment products in Zambia and the motivations for buying locally made textiles and garments. The results show that awareness of locally made textile and garment products in Zambia is high, particularly for school uniforms (85.26%), tailored traditional wear (68.42%), and chitenge fabric (55.79%), which are the most recognised locally produced items. Lower awareness was recorded for knitted or crocheted products (45.79%), corporate wear (30%), and household textiles such as bedsheets, pillowcases, curtains, and upholstery (26.32%), while only 23.68% identified casual clothing and fabric-based accessories.

Regarding motivations, the main reasons for buying locally made textiles were supporting local industry (69.47%), cultural pride (48.42%), and price affordability (46.32%), followed by quality (40%) and availability (39.47%). Similarly, for locally made garments, the top motivators were supporting local industry (74.74%), affordability (52.63%), cultural pride (46.32%), and quality (45.79%). These findings highlight that patriotism, economic considerations, and cultural identity are strong drivers of consumer choice.

For second-hand clothing, consumers were mainly driven by lower prices (50%), better perceived quality (49.47%), and variety of styles (41.58%), with availability (34.74%) also influencing decisions. This indicates that second-hand clothes remain attractive largely due to their affordability and quality advantages over some local alternatives. Overall, while local industry support and cultural pride strongly influence intentions to buy local products, second-hand markets continue to thrive due to competitive pricing and diverse options.

Table 4.6 : Awareness of Locally made Textile and Garment Products in Zambia and the Motivations for Buying

Variable Name	Frequency	Percentage
Knowledge of Locally Made Products		
School uniforms	162	85.26
Tailored traditional wear (men's and women's)	130	68.42
Chitenge fabric (plain or printed)	106	55.79
Knitted or crocheted items	87	45.79
Corporate wear / workwear	57	30
Bedsheets and pillowcases	50	26.32
Curtains and upholstery fabric	50	26.32
Casual clothing (shirts, trousers, dresses, T-shirts, hats, caps and scarfs)	45	23.68
Bags and fashion accessories (fabric-based)	45	23.68
Motivation for buying local textile		
Supporting local industry	132	69.47
Cultural pride	92	48.42
Price affordability	88	46.32
Quality	76	40
Availability	75	39.47
Unique design/style	66	34.74
Motivation for buying local garment		
Supporting local industry	142	74.74
Price affordability	100	52.63
Cultural pride	88	46.32
Quality	87	45.79
Availability	79	41.58
Unique design/style	74	38.95
Motivation for buying Second- Hand clothes		
Lower price	95	50
Better quality	94	49.47
More variety/styles	79	41.58

Availability	66	34.74
Not applicable	17	8.95
Habit/preference	15	7.89

Analysis of Factors Associated with Willingness to Buy Locally Made Garments and Textile Products

The analysis of respondents' willingness to buy local garments and textile products reveals several notable patterns. Perceptions of purchases being fashionable significantly influence future purchase intentions, as indicated by the chi-square results (Table 4.7). For local garments, those who consider local clothes fashionable are more likely to be willing to buy (p-value= 0.004), while for local textiles the association was even stronger (p-value = 0.001). This suggests that consumers' perception of style and trendiness plays a critical role in shaping their future purchasing decisions.

Other factors such as frequency of buying local textile products, income, gender, age, and respondent type do not show statistically significant associations with willingness to buy at the 10% significance level (p-values all above 0.10 in most cases). Similarly, willingness to buy does not differ significantly by income brackets, gender, age, or whether respondents are individuals or retailers, implying that these demographic characteristics do not strongly influence future purchase intentions.

Quality perception, however, has a mixed effect. While willingness to buy garments and textiles also shows a significant association. Finally, buying second-hand clothes does not significantly affect willingness to purchase local garments or textiles.

Table 4.7: Crosstabulation Results of Factors Affecting Willingness to Purchase Local Garments and Textiles

Variable Name	Willing to buy local garments			Willing to buy local textile		
	Yes (%)	No (%)	P-value	Yes (%)	No (%)	P-value
Local Clothes fashionable						
Not sure	97.22	2.78		94.44	5.56	0.001
Yes	100	0	0.004	99.04	0.96	
No	90	10		84	16	
Buys local textile products						
Never	90.91	9.09		90.91	9.09	
Rarely	93.15	6.85		89.04	10.96	0.136
Sometimes	100	0	0.092	97.44	2.56	
Often	100	0		100	0	
Very often	100	0		100	0	
Income						
K5000 and Less	100	0		95.83	4.17	
>5000- 10 000	91.67	8.33	0.095	91.67	8.33	0.787
>10 000-30 000	96.61	3.39		93.22	6.78	
Above 30 000				96.3	3.7	

