ECONOMIC POLICY RESEARCH CENTRE

CASE STUDY 1

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COTTON

AGRO-INDUSTRIALISATION

Upgrading the cotton value chain for textile industry development

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1. Background

Cotton is an important crop in Uganda, ranked as the country's third largest export crop, after coffee and tea, according to the Cotton Development Organisation (CDO). The cotton value chain employs a number of actors, including farmers, traders, and ginners.[1] Cotton is a particularly important crop for agro-industrialisation because its primary products and by-products are inputs into a broad range of industries including cottonseed millers (husks, cake and soap makers), cotton wool manufacturers and textile manufacturers. The cotton and textile industry in Uganda, however, remains underdeveloped in spite of recent efforts to revamp it. More recently however, opportunities have risen in the international trading system which can be capitalised on to develop the domestic cotton sector.

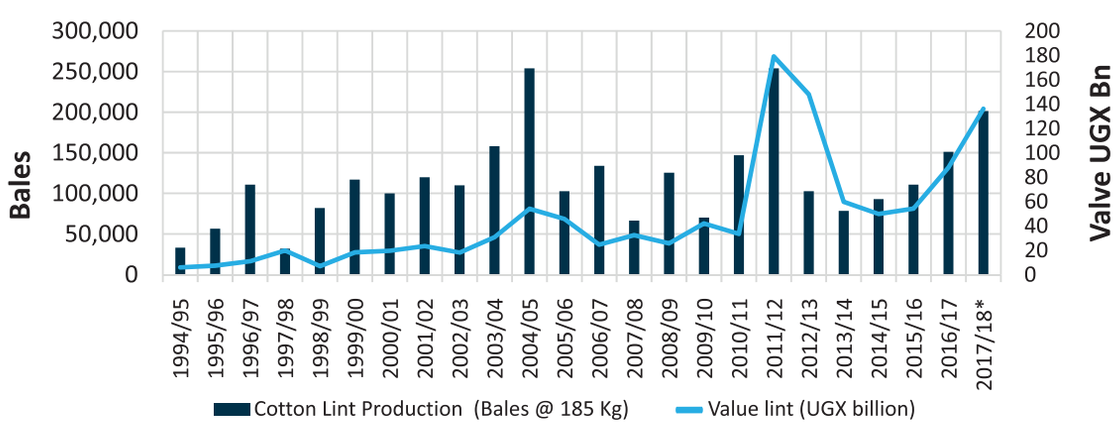
The World Trade Organisation (WTO) Nairobi 2015 decision removed export subsidies and provided for technical assistance to cotton producing countries. Moreover, Uganda, through the Cotton Development Organisation (CDO) has stepped up efforts to increase production. A number of studies for instance Itoh and Kiyono (1987), Quirke (2001), and Gillson et al. (2004) all show a positive relation between the removal of subsidies and prices received by poor countries. Besides, other authors such as Munu and Shinyekwa (2018) argue that the removal of subsidies provides opportunities for developing the East African Community (EAC) cotton sector which could be harnessed to revamp the textile industry.

1 A cotton gin is a machine that quickly and easily separates cotton fibres from their seeds, enabling much greater productivity than manual cotton separation.

