AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search
http://ageconsearch.umn.edu
aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

ZIMBABWE ECONOMIC POLICY ANALYSIS AND RESEARCH UNIT

ZEPARU

ZIMBABWE'S COTTON TO CLOTHING VALUE CHAIN STUDY

ZEPARU OCCASIONAL RESEARCH PAPER NO.1/2014

FEBRUARY 2014

ZIMBABWE'S COTTON TO CLOTHING VALUE CHAIN STUDY

ZEPARU OCCASIONAL RESEARCH PAPER No.1/2014

FEBRUARY 2014

ZIMBABWE ECONOMIC POLICY ANALYSIS AND RESEARCH UNIT

ISBN 978 0 7974 7130 6

TABLE OF CONTENTS

ACRONYMS	**vi**
ACKNOWLEDGEMENTS	**vii**
EXECUTIVE SUMMARY	**viii**
PREFACE	**1**
Objectives of the Study	1
Methodology used in the Study	3
Chapter 1	**6**
OVERVIEW OF THE COTTON TO CLOTHING VALUE CHAIN IN ZIMBABWE	6
Common Problems	9
Background and Context of the Study	9
Evolution of the manufacturing industry in the first decade after independence (1980 to 1990)	10
Uncompetitive traits of the TC sector in the period preceding the adoption of the Economic Structural Adjustment Programme (ESAP)	11
The short era of expansion witnessed by the Zimbabwe TC sub-sector after 1980	12
The Textile and Clothing Sub-Sector in the Aftermath of ESAP	14
Chapter 2	**20**
RESEARCH, PLANTING SEED PRODUCTION AND MARKETING VALUE CHAIN LINK	20
The GMO vs Non-GMO Cotton Debate: Research into Bacillus Thuringensis (Bt) and other GMO Cotton Seed Varieties	24
Chapter 3	**29**
SEED COTTON PRODUCTION VALUE CHAIN SEGMENT	29
Small Holder Farmer Yield Levels with low Inputs	34
Cotton Input Packages, Yields and Family Livelihoods.	35
Comparing Standards of Living Between Cotton and Tobacco Farmers at Present	36
Technology in Cotton Growing in the Small Holder Farm Sector	38
Organization of Cotton Farmers for Increased Competitiveness of the C2C Value Chain	39
Chapter 4	**42**
THE GINNING INDUSTRY SEGMENT	42
Pricing and Quality Competitiveness and the Ginning Industry	43
Seasonal Financing for Cotton	48
Regulatory Framework	51
Production of Cotton Lint	53
Technology and the Ginning Industry	55
Summarizing Lessons Learnt from new Investments in the Ginning Industry	56
Chapter 5	**59**
THE TEXTILE AND CLOTHING INDUSTRY SEGMENT	59
SWOT Analysis of the Zimbabwean Textile Sector	60
The Position of the Textile Link in relation to the C2C Value Chain	60
What the Value Chains Within the Textile Industry Do?	61

TEXTILE ECONOMICS IN ZIMBABWE 67
How the textile Industry grew in Zimbabwe on the back of Import Substitution Industrialization 67
The Impact of ESAP, Globalization and the end of the ATC 67
Constraints faced by Zimbabwe's textile industry 68
Structure of the Textile Industry 69
Recent Factory Closures and Problems Encountered 72
Strategy of Foreign Direct Investment in the Textile Industry 75
Strategy of Zambian FDI and lessons for Zimbabwe 75
Strategy by Sub Sahara Africa's (SSA) to the rivalry from Asia 76
Strategy by western countries to competitive pressures from Asian exports 77
Demand for imported textile goods in Zimbabwe and in the region 85
Porter's Factor Conditions 87
The major competitive advantages that Zimbabwe has over other textile manufacturing countries 88
Findings and the way forward textiles 91
Sectoral Marketing Initiatives (SMIs), Growth Strategies and Niching 93
CHAPTER 6 **127**
SPECIFIC RECOMMENDATIONS TO THE REPORT 127
BIBLIOGRAPHY 132

List of figures

Figure 1: Porter's value chain. 4
Figure 2: Five Key Links of the Cotton to Clothing Value Chain 6
Figure 3: High Value Addition in the Textile Chain 7
Figure 4: Average Seed Cotton Yields of Cribbed Cotton Varieties under Irrigation and Rain-Fed Conditions since the Post Independence Era in Zimbabwe 25
Figure 5: Map of Zimbabwe Showing Cotton Growing Regions 30
Figure 6: Cotton Value Chain Cost Drivers Per Hectare 37
Figure 7: COTTCO'S Cotton Value Chain: Subsidiaries and Associates 52
Figure 8: Lint Production – 1995/96 – 2012/13 54
Figure 9: The Cotton to Clothing Supply Chain 60
Figure 10: Ring Spinning Process 61
Figure 11: Rotor Spinning Process 61
Figure 12: Country Spinning Costs by Year For Ring And Rotor 63
Figure 13: Cost Components of Ring Spinning 63
Figure 14: Knitted Fabric 64
Figure 15: Woven Fabric 64
Figure 16: Spinning Capacity 68
Figure 17: Average national electricity prices in selected industrialized countries. 79
Figure 18: Inputs Involved in the Construction of a Garment/Apparel Accessories 95
Figure 19: composition of cost garment construction drivers, refer to thematic 9 of table 30. 102
Figure 20: Porter's Diamond Framework: Competitiveness of The TC Cluster In Zimbabwe 105
Figure 21: Process Flow Schema Associated with the Rhinoceros Model 115
Figure 22: Average Annual Lint Production for Africa's Top 5 Producers (1985/86 - 1989/90) 116
Figure 23: Average Annual Cotton Lint Production For Africa's Top 5 Producers (2006/07 - 2010/11) 116
Figure 24: Average Annual Cotton Lint Exports for Africa's Top 5 Producers (1985/86 - 1989/90) 118
Figure 25: Average Annual Cotton Lint Exports For Africa's Top 5 Producers (2006/7 – 2010/11) 119
Fig 26 : Process flow schema associated with the Elephant Model 121
Fig 27: Process flow schema associated with the African Lion Model 123