Variable Name	Willing to buy local garments			Willing to buy local textile		
	Yes (%)	No (%)	P-value	Yes (%)	No (%)	P-value
Quality						
Poor	90	10	0.092	80	20	0.001
Fair	97.12	2.88		96.15	3.85	
Good	100	0		100	0	
Excellent	100	0		75	25	
Gender						
Female	95.52	4.48	0.496	94.03	5.97	0.975
Male	97.39	2.61		93.91	6.09	
Age						
35 and Less	97.06	2.94	0.85	94.12	5.88	0.953
Above 35	96.59	3.41		94.32	5.68	
Respondent Type						
Individual	96.7	3.3	0.602			
Retailer/Whoseller	100	0				
Buy Second Hand Clothes						
Never	100	0	0.701	94.12	5.88	0.776
Sometimes	96.19	3.81		95.24	4.76	
Often	97.06	2.94		92.65	7.35	

Foreign Market: Comparative Advantage and Drivers of Demand for Textile and Garment

1. **Revealed Comparative Analysis of Zambia's textile and garment exports**

   Commodities with revealed comparative advantage (RCA > 1).

   The RCA results (Table 4.8) show that raw cotton (HS 263) is the only commodity in which Zambia has consistently demonstrated a clear revealed comparative advantage over time. RCA values rose sharply from 1.3 in 1995 to extremely high levels in the early 2000s (peaking at 44.2 in 2005), before declining but remaining above unity at 2.4 in 2024. This indicates that Zambia has been relatively competitive in exporting unprocessed cotton compared to the rest of the world. Between 1995 and 2005, textile yarn (HS 651) also showed RCA values above 1, suggesting that Zambia once had some export competitiveness in early-stage textile processing. However, this advantage was not sustained.

Commodities with potential or marginal RCA (RCA close to 1 or episodic).

A few product categories display sporadic or marginal RCA, indicating potential rather than established competitiveness. These include synthetic fibres suitable for spinning (HS 266), which briefly recorded an RCA slightly above 1 in 2005, as well as worn clothing (HS 269) and made-up textile articles (HS 658), which experienced temporary increases in specific years. These fluctuations likely reflect short-term trade conditions, re-exports, or isolated production and trading activities rather than a structurally competitive industry. These categories signal latent opportunities where targeted investment, skills development, and improved access to inputs could allow Zambia to gradually move into light manufacturing or niche textile products.

Commodities with no revealed comparative advantage (RCA < 1).

Most textiles and garments, including woven and knitted fabrics (HS 652 - 655), apparel and clothing accessories (HS 841- 846), and textile machinery (HS 724), consistently record RCA values close to zero. This indicates a strong comparative disadvantage in downstream textile and garment manufacturing. The data clearly show that Zambia is not competitive in exporting finished or semi-finished textile products, largely due to weak spinning and weaving capacity, high production costs, competition from imports (including second-hand clothing), and limited integration across the value chain. As a result, Zambia remains dependent on imports for fabrics and garments, while exporting raw cotton with relatively low value capture.

Table 4.8: Zambia Revealed Comparative Advantage in Textile and Garment Products

Product Code	Product Label	1995	2000	2005	2010	2015	2020	2024
263	Cotton	1.3	14.2	44.2	9.4	11.9	4.4	2.4
266	Synthetic fibres suitable for spinning	0.2	0.4	1.1	0	0	0	0
267	Other man-made fibres suitable for spinning	0.1	0.1		0	0	0.1	0
268	Wool and other animal hair (incl. wool tops)	0			0	0	0	0
269	Worn clothing and other worn textile articles	0.1	13.2	0.6	0.2	0.1	0.1	0.4
613	Furskins, tanned or dressed (excl. 8483)		0.1	0.4	0			0
651	Textile yarn	3.7	5.5	2.4	0	0.1	0	0.1
652	Cotton fabrics, woven	0.3	0.2	0.1	0	0	0	0
653	Fabrics, woven, of man-made fabrics	0	0.1	0	0	0	0	0
654	Other textile fabrics, woven	0	0	0	0	0	0	0
655	Knitted or crocheted fabrics, n.e.s.	0	0	0	0	0	0	0
656	Tulles, trimmings, lace, ribbons & other small wares	0.3	0.4	0	0.7	0	0.2	0.2
657	Special yarn, special textile fabrics & related	0	0	0	0	0	0	0
658	Made-up articles, of textile materials, n.e.s.	0.2	0.2	0.1	0.1	0.1	0.1	0.4
724	Textile & leather machinery, & parts thereof, n.e.s.	0	0.1	0	0	0	0.1	0.1
841	Men's clothing of textile fabrics, not knitted	0	0.1	0	0	0	0	0