1.1 Cotton production in Uganda

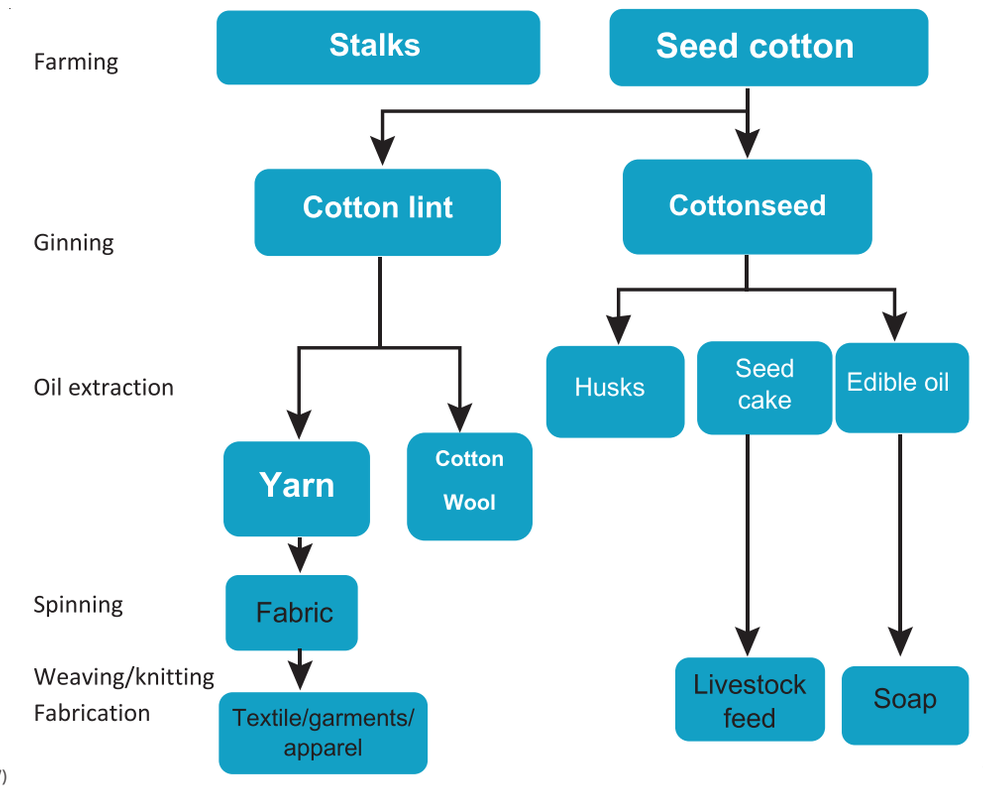
Cotton production in Uganda and indeed earnings from the sub-sector has been fluctuating over the years. As illustrated in Figure 1, production has been ranging from 33,000 bales to 136,000 bales over the last 20 financial years with the exception of 2004/05 and 2011/12. The 2017/18 financial year is tentative, subject to final computation. Better prices are the biggest incentive for increased production as seen during the two financial years where increased prices were matched with increased production. CDO estimates that Uganda has the capacity to produce 1,000,000 bales of cotton lint, provided farm-gate prices improve and remain fairly stable, technologies for addressing adverse effects of climate change are put in place, and farmers adopt the recommended agronomical practices for increasing yields and improving quality.

Figure 1: Trends in cotton lint production and value



Source: CDO.

Figure 2. The cotton value chain in Uganda



Source: Lugojja (2017)

2. Cotton and textile value chain in Uganda

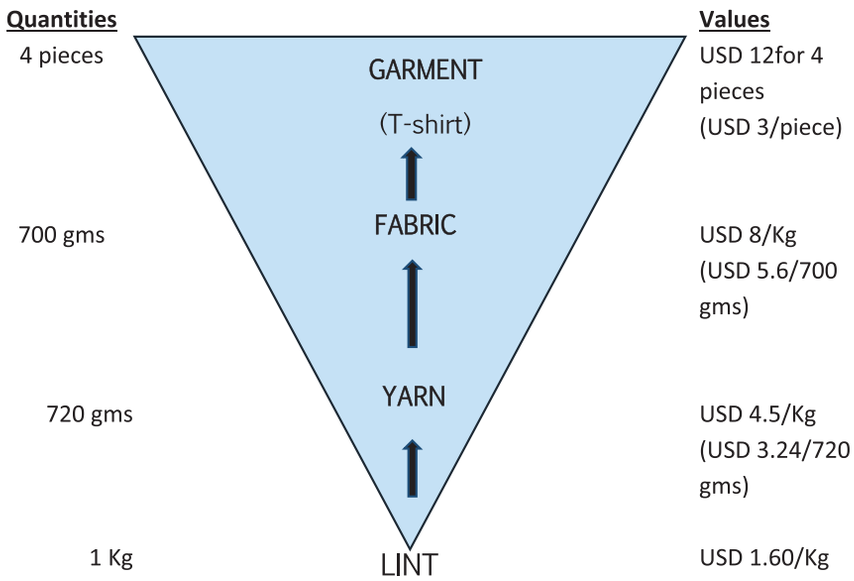
The cotton and textile value chain in Uganda, as summarised in Figure 2, is underdeveloped at the spinning and weaving/ knitting stage. Much as the value chain is composed of many industrial activities in both cotton lint and cottonseed, the entire sector is driven by the main product i.e. textile and garments. However, 95 percent of the cotton is exported as lint hence undermining the opportunities for increased earnings from upgrading in the value chain. This is problematic because spinning, weaving/knitting and fabrication is the most profitable stage in the textile industry value chain. Moreover, being the driver of cotton sector growth, developing the textile industry supports the entire cotton value chain by-products. In 2015, the global lint cotton market was valued at USD 11.7 billion, whereas cotton yarn was valued at USD 29.2 billion and textile products was worth USD 15.2 billion. This demonstrates the need for Uganda to upgrade in the cotton value chain by concentrating on the production at the cotton yarn and textile nodes rather than only cotton lint, which requires increased investment in these stages.