List of tables

Table 1: Contribution of the textile sector to the economy in the years 1997 to 2004. 13
Table 2: Estimated Contribution of Sample Sub-Sectors to Manufacturing GDP, Exports and Employment in 1992 15
Table 3: Cotton Supply Chain Exports, 2005 – 2010 US$(000,000) (Estimates) 17
Table 4: Percentage Share of Textiles and Clothing & Footwear in Manufacturing 19
Table 5: Cotton Varieties in Zimbabwe 20
Table 6: CRI – Seed Cotton Yields Under Specific Conditions Kgs/Ha 21
Table 7:Cotton Production By Farming Scale 1988/1989 – 2004/05 30
Table 8: Farmer Dependency on Cotton in Zimbabwe 31
Table 9: Trends in Seed Production, 1988/1989 – 2012/2013 32
Table 10: Cotton Production by SADC States 33
Table 11: Structure Of The Ginning Industry: Support Levels In 2013 42
Table 12: Textile Sub-Sector: Strengths, Weaknesses, Opportunities and Threats - Zimbabwe 60
Table 13: Pricing Of 25 Tex Yarn 62
Table 14: Spinning Value Chain 62
Table 15: Fabric Formation Value Chain 65
Table 16: Preparation Through To Dyeing Process 65
Table 17: Dyeing, Printing and Finishing Value Chains 66
Table 18: Spatial Distribution of Textile Firms 71
Table 19: Local Consumption of Lint by the Textile Industry against Exports, 2008-2013 72
Table 20: Zimbabwe Textile Industry's Competitiveness Analysis In 2013 73
Table 21: Age of Machinery Installed 10 Years And Less 74
Table 22: Road Transportation Costs Applicable To Zimbabwe for 40ft Container (US$) 80
Table 23: Raw Water Cost Comparisons by Country 81
Table 24: Cost of Capital in Sample Countries 82
Table 25: Price Comparison of Selected Clothing Items in Different Retail Shops in Harare 83
Table 26: GDP Per Capita: Comparison Of Mauritius, Zambia And Zimbabwe (Us$) 84
Table 27: Government of Zimbabwe as a Market for Local Goods 85
Table 28: Current Cotton Cost Fact File 89
Table 29: Proposed Cotton Cost Fact File 90
Table 30: Number of Firms and Employment in the Clothing Industry 96
Table 31: Summary of Findings from Questionnaires 100
Table 32: Computation of value addition factor from a sample of 4 clothing companies in Zimbabwe (2013) 111
Table 33: Ratio Of Average Cotton Yields Of Selected African Countries To The World Average (1985/86 - 1989/90) 117
Table 34: Ratio Of Average Cotton Yields Of Selected African Countries To The World Average (2006/07 - 2010/11) 118

Acronyms

ACP	African, Caribbean and Pacific countries
AEC	African Economic Community
AFC	Agricultural Finance Corporation
AGOA	African Growth and Opportunity Act
AMA	Agricultural Marketing Authority
ARDA	Agricultural Rural Development Authority
AU	African Union
C2C	Cotton to Clothinga
CGA	Cotton Ginners Association
CIMB	Cotton Industry and Marketing Board
CMB	Cotton Marketing Board
CmiA	Cotton made in Africa
COMESA	Common Market for Eastern and Southern Africa
COTTCO	Cotton Company of Zimbabwe
CRI	Cotton Research Institute
CTC	Cotton Training Centre
DRC	Democratic Republic of Congo
DR&SS	Department of Research and Specialist Services
DWT	David Whitehead Textiles Ltd
EAC	East African Community
EBA	Everything But Arms
EPA	Economic Partnership Agreement
ESA	Eastern and Southern Africa
ESAP	Economic Structural Adjustment Programme
EU	European Union
FDI	Foreign Direct Investment
FTA	Free Trade Area
GATT	General Agreement on Tariffs and Trade
GDP	Gross Domestic Product
GNU	Government of National Unity
GoZ	Government of Zimbabwe
H & H	Health and Hygiene Textiles
HIPC	Heavily Indebted Poor Countries
IDC	Industrial Development Corporation of Zimbabwe
IMF	International Money Fund
ILO	International Labour Organization
ISI	Import Substitution Industrialization
ISO	International Standards Organization
LSCF	Large scale commercial farmers
LDC	Least Developed Country
MDGs	Millennium Development Goals
MFA	Multi Fibre Agreement
NBA	National Biotechnology Authority of Zimbabwe
NEC	National Employment Council
NEPAD	New Economic Partnership for African Development
NICs	Newly Industrialized Countries
NSSA	National Social Security Authority
OBM	Original Brand Manufacturing
ODM	Original Design Manufacturing
OFAB	Open Forum for Agricultural Biotechnology Zimbabwe Chapter
RCZ	Research Council of Zimbabwe
RoO	Rules of origin
SADC	Southern African Development Community

ACKNOWLEDGEMENTS

Financial support to undertake this study was received from USAID-Strategic Economic Research Analysis (SERA) program under Contract No. USAID-613-C-11-00001. ZEPARU appreciates the support provided by the USAID-SERA Chief of party Dr. Bruce Bolnick and Dr. Daniel Ndlela the Resident Advisor to ZEPARU (now Chief of Party) for their insights and advice during the design of the research project and the contracting process.