842	Women's clothing, of textile fabrics	0	0	0	0	0	0	0
843	Men's or boy's clothing, of textile, knitted, croche.		0.1	0	0	0	0	0
844	Women's clothing, of textile, knitted or crocheted	0	0	0	0	0	0	0
845	Articles of apparel, of textile fabrics, n.e.s.	0	0	0	0	0	0	0
846	Clothing accessories, of textile fabrics	0	0	0	0	0	0	0
848	Articles of apparel, clothing access., excluding textile	0	0	0.6	0	0	0	0

Source: Authors Analysis using UNCTAD Statistics

2. Drivers of Demand for Textile and garment

The gravity model results (Table 4.9) show that Zambia's textile and garment exports are significantly influenced by both economic size and trade facilitation factors between Zambia and its trading partners. The importing country's GDP has a positive and highly significant coefficient (0.9218, p=0.000), meaning that Zambia exports more textiles and garments to economically larger countries. This aligns with gravity theory expectations - wealthier markets have higher purchasing power and greater demand for imports. Similarly, the importing country's population has a positive and significant effect (0.4863, p=0.002), indicating that Zambia's exports increase with the size of the consumer base in the destination country. Larger populations create broader markets for textile and garment products.

On the exporter side, both Zambia's GDP (-0.7029, p=0.007) and population (-2.3813, p=0.018) show negative and statistically significant coefficients. This suggests that increases in Zambia's own GDP and population are associated with reduced textile and garment exports. The likely explanation is that as Zambia's domestic economy and population grow, more textile and garment output may be absorbed domestically rather than exported, or production costs rise, reducing competitiveness in export markets. The distance coefficient (-0.0005, p=0.000) is negative and highly significant, as expected, greater geographical distance reduces trade flows due to higher transport costs, logistical barriers, and information asymmetries. This confirms that proximity is an important determinant of Zambia's export intensity. The common language variable (-0.8509, p=0.000) is surprisingly negative and significant, suggesting that Zambia exports less to countries with which it shares a common language. This might reflect the structure of Zambia's export partners- for example, several of its major textile and garment destinations are not English-speaking but may have strong trade links for historical or regional reasons.

By contrast, sharing a border (0.8337, p=0.013) has a positive and significant effect. Zambia trades more textiles and garments with its neighbouring countries, which is consistent with the benefits of reduced transport costs, easier logistics, and established cross-border trade networks.

The landlocked variable (1.1736, p=0.006) also shows a positive and significant effect. This result may appear counterintuitive but can be explained by the fact that Zambia's neighbouring landlocked countries (such as Malawi or Zimbabwe) often rely on Zambian textile and garment products due to geographic proximity and similar market conditions, making regional trade relatively strong despite

being landlocked. Membership in regional economic blocs has a strong positive effect: being part of SADC (1.4218, p=0.000) and COMESA (2.2980, p=0.000) significantly boosts Zambia's textile and garment exports. These regional integration agreements lower trade barriers, harmonise standards, and enhance market access across member states, facilitating intra-African trade in manufactured goods like textiles and garments.

Finally, the simple average applied tariff on manufactured goods has a negative and significant coefficient (-0.1451, p=0.000), indicating that higher tariffs in importing countries reduce Zambia's exports. This underscores the importance of tariff liberalisation for boosting Zambia's export competitiveness.

Table 4.9: Gravity Model Results for Factors influencing exports of textile and garment

Variable	Coefficient	Std. error (Robust)	P-value
ln GDP (importer)	0.9218	0.1401	0.000
ln population(importer)	0.4863	0.1605	0.002
ln GDP (exporter)	-0.7029	0.2612	0.007
ln population(exporter)	-2.3813	1.0033	0.018
Distance	-0.0005	0.0001	0.000
Common Language	-0.8509	0.2435	0.000
Share Border	0.8337	0.3370	0.013
Landlocked	1.1736	0.4254	0.006
SADC Member	1.4218	0.3376	0.000
COMESA member	2.2980	0.4927	0.000
Simple Av. Tariff - Manufacture	-0.1451	0.0268	0.000
_cons	20.9357	6.9705	0.003

4.3.6 Sustainable Practices in Zambia's Cotton and Textile Value Chain

The respondents highlighted a range of initiatives taking place across the cotton and textile sectors that contribute to environmental, social, and economic sustainability. At the production level, several environmentally friendly practices are being promoted in collaboration with various partners. A key initiative is the adoption of biopesticides as alternatives to synthetic chemicals, which have historically been widely used in cotton farming. Conventional spraying, often conducted eight to ten times per season, has had adverse effects on both farmers' health and the environment, particularly through contamination of soil and water. By using biopesticides, the number of sprayings can be reduced to three or four, significantly improving the safety and sustainability of cotton cultivation.