2.1 Developing Uganda's textile industry

The Uganda Investment Authority (UIA), a semi-autonomous government agency that drives national economic growth and development, in partnership with the private sector, has identified a number of investment opportunities in the cotton sector. The key areas for investment include: cotton ginning, cottonseed oil, animal feed, absorbent cotton wool and cotton yarn. According to UIA, investments in the cotton sector can be located near the cotton growing areas and where large tracts of land can also be leased to investors for them to grow their own seed cotton. Moreover, UIA can also allocate the investor industrial land to construct new facilities in planned industrial parks in the North and West Nile regions (UNCTAD, 2018).

The implementation of Import Substitution Industrialisation (ISI) is one policy which Uganda could undertake, not only based on the experience of the 1970s but also for other countries, notably Ghana. Ackah et al. (2014) observes that, as a result of the ISI pursued after independence, Ghana established numerous light industries to locally produce imported goods, including, among others, manufactured textiles and garments. The Ghanaian textile subsector then dominated the manufacturing sector for more than two decades, contributing significantly to livelihoods, as it employed about 25,000 people, or 27 per cent of total manufacturing labour force (Quartey, 2006). However, during the liberalisation phase from 1980s,

Figure 3. Approximate quantities produced and estimated values earned from adding value to lint



Source: CDO

the subsector declined due to low demand for local textile products, influx of second-hand clothing, and high production costs which affected the competitiveness of domestic firms. This same trend also happened in Uganda when the country adopted liberalisation policies. Examples from Asian countries like Indonesia, Cambodia, and Bangladesh who invested in spinning mills to produce cotton yarn also provides lessons for Uganda to transform the sector.

According to CDO, there is an increased return per Kilogramme of cotton lint through value addition as opposed to export of raw lint. As illustrated in Figure 3, increased domestic value addition maximises returns from cotton lint which can in turn release at least USD 1 to the farm-gate. This would reduce Uganda's dependence on International lint prices as is the case for India and China who are among the world's top producers and consumers of cotton lint. At an exchange rate of about UGX 3,300 and the current average farm-gate price of UGX 1,700, adding USD 1 to the farm-gate price would increase the price to UGX 5,000 per Kg of seed cotton. This can spur production to reach the potential of 1,000,000 bales of lint per annum.

3. Uganda's trade in cotton and textile products

Uganda has a huge trade deficit as regards textile products. The country's import bill on textile clothing steadily rose from USD 56.3 million in 2001 to over USD 210 million in 2012 while earnings from the country's cotton exports rose from 12.8 million to only USD 30 million over the period. The EAC Common External Tariff (CET) of 3 bands i.e. 0%, 10%, and 20% have not been sufficient in protecting domestic textile producers. Of critical significance is the worn textile products and clothing (second hand clothes) which constitutes a major component of Uganda's import of textile products, accounting

Table 1: Uganda's trade balance in textile products (USD '000)

	2001	2005	2010	2015	2016
All products	-554,952	-1,241,327	-3,045,735	-3,261,108	-2,347,146
All textile products	-43,446	-49,777	-144,437	-160,871	-188,470
Cotton (lint)	12,775	25,522	13,360	12,785	23,914
Apparel and clothing products	-8,241	-12,364	-22,636	-20,131	-20,411
Man-made staple fibres	-8,573	-12,329	-17,023	-19,169	-20,599
Worn clothing & worn textile products	-27,434	-36,341	-86,887	-102,326	-137,838
Other textiles	-11,973	-14,265	-31,251	-32,030	-33,536
Overall Textile Import Bill	-56,221	-75,299	-157,797	-173,656	-212,384

Source: Own computation using ITC data (2018)

for USD 27.4 million in 2001 and USD 137.8 million in 2016 as shown in Table 1. The huge import bill for second hand clothes demonstrates the high demand in the domestic markets. This is a result of lower prices for second hand clothes and yet with good quality as well as limited supply of domestically produced textile products moreover with higher prices. The textile industry in Uganda would therefore have ready market domestically if the issue of prices can be addressed.