ZEPARU acknowledges and greatly appreciates the intellectual input of the AFRICONSULT team that conducted this study. The research team comprised Sam Geza (team leader); Tararama Gutu, Eli Mtetwa and Owen M. Tshabangu. ZEPARU also acknowledges the invaluable contributions from the diverse stakeholders that the research team interacted with in conducting this study. Some of the players in the Zimbabwe cotton to clothing (C2C) value chain that contributed to this study included: small holder cotton farmers; ZFU and its field network of development agents; AMA, the regulator; CGA the body which represents the ginners/merchants/contractors; ZCMA and ZITMA and the Zimbabwe Textiles Workers Union. The study also benefited from inputs from officials in the Ministries of Industry and Commerce, Agriculture Mechanization and Irrigation Development, Small to Medium Enterprises and Cooperative Development, Youth, Indigenization, Empowerment and Economic Development and Energy and Power Development. The study was coordinated by Cornelius Dube a senior research fellow at ZEPARU and supervised by Dr. Gibson Chigumira the ZEPARU Executive Director.

The perspective, findings and recommendation in this publication are those of the authors and do not necessarily reflect the official position of ZEPARU or its funding partners USAID-SERA, ACBF and the Government of Zimbabwe. Any errors and omissions remain the sole responsibility of the authors.

EXECUTIVE SUMMARY

The study revealed the extent of the destruction of the TC sub-sector and its ancillary industries beginning from the time of ESAP to the present. It also outlined the direct consequences of deindustrialization and unfettered competition in TC goods from outside on employment, the country's GDP, balance of trade, Fiscal and Foreign currency revenues as well as the general livelihoods of the community. The reports analysis of the firms and the C2C Value Chain showed that very few of the firms and link chains were globally competitive. The study concluded that Zimbabwe's success in turning around the manufacturing sector in general, and the C2C value chain in particular will depend largely on the following factors:

- Nurturing by a visionary and dedicated political leadership ;
- A capable and competent bureaucracy;
- Effective policy planning and coordination;
- Policy discipline;
- State commitment to agriculture and rural development to end poverty and ensure food sovereignty;
- Strategic engagement of local and foreign capital in mobilizing financial resources and attracting and regulating FDI to support industrialization
  and technological development;
- Infrastructure development, particularly with reference to massive investment in the provision of energy, rail/road/air transport, water, and ICT's
- Export-oriented industrialization;
- Active engagement of research-oriented think tanks in policy formulation and implementation.

This comes from hard lessons learnt from the development of the more successful Asian economies including China and India. Similar lessons - both negative and positive - were also learnt closer home although from diametrically opposed ideological perspectives under the ISI programmes of UDI and apartheid South Africa. Outside of the Washington Consensus, the State plays a pivotal role in creating a conducive environment for local capital to invest and in attracting FDI. Government creates the foundation for indu trial development through policy formulation,implementation and regulation.

The Zimbabwean TC industry can ultimately be resuscitated to propel the industrialization thrust of the country. The same industry has been used before for employment creation purposes. As a typical light industry the TC industry especially the clothing subsector, which is labour intensive, has low capital requirements, and spends little on research and development, it can repeat the earlier feat but creating greater levels of employment than before.

The industry has in the past absorbed large numbers of unskilled and semi-skilled and skilled workers. The cost of creating a job in the TC industry is lower than in

other sub-sectors of the manufacturing industry. The TC industry offers jobs for both men and women. The women dominate the clothing half while the men are found more on the textiles side. With more women holding decent and formal jobs in industry, this has a positive effect on poverty levels in society.

The TC industry has been an important channel for the transfer of skills and technology before its demise. This role will not diminish as the industry is turned around. As new value chains or existing ones expand through the backwards and forwards linkages such as for cotton farming, ginning, spinning, weaving, designers, clothing manufacturing, retail shops and local economic development initiatives, there will be obvious benefits to skills and employment creation in the broader economy. New opportunities for industrial clusters will offer significant learning opportunities for unskilled, semi-skilled and skilled workers, with potential to upgrade to more sophisticated goods and manufacturing processes.

Although, the TC sector is a global industry, activities of production are carried out in a local context and therefore affect the local and the national economy.

The previous ISI model of the TC industry although designed for growth and development, clearly had limited potential for trade and export earnings. Its products were meant to serve the local and South African markets mostly. The TC industry this time round has to be redeveloped on the basis of an export-led industrialization strategy. Such an approach involves the TC industry producing for exports in regional, continental and global markets while at the same time producing for the localized and the national markets.

Fundamental changes have taken place in the global TC value chain and its trading rules since the establishment of the WTO in 1995 and the disbandment of the MFA in January 2005. Gone with the MFA are the bilateral agreements, quotas and trade preferences. Presently, the EU and USA offer preferential trade to LDCs to access their markets to support TC production and economic development in the Third World countries. The EU does this through the Everything But Arms initiative (EBA) while the US has the African Growth and Opportunity Act (AGOA). In the region, both COMESA and SADC to which Zimbabwe is affiliated offer opportunities for the country to develop through the trade of manufactured TC goods within these blocs.