Another practice gaining traction is the use of cotton residues to produce biofertilizers and biochar, the latter being a charcoal-like material that enhances soil fertility and health. Though the use of biochar is still in early stages, it is growing in popularity and holds significant promise for scaling up sustainable soil management practices. There is also increasing awareness around the responsible use of eco-friendly pesticides and the health and safety implications of agrochemical use, indicating a broader shift toward sustainability in cotton farming.

At the farmer level, sustainability efforts include the formation of business-oriented cooperatives, which help smallholders improve income generation and value addition. These cooperatives are involved in producing organic fertilizer, charcoal bricks from cotton stalks, mushroom cultivation using agricultural waste, and participating in weaving and spinning training programs. Some cooperatives are also being supported to engage in cooperative-level ginning, helping to increase farmer bargaining power and retain more value locally.

It was further highlighted that at the industrial level, approximately eight active ginning companies are producing certified cotton under the Cotton Made in Africa (CMiA) program. CMiA promotes sustainable cotton production through its comprehensive "five-finger approach," which includes proper land preparation, climate adaptation strategies, safe agrochemical use and disposal, conservation farming, and the use of organic fertilizers. The program also supports training in biochar production, further reinforcing sustainable farming practices.

From a broader sustainability perspective, the operationalisation of Zambia-China Mulungushi Textiles demonstrates efforts to incorporate green industrial practices. The facility includes solar power generation, which not only ensures a stable energy supply for production but also contributes excess power to the national grid, helping to reduce the impact of power shortages and support renewable energy development.

Lastly, the key informants pointed out that the textile industry's waste output calls for stronger government policies on sustainable waste management. To ensure that industrial growth aligns with environmental goals, investors are encouraged to adopt green technologies and modern, eco-friendly equipment. This approach, combined with innovations in agroforestry, intercropping for pest control and nutrition, and partnerships with wildlife conservation organisations, reflects a growing commitment to sustainability across multiple levels of the cotton and textile value chain in Zambia.

5. CONCLUSION AND RECOMMENDATIONS

Conclusion

Zambia's cotton-textile-garment value chain demonstrates spots of potential, with strong upstream cotton production but limited domestic value addition. Smallholder dominance in cotton farming, coupled with weak ginning, spinning, weaving, and garment manufacturing, results in lost opportunities for industrialisation, employment, and export diversification. Structural challenge which include low input availability, inadequate finance, unreliable power, outdated machinery, and weak regulatory enforcement, hinder sector competitiveness.

Consumers exhibit high willingness to purchase locally made products, yet purchase frequency is constrained by perceptions of quality, price, and limited variety. Zambia retains comparative advantage only in raw cotton exports, highlighting the urgent need to develop mid- and downstream segments to increase domestic value capture and regional competitiveness. Opportunities exist in expanding ginning, spinning, weaving, fabric finishing, and garment manufacturing, with regional and domestic markets offering growth potential. Effective integration of policy, finance, skills, and technology is essential to overcome existing barriers and achieve sustainable sector growth.

The combination of high-quality cotton, supportive regional markets, growing domestic demand for local products, and government-led initiatives such as the revival of the Zambia–China Mulungushi Textiles signal opportunities for sectoral transformation. If well-coordinated, investments in midstream processing, industrial skills, and energy infrastructure could re-establish Zambia as a competitive textile hub in Southern Africa. Realising this potential requires multi-sectoral collaboration among government, private sector, financial institutions, and development partners to address regulatory gaps, improve access to finance, strengthen research and extension systems, and promote regional trade facilitation.