4. Gaps in the integrated model for textile industry

Given strong downstream, upstream, and midstream linkages in the cotton-textile-apparel value chain and employment intensity potential of the textile sector, addressing spinning and weaving issues would go a long way in developing the textile sector, relieve the country of huge and rising bill in the importation of second hand clothes and boost employment and income opportunities for the country's labour force. Unlike ginners who work closely with farmers and middle men along the value chain, textile producers, on top of being few in number, are also not directly linked to other value chain players. The ginners, who would have provided this link instead export most of their lint. The Uganda Ginners and Cotton Exporters Association (UGCEA) works with CDO to drive the cotton sector development. The association's mandate is to improve ginning and lint exports. Much as the UGCEA and CDO arrangement is important, transforming the cotton and textile industry should be undertaken beyond this arrangement, which is itself not sustainable.

The proposed integrated model therefore needs to consider the unique nature of cotton value chain which naturally have farmers linked to only to ginners but not textile industries and other by-product manufacturers. Instead, linkages should be fostered between the ginneries and spinners/textile manufacturers. Currently, there are only two known textile industries i.e. Southern Range Nyanza Ltd and Fine Spinners (U) Ltd. The two mills consume about 10,000 lint bales per annum and have a total of 21,000 spindles installed. They however produce at excess capacity, utilising only around 63 percent of their capacity, which amounts to about 570,000 pieces of garments produced every month.

It is therefore important for these two companies to be used as a building block for both increased private sector and government investment in the downstream cotton value chain. This narrative is supported by UNCTAD (2018) which argues that government needs to increase support to the development of the local textile industry as this would address the missing link in the chain i.e. the making of yarn, which will attract fabric manufacturing. This would also borrow the Ghana case where Ackah et al. (2014) recommends rejuvenation of the textile industry in an integrated manner, from seed production to spinning to ginning, and printing. The integrated model would therefore facilitate the development/emergence of textile industries at both large scale and small scale which are directly linked to domestically produced cotton across the value chain.

The Textile Development Agency (TEXDA), a key government agency for promoting the growth of entrepreneurs in textile businesses through technical, managerial and entrepreneurial skills upgrading is facing challenges of funding and human resources. TEXDA, which has been transformed into a Trust under the Ministry of Trade, Industry and Co-operatives (MTIC) to become the Uganda Textile Development Center (TDC), offers training and production in Textiles. The agency's mandate is to strengthen the capabilities of Micro Small and Medium Enterprises (MSMEs) in the textile sector, through mentoring, provision of inputs and machinery, and facilitating the manufacturing of innovative quality products that are competitive in both local and export markets. Any transformative intervention in the cotton sector should ideally involve building the capacity of TEXDA as it links with SMEs, which ultimately supports the entire cotton value chain. Moreover, if the institutional infrastructure is expanded, it can offer incubation services for Textile SMEs while also expanding its production for the Export Market whilst also creating new jobs.

4.1 Research and development

Research to enhance the development of production technology in the cotton sector, just like for other crops is undertaken by the National Agricultural Research Organisation (NARO). This is done through the National Semi-Arid Resources Research Institute (NaSARRI), which generates, packages, and disseminates appropriate agricultural production technologies and information for improved and sustained integrated crop and natural resource management. Research on production technology is aimed at developing new cotton varieties, yields, yield components, fibre quality, initial seed multiplication, improving existing varieties, controlling pests and diseases, and improving current farming practices. It takes around 10 years for NaSARRI to produce foundation seeds which are then tested in different agro-ecological zones before being released to farmers. However, on some occasions, NaSARRI

imports foundation seeds and tests them in the different agro-ecological zones, although this is not a common practice.

The major challenge with regard to R&D is resource constraints which undermines the work of NaSARRI. As a result, the development of new varieties and production technologies has been slowed down especially in view of changing stakeholder demands and emerging production constraints such as climate change. In addition, contamination of seeds still exists partly due to the liberalised nature of cotton trade where ginners buy cotton from different locations. This results into the mix-up of cottonseed from the different agro-ecological zones which has a negative effect on productivity. CDO has intervened to address this challenge by setting up a cotton de-linting Plant in Gulu, which will be producing uncontaminated seeds.