The present circumstances have provided a unique opportunity for the local industry to transform itself into a real global player through trade and investment instead of being donor dependent for its industrialization thrust.

TC industry can take advantage of the preferential access to EU markets without being restricted by these trade preferences. AGOA is out of reach of the TC industry for the time being. The industry has already started attracting FDI from China, India and Mauritius to help it penetrate the huge Asian markets.

The study has tried to discover the initial causes of the decline and later on the collapse of the TC industry and its impact on the competitiveness of the C2C

value chain. The analysis showed that some segments of the chain have withstood the pressures relatively better than others. In reviving the chain, the amount of financial and other resources required for cotton growing, ginning and the clothing industry will be minimal compared with the requirements of the textiles sub-sector. For example, the cost of creating a single job in the garment manufacture sub-sector currently is US$250, or US$ 22 500 for 100 people. In the textile industry, to create one job an investment of US$ 26 000 is required, or US$2 600 000 for 100 people.

No fresh investment will be needed in the ginning industry until capacity utilization levels reach 600 000mt per annum. Capacity utilization is at less than 200 000mt which is below the 50% mark at present. The speed of recovery will be fastest in those three segments requiring less capital. It will take much longer to turn around the textile industry.

The major funding for the revival of the supply chain will come from a combination of local capital or entrepreneurs, possibly diaspora bonds and FDI on the understanding that Government will be flexible in its implementation of the indigenization laws; i.e. avoiding the "one size shoe fits all" approach. The report is recommending the adoption of the African Lion Model in turning around the fortunes of the C2C value chain which allows for the development of the chain through a combination of market (demand) and supply driven strategies.

Reforms will have to be implemented starting with an Act of Parliament – the Cotton Industry and Marketing Board Act – to deal with all aspects of the production, marketing, organization and regulation of cotton in the country. Such a legal framework will form the foundation of a thriving cotton industry in Zimbabwe and a highly competitive C2C value chain in future.

The cotton growing sector will continue to be dominated by small holder farmers who are nonetheless viable. They will hopefully be joined by their indigenous LSCF counterparts from the ZCFU to grow the crop on a large scale. The report anticipates ARDA providing some of its 19 000 hectares of irrigable land for commercial cotton production under a high inputs scheme arrangement realizing yields of above 3 000kg/ha. There should be an immediate return to quality control of cotton on the farms right through to the ginneries to restore the premium Zimbabwean cotton used to command on international markets. But because emphasis will now be on beneficiation, most of the cotton will be value added locally and finished TC products sold on regional and international markets.

The development of world class infrastructure as enablers for the C2C value chain will be done in the context of supporting the whole economy. Competitiveness of the value chain needs ICTs, power, water, air-rail-road transport and telecommunications particularly to facilitate intra-COMESA, intra-SADC and intra-Africa trade

Finally, the birth of a new economy means that many Zimbabweans would want

to own and run TC businesses besides being farmers and employees of foreign firms. Many young graduates from colleges and universities are already into fashion and designing of clothes. They would need a highly competitive and sophisticated textile industry to supply them with a wide variety of up to date fabrics and accessories. There are encouraging signs that the revival of the C2C value chain has started, This is being done through the efforts of the remaining clothing manufacturers at the top end of the value chain even though they are now largely reliant on imports of fabric for their operations. A number of Chinese firms are now stepping into the void left by COTTCO to finance the growing of cotton, planting seed multiplication and value addition at the upper end of the chain. What remains is for Government to entice local capital to do the same as the Chinese investors.

PREFACE

The Zimbabwe Cotton to Clothing Value Chain Study was based on the following Terms of Reference and Scope of Work designed by the Zimbabwe Economic and Policy Research Unit (ZEPARU), an independent think tank of the Government of Zimbabwe, under the Ministry of Finance and Economic Development.

- Assess the value chains in the Textiles and Clothing industry.
- Map the viability of the value chain in the Textiles and Clothing industry.
- Identify policies to enhance the competitiveness of the Textiles and Clothing industry.
- Identify measures to enhance the competitiveness of the Textiles and Clothing industry.
- Identify strategies to enhance the competitiveness of the Textiles and Clothing industry.
- Produce progress research reports that are acceptable to ZEPARU with the first one by 13 November 2013.
- Produce a draft research report that is acceptable to ZEPARU by 13 December 2013.
- Present the draft report in a stakeholders' workshop where the draft report will be reviewed by 31 December 2013.
- Produce a final research report that is acceptable to ZEPARU, taking into account comments on the draft report from ZEPARU and other key stakeholders by 13 January 2014.
- The duration of the consultancy will be strictly 3 months from 14 October to 13 January 2014.

As an applied research project meant to inform Government policies and improve the competitiveness of the C2C value chain, AFRICONSULT incorporated the cotton growing link with the concurrence of the client in order to bring out a fuller picture and understanding of the whole value chain, its problems and possible solutions.

OBJECTIVES OF THE STUDY

- The study aimed at developing insights, and obtaining clarification of the causative factors for the serious decline of the cotton to clothing (C2C) value chain on the Zimbabwean economic landscape, especially in the last two decades.
- The study attempted to develop concepts, establish priorities and do an analysis of the data collected. From the data and analysis, recommendations were formulated based on conclusions drawn from the empirical evidence presented.
- Industrial and commercial enterprises in any country fail and crumble when they lose the competitive edge. Thus, it was hoped that this study would enable AFRICONSULT to discover and recommend feasible and practical ways that stakeholders and players could consider to restore and advance the viability of the whole cotton to

clothing value chain in Zimbabwe and consequently bring back employment prospects and improve livelihoods of women and the youth of the nation who have been the largest segment of the population supported by this sector.