Actionable Recommendations

1. **Strengthen Mid- and Downstream Processing**
    - Incentivize the establishment of industrial-scale spinning and weaving mills through Public-Private Partnerships (PPPs) and foreign direct investment to bridge the fabric supply gap.
    - Develop specialized industrial parks in non-cotton growing provinces to decentralize processing and create regional hubs
    - Promote value addition in cotton by-products (oil, livestock feed, energy pellets) to diversify revenue streams.
2. **Market Development and Promotion**
    - Support local brands and garment manufacturers to enhance product quality, design, and style to attract domestic and penetrate regional markets such as the AfCFTA.
    - Promote awareness campaigns emphasising locally made textiles and garments to leverage patriotic and cultural preferences. Buy local.

3. **Policy and Regulatory Reforms**

    - Strengthen enforcement of quality standards and regulate the "Salaula" (second-hand) market to protect the domestic garment industry while maintaining consumer choice.
    - Implement the 2025 Cotton Act to expand the Cotton Board's mandate across the entire value chain and establish a Price Consultative Forum to protect farmer interests.
    - Enforce regulations that grant preference to local textile enterprises for government contracts, such as military, police, and school uniforms.

4. **Value Chain Support and Skills**

    - Improve access to high-quality seeds (through the Cotton Development Trust) and enhance extension services by adopting ICT-based advisory tools.
    - Partner with TEVET and universities to create specialized curricula in digital textile design, advanced tailoring, and machine maintenance.
    - Support the commercialization of cotton by-products, such as cottonseed oil, livestock feed, and biochar, to diversify farmer income and promote circular economy practices.

Implementing these recommendations will support industrialisation, increase domestic value addition, expand exports, and create sustainable employment in Zambia's textile sector.

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APPENDIX

Regression Analysis – The Gravity Model: The Gravity model was used to analyse the factors affecting exports of textile and garments. The basic gravity model using the PPML is specified as follows:

The trade model is specified as follows:

$$\ln \mathrm{imp}_{ijt} = \varphi_0 + \varphi_1 \ln \mathrm{GDPPC}_{it} + \varphi_2 \mathrm{dis}_{ij} + \varphi_3 \mathrm{comlang}_{ij} + \varphi_4 \mathrm{comrec}_{jt} + \varphi_5 \mathrm{pop}_{it} + \varphi_6 \mathrm{locked}_{j} + \varphi_7 \mathrm{policy}_{jt} + \varphi_8 \mathrm{locked}_{i} + \varphi_9 \mathrm{er}_{j} + t_t + \varepsilon_{ijt} \ldots\ldots\ldots\ldots\ldots (1.1)$$

And the following model is estimated using the PPML method:

$$\mathrm{imp}_{ijt} = \mathrm{Exp}\left(\varphi_0 + \varphi_1 \ln \mathrm{GDPPC}_{it} + \varphi_2 \mathrm{dis}_{ij} + \varphi_3 \mathrm{comlang}_{ij} + \varphi_4 \mathrm{comrec}_{jt} + \varphi_5 \mathrm{pop}_{it} + \varphi_6 \mathrm{locked}_{j} + \varphi_7 \mathrm{policy}_{jt} + \varphi_8 \mathrm{locked}_{i} + \varphi_9 \mathrm{saat}_{i} + t_t\right) + \varepsilon_{ijt} \ldots\ldots\ldots\ldots\ldots\ldots (1.2)$$

Where;

$i =$	importing country,$j =$ exporting country,$t =$ time in years
$\mathrm{imp} =$	imports
$\mathrm{lnGDPPC} =$	natural logarithm of Gross Domestic Product Per capita
distance (dis) $=$	distance between the two countries
Population (pop) $=$	population of the importing country
$\mathrm{comlang} =$	1if countries have common language,0if otherwise.
$\mathrm{comrec} =$	1if member of COMESA of SADC,0if otherwise.
$\mathrm{locked} =$	1if country is landlocked,0if otherwise.
$\mathrm{policy} =$	1after 2018 Industrial Policy,0if before industrial policy.
$\varepsilon_{ijt} =$	error term
$\Phi_I =$	estimator
Tariff (saat) $=$	simple average applied tariff (manufacturing). This variable measures multilateral resistance.

Time (t): To capture the variations between years and to control for global macroeconomic shocks, the time fixed effect is included in the model. Bilateral fixed effects are included in the model to control for country pair unobserved heterogeneity.

In the case of continuous variables (e.g., GDP, GDP per capita, population etc), the estimate of the coefficient on the logarithm of the continuous variable is interpreted as the elasticity of the value of trade flows with respect to the continuous variable. In the case of an indicator variable (e.g., locked, policy, etc), the estimate of the coefficient on the indicator variable is interpreted after calculating $\left(e^{\varphi_i} - 1\right) \times 100$, as a percentage higher or lower than the benchmark category.

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