In terms of the upstream value chain, there has been less focus on R&D as the ginneries use the same technology used in the1970s which according to field reports is at par with other technologies used across the world. At downstream, Southern Range Nyanza textiles have since 1996 invested over 45 million USD in a program to revive and modernise the plant in Jinja. In line with the principles of the Buy Uganda Build Uganda (BUBU) policy[2], the industry is supplying uniforms to armed forces and other public servants. In addition, the industry plans to further expand fabric manufacture to increase current daily output of 80,000 meters by another 50,000 meters in response to gradual phase-out of second hand goods by the EAC. However, access to cheap and long term finance still remains a challenge for the industry. This is even more important because the industry requires huge capital investments with a considerable time for returns to investment.

Local textile industries are however constrained with regard to access of the main raw materials i.e. cotton lint. Currently, UGCEA exports around 95 percent of the lint produced while government runs a buffer stock to ensure enough supply of lint. This is a revolving fund which is used to purchase lint to later be bought by the textile industries. With the expansion of textile manufacturing however, the available buffer stock would not be enough hence the need to increase it.

Lack of appropriately skilled workers to run the textile industry is a major hindrance to the textile sector development. There is inadequate machine operators (spinners, weavers, wet processors), technicians, garmenting workers (merchandisers and pattern makers). The vocational colleges available do not produce what the market needs. This, at times, results in the importation of foreign labour which not only increases production costs but denies the country increased employment opportunities.

5. Conclusion and recommendations

The textile industry in Uganda presents a good opportunity for promoting agro-industrialisation. To capitalise on this, government needs to;

a) Incentivise private sector investment in the spinning and weaving/knitting production node of the cotton value chain. Companies like Southern Range Nyanza, which already have interest in upscaling, need to be incentivised through both tax and non-tax incentives with close monitoring to ensure that they are using domestically produced cotton as their input. These should be long term, at least 10 years, to match pay back periods. However, aspects like the Value Added Tax (VAT) exemption for vertical textile mills are housed in the VAT Law and prone to annualized tinkering. Any such tinkering would undermine investments.

a) Directly invest in spinning and weaving/knitting to stimulate production and increase on the proportion of cotton lint consumed domestically. This is because private sector investments in the sector may not be sufficient as the long period for returns in investment discourages the private sector. Specifically, reviving the Lira Spinning Mill for production of cotton yarn is critical in spurring the establishment of cottage industries.

b) The review of the EAC CET should adopt a more protective measure for cotton and textile products. Uganda should adopt the regional consensus of having a four band structure, the highest of which being 35%. In addition, there should be a specific duty of US 5/Kilo of textile imports or maximum CET (whichever is higher).

c) Support the TDC's s mandate by transforming it into the National Textile Institute as per the National

2 The Buy Uganda Build Uganda policy was initiated in 2014, based on existing Government policies to support and encourage the consumption of locally produced goods and services.

Textile Development Policy. This will increase its infrastructure as well as human and financial resources. Since the agency supports SMEs, it provides a good foundation for building the textile industry, not only around the big companies but also small scale producers which would be more inclusive, both in terms of income brackets and geographical distribution.

d) Upgrade in the textiles and apparels global value chains to benefit from increased earnings in cotton trade. This is because Uganda is currently integrated largely in upstream value chain which is low value unlike downstream which is more lucrative.

e) Increase funding for the buffer stock cotton lint for local value addition. The annualized budget for this under CDO should be increased by at least UGX 5billion to take into account of expansions at textile milling level so that there is ample cotton lint available for value addition in Uganda.

f) Institute a sustainable intervention to holistically support cotton production and textile industry development. The current UGCEA and CDO arrangement is a voluntary intervention by industry players. The major preoccupation of the arrangement is exportation of cotton lint. A transformative agenda therefore should be a government-led initiative to support the entire vertical integration of the cotton and textile value chain, which includes addressing the constraints to industrialisation.

g) Adopt deliberate initiative of ring fencing financing for cotton research and textiles under the Uganda Development Bank (UDB) and Uganda Development Corporation (UDC) route. Textile projects are capital intensive which such capital is not available under UDB's UGX 50 billion annual capitalization enhancements. In addition, bilateral ties can be used to capitalise on existing international funding mechanisms. For instance, the recent India credit line for technology acquisition in the sums of USD 200 million for Uganda as announced by Indian Prime Minister Modi, should be made available for textiles for a transformative approach since India is one of the major suppliers of textile equipment.

h) Provide funding to MTIC to facilitate execution of a technical cooperation agreement on matters of Textile and Cotton with India under the South to South Cooperation. Since the Indian Government is ready and agreeable, it can be used to enable tertiary institutions in Uganda to deliver Vtraining modules and expertise suitable to bridge the skills gap.

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