- The main aim was to answer the question of Zimbabwe's C2C sector's competitive advantages and suggest how the competitiveness could be leveraged to enhance the performance of cotton farmers, and resuscitate the local textile and clothing firms.

- The key factors that are driving the competitiveness of the leading cotton producing countries and their textile and clothing exporting firms would be identified to understand how these factors could be adopted for the local C2C industry in order to increase competitiveness.

From a policy point of view the study took place hardly three months after the installation of a new Government following the July 31st 2013 harmonized elections. The new Government's economic thrust was set out in its blue print, the Zimbabwe Agenda for Sustainable Socio-Economic Transformation (ZimAsset) which, according to President Robert Mugabe, is tailored to pursue "a new trajectory of accelerated economic growth and wealth creation," as it is anchored on the policies of indigenization, empowerment and employment creation[1]. The new trajectory also encompasses the gradual replacement of the inherited enclave economy by a broad-based national economy of indigenous Zimbabweans and China's Deng Xiaoping's proverbial "cats of various colours" which nevertheless "are able to catch mice". Government is expected to play a prominent interventionist but strategic role in determining the direction of change and the pace of development of the economy in relation to industrialization, job creation, food sovereignty and the provision of infrastructure and social services. The study will work within the framework of the ZimAsset policy document in making recommendations at the end of the research.

The five-year national economic development plan - 2013 to 2018 - proposes to turn around the economy on the basis of four economic pillars or clusters, namely:

- Food Security and Nutrition with special reference to the resuscitation of the agricultural sector through irrigation development to achieve food security and food sovereignty with higher yields and support for small-scale farmers. The plan identifies cotton and livestock as sectors that can assist in eliminating poverty in the rural areas when they are resuscitated.

- Social Services and Poverty Reduction; particularly the improvement of water and sanitation facilities, review of rates and fees by local authorities, health and educational establishments for the benefit of communities.

[1] Sunday Mail October 27, 2013.

- Infrastructure and Utilities; revamping the country's infrastructure, particularly the road networks, railways, energy, water, irrigation & the provision of affordable housing loan schemes, i.e. the "enablers" of economic growth and development.

- Value Addition and Beneficiation for generating massive job opportunities, improved livelihoods and incomes for Zimbabweans, increased production capacity in all sectors of the economy as well as exports and the resuscitation of ailing industries.

The study took into account the Government policy positions in making recommendations at the end of the research.

METHODOLOGY USED IN THE STUDY

The study was conducted by a four person team of researchers[2] over a period of three months. Because of the need to meet the client's time deadlines, the team was split in two with one half focusing on the growing of cotton by small holder farmers in all the eight farming provinces of the country. The other two members investigated the industrial or manufacturing side of the value chain. The teams and individual members collaborated on overlapping areas given that the C2C value chain is vertically integrated in its operations. The study was conducted using a combination of desktop and exploratory methods of investigation. The assumption was that the knowledge frontiers of the C2C sector should be extended beyond their existing boundaries. The aim was to facilitate the investigation of issues that could either be new, under explored or both. Some data needed updating in the light of the continuing de-industrialization of the TC industry. It became necessary for AFRICONSULT to do three things.

First, was to identify stakeholders that fall along the cotton to clothing value chain and invite them to a consultative and participatory workshop to brainstorm by interested parties on the status and problems of the supply chain. The key stakeholders were identified from Government Ministries, the farmers' representative bodies (ZFU and ZCFU), the private sector industrialists, representatives of workers from the trade union movement (ZCTU and ZFTU), academia, export promotion bodies (ZIMTRADE), research institutions, ginners-cum-merchants-cum-contractors, training and extension bodies. Second, prepare outlines of hypothetical strategies that suggest possible ways and means of coming out of the distressed state of the C2C sector. The stakeholders were encouraged to critique the strategies which they would then review at a later validation workshop to discuss the final draft report of the consultants. Third, the research teams designed appropriate questionnaires administered to stakeholders and actors electronically, through personal interviews, or semi-structured interviews in the interest of time.

Additional data collection also relied on primary and secondary sources. The primary sources consisted of interviews, observations made during site visits to

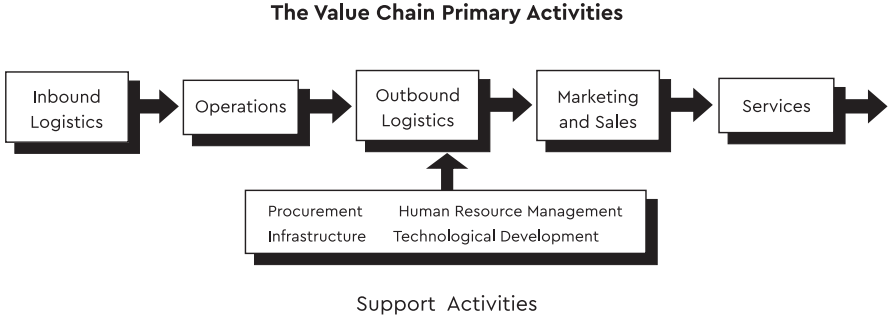
[2] Team members consisted of:- S. Geza, as team leader, T.S. Gutu, Dr. E.G. Mtetwa and O.M. Tshabangu.

firms that are still open, or half open, and questionnaires and discussions with other affected parties such as cotton growers and merchants/ginners. Secondary sources of information consisted of scholastic journals, magazines, newspapers, Business Association resolutions and their manufacturing industry survey reports, news bulletins, books, the internet and miscellaneous publications.

In analyzing the C2C value chain the report will de-segregate the links, describe the status and the challenges each segment or link faces, identifying the cost drivers of each to determine its competitiveness and how it is connected to the other segments. In doing so, key factors that inhibit competitiveness of the C2C value chain will be tested. In the particular case of the TC segment, the research will seek to find the key factors that drive global competitiveness of the top C2C exporting nations for purposes of benchmarking for the local TC industry as it sets down to industrialize the economy.

At the end of it all, will be suggested possible solutions and recommendations to overcome identified problems. A whole chapter will be dedicated to looking at models of turning around and improving the C2C value chain under conditions of global competition and the liberalization of trade in TC products in the long run.

Figure 1: Porter's value chain.



Source: IFM Management Technology: **www.ifm.eng.cam.ac.uk**, and Wikipedia.org/value chain

As an aid to value chain analysis the consultants followed Porter's value chain model, together with Porter's diamond of competitiveness. The classical Porter value chain is depicted in figure1 with brief explanations of the categories. The competitiveness diamond is explained at the relevant sections where it is employed.

The analytical tools provided a compass to ensure that as much as possible the value and supply chains are mapped adequately given data availability or lack of it. While the categories in figure1 largely reflect the way a single firm would view its systems of supply and the addition of value in production, they also suggest and imply interconnectedness of an industry from raw materials supply to production at all levels of the value addition process up to the supply of finished goods to the final consumer, domestically and/ or internation-

ally. The relevant services and support infrastructure are taken into account. The consultants were largely concerned with 'value added at the link' and 'industry wide synchronized interactions that create an extended value chain, sometimes global in extent[3]. The firm level supply chains indicated in the diagram were however useful in identifying what C2C individual value chain actors may need to focus on for competitiveness. Although there was not enough time for updated in-firm work- study approaches, previous studies that covered more ground were drawn upon.
The descriptions of the categories provide more detailed insights. This was the compass.
Inbound Logistics - involve relationships with suppliers and include all the activities required to receive, store, and disseminate inputs.

Operations - are all the activities required to transform inputs into outputs (products and services).

Outbound Logistics - include all the activities required to collect, store, and distribute the output.

Marketing and Sales - activities inform buyers about products, induce buyers to purchase them, and facilitate their purchase.

Service - includes all the activities required to keep the product or service working effectively for the buyer after it is sold and delivered. This may not be too relevant in this particular value chain. The initial quality and durability issues of clothing and textile manufacture take care of the serviceability of products.

Secondary and/or support activities are:
Procurement – is the acquisition of inputs, or resources, for the firm.
Human Resource management - consists of all activities involved in recruiting, hiring, training, developing, compensating and (if necessary) dismissing or laying off personnel.

Technological Development - pertains to the equipment, hardware, software, procedures and technical knowledge brought to bear in the firm's transformation of inputs into outputs.

Infrastructure - serves the company's needs and ties its various parts together, it consists of functions or departments such as accounting, legal, finance, planning, public affairs, government relations, quality assurance and general management.

The way the activities are carried determines the efficiency of the firm(s) in executing the various tasks and the profitability of the enterprise. The issues are dealt with in greater detail in the relevant segments of the study.

However, AFRICONSULT takes full responsibility for any lack of clarity and errors in the presentation and interpretation of the data.

[3] IFM Management technology: www.ifm.eng.cam.ac.uk , and wikipedia.org/wiki/value chain.

CHAPTER 1

OVERVIEW OF THE COTTON TO CLOTHING VALUE CHAIN IN ZIMBABWE

The primary activities of the Cotton-to-Clothing (C2C) value chain in Zimbabwe are depicted in the diagram below. The players and links in the chain comprise the following:

- Seed producers who research and develop the cultivars that are confirmed as appropriate for planting under Zimbabwean agronomic conditions and have the desired market characteristics for ginning and spinning. They multiply the seed and market it to farmers.
- The small holder farmers who grow the cotton and sell seed cotton to ginners.
- The ginners who buy the seed cotton and separate the lint from cotton seed. The ginners also play two other important roles as contractors/ merchants who provide funding to the farmers to finance the growing of the crop through their input support schemes. The ginners then sell the lint to both local and foreign spinners. They will either dispose of the by-products of cotton seed to the edible oil expressers, stock-feed manufacturers, etc. Alternatively, the ginners may do the value addition for oils and stock-feeds themselves.
- The next link is the textile segment where the cotton lint is spun into yarn which is then knitted or woven into fabric. It is at this stage that the fabric can then be dyed or finished in some other way.
- The clothing or garment link is the final stage of the chain which buys the fabric or cloth from textiles to make clothes.

Figure 2: Five Key Links of the Cotton to Clothing Value Chain

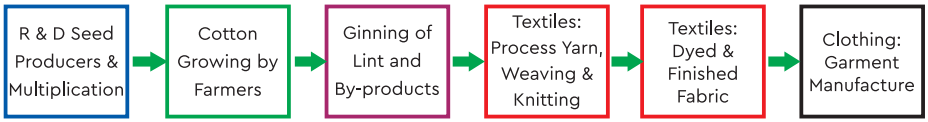


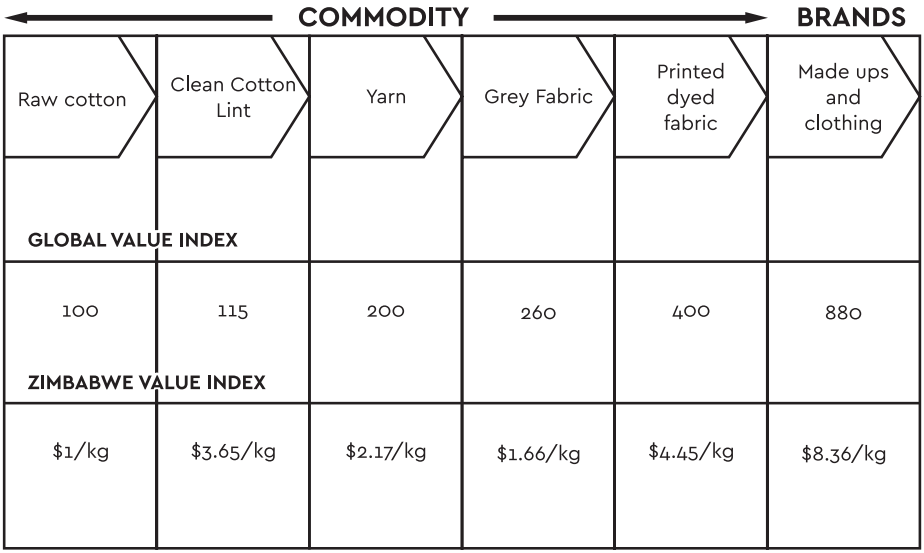
Figure 2 illustrates the chain of material inputs, activities and the various stakeholders who participate in driving the cotton to clothing value chain. In addition the figure illustrates the different fibres that are involved in the manufacture of clothing articles. Activities that make up the value chain can be contained within a single firm, e.g. in the cases of the COTTCO and SinoZim value chains, or divided among different firms.

The above traditional model of the integrated cotton chain in Zimbabwe is no longer able to withstand external competitive pressures. Its links have either been breached as is the case between the clothing and textile industries, or remain tenuous as those between farmers and ginners on one hand and ginners and spinners on the other. There is also an absence of direct links between farmers and the textiles and clothing industry. Farmers have not shown an interest in knowing what the

TC industry does with the cotton they produce. Neither has the TC industry so far been keen to know under what conditions the farmers produce the "white gold". Yet the overall success of the C2C value chain depends on each segment operating at optimum levels for its own benefit and the rest. All the links have historically possessed the capacity to produce to high levels to achieve critical mass at each level of the value chain and realize economies of scale. This is no longer the case.

Figure 3 shows value addition at the various links, contrasting Zimbabwe's experience with value addition for the world textile and clothing market.

Figure 3: High Value Addition in the Textile Chain



Source: Regional COMESA Strategy with Zimbabwe adaptation.
Note:Multiply the Zimbabwe figures by 100 to obtain comparable base with the rest of the world.

The Zimbabwe situation indicates the existence of some companies that still attain the high value addition segment of the clothing and textile chain. One of them is depicted in Table 33 of Ch. 5 of the report as Company 3. A second one is located in Harare, but there are very few companies at the high end of the value chain. Some of the data used in Figure 3 goes back to 2011. There have been major changes for the worst since then with company closures and an unfavorable operational environment as discussed in the relevant segments of the value chain. Value addition for all intents and purposes is confined to the low end of the market. The figure for cotton lint is noteworthy as it suggests that there is significant value pricing of lint instead of cost- plus pricing. The pricing of lint has become controversial as discussed below.

AFRICONSULT could not carryout detailed in- firm studies in the time available for this project. The consultant's own findings are reported upon in various places within the individual segments of the value chain. It is important to indicate what other studies have found to be the in-firm situation in order to highlight what firms need to address in their own systems.

A detailed 1997 study by the Economic Affairs Division of the Commonwealth Secretariat together with a ZIMCONSULT associate, Peter Robinson[4] provide important insights on the status of clothing companies in Zimbabwe together with the situation in other sectors of manufacturing. Although a lot of time has gone by since then the findings are likely to be still more than relevant given the economic meltdown that has happened in the sector since then. Some of the conclusions were even prophetic given developments thereafter. In one area the study observes as follows;

'Whether or not Zimbabwe can survive as important exporters and raise their market shares will depend on their ability to use their local raw material base effectively, raise technological levels and skills through the industry, develop better marketing techniques and move into specialized high quality marketing niches.' It was also observed that there was the possibility of firms exporting their skills and know how to less industrialized economies around them. In other words, this would entail partnering with firms in these economies for mutual benefit including market penetration.

The Commonwealth Secretariat study quoting a World Bank financed research on Zimbabwe, World Bank (KSA 1996), observed that 'Collection and product development is one of the greatest weaknesses of Zimbabwean companies. In most of the companies the creative part of collection making is missing. The concentration on orders according to buyers' specifications is dangerous for the future development of the clothing companies because the success factor, price, gets high priority and the industry becomes vulnerable to countries providing lower prices.'

Other issues raised by that Secretariat study were:

- Lack of specialization and subcontracting.
- Poor training and lack of computerized cost systems.
- Organizational structure that is inappropriate and over- centralized
- Need for quality orientation.
- Technology weaknesses included pattern making and marking, cutting and finishing.
- Quality control improvement with greater use of quality audits and statistical quality control.
- Lack of necessary worker and middle management skills.

This is just a small sample of the issues, suggesting that even were the external environment to improve significantly a lot would still need to be done by the manufactures themselves in getting up to speed in order to be world competitive. A 2003 Competition and Tariff Commission study[5] of the clothing

[4] Zimbabwe: Enhancing Export Competitiveness a Report for the Ministry of Industry and Commerce, Sanjay Lall , Ganesha Wignarasha ,Mike Sellek and Peter Robinson, (December 1997)

[5] Competition and Tariff Commission Directorate (2003)

sector observed much the same situation although in less detail. These previous studies need popularization and updates, resources permitting. Companies operating in a difficult operating environment are likely to be concerned with day to day survival issues to the detriment of strategic thinking.

COMMON PROBLEMS

Furthermore the C2C value chain has common problems within its entire links besides specific ones which affect individual segments and in-company weaknesses. The common ones relate to some inbound activities, the financial sector, the role of government and issues in the technical arena as follows:

- The overall macro-economic environment and Government policies which the business community considered not sufficiently conducive to doing locally and internationally including perceptions of corruption and its impact together with other policy standpoints on country risk.
- The "enablers", e.g. energy, water and transport, form signficant proportions of their cost drivers when they are available. Service provision of some of these is irregular, unreliable, costly and risky. The businesses then become price uncompetitive on both domestic and foreign markets.
- The labour market issues to do with regulations on hiring and dismissal of labour and productivity issues.
- Cash flow problems associated with the present liquidity crunch in the economy which creates difficulties with raising working capital for businesses and the inability of businesses to borrow long term from banks for recapitalization purposes, or to access cheap lines of credit. Where the funds are available, the terms and conditions are onerous.
- Antiquated plants, machiery and equipment which is inefficient, constantly breaks down, needing lots of spares and replacing.

Both the common and unique problems of each link will be dealt with in the context of the various segments of the value chain until the stage is reached for recommendations and solutions to the whole chain.

BACKGROUND AND CONTEXT OF THE STUDY

The history of the development of cotton and subsequently the textile and clothing (TC) industry in Zimbabwe is well documented in the literature[6]. Cotton was one of the crops grown as a primary input for the fledgling textile and clothing sector. By 1940 it was grown as part of an integrated value chain from cotton growing, to ginning, to textile manufacture, up to wearing apparel. It was considered an appropriate industrialization effort where the industry could use a locally available resource. It is this supply chain that this study is concerned with nearly half a century after it was first developed. By the time of Zimbabwe's independence in 1980 the country's competitive advantage in clothing and textiles, based on cotton growing, was well established.

During the period of the Rhodesian Rebellion (1965 -1980), the Smith regime faced economic sanctions instigated by the British Government with the backing of the United Nations. The Rhodesian regime adopted a wide range of sanctions

[6] Mlambo A., et al. Origins and Growth of Colonial Zimbabwe's Textile Industry, 1890–1965, in Historia, 52, 2, November, 2006, pp 145–175 and Nkala S, Textile and Clothing Sector Brief. ZIMTRADE. 2012

busting strategies; chief amongst them was the strategy of import substitution industrialization (ISI). The Rhodesians operated a command economy, whose ultimate objective was to create an independent national economy. Whereas the manufacturing sector accounted for 17% of GDP in 1965, its share had grown to 25% at the advent of independence in 1980.[7] The latter economic performance was the highest in Sub- Saharan Africa north of the Limpopo.

The TC industrial sector was a significant beneficiary of the import substitution policy; it was a key exporting sector and an important foreign currency earner, facilitated by the then existing Bilateral Trade Agreement with South Africa, first instituted in 1948 and then reinstated in 1964.

The main source of strength and competitive advantage of the clothing manufacturing sub- sector in particular, during the pre-independence years, was that the sub-sector was part of a vertically integrated cluster of industries.[8] The cotton- textile-clothing value chain was protected by the state. In that setting, the clothing sub-sector had a captive supply of feedstock, namely the fabric produced by the textile manufacturing industry. In that scheme of things, intermediate products were rarely exported; most of the fabric was destined for use as domestic feedstock for the clothing factories. Therefore the clothing industry was spared from costs that would have arisen from transportation across international borders, which would involve clearance at the border. Further, the industry was exempt from the burden of incurring inventory costs. The railway transportation infrastructure was fully functional in those years, electricity supplies were firm and affordable, electricity generation capacity at the Kariba was not yet completely outstripped by such factors like population growth, and foreign currency for export earners was provided. Last but not least, the labour force was one that was both suitably skilled and in possession of a strong work ethic.

EVOLUTION OF THE MANUFACTURING INDUSTRY IN THE FIRST DECADE AFTER INDEPENDENCE (1980 TO 1990)

As already indicated above, at independence, Zimbabwe inherited a relatively developed and diversified manufacturing sector by Sub-Saharan African standards, producing many different products. The major manufacturers of consumable goods were located in Harare and Bulawayo, each accounting for close to 50% and 25% respectively, of manufactured output.[9] The manufacturing sector consisted of some 1 260 separate units, produing 7 000 different products. Theindustry was configured for backward and forward linkages, with such critical sectors like mining and agriculture.[10] In the 1980s, the manufacturing sector comprised eleven major industrial groupings. The largest grouping, in terms of growth output, was the metals and metal products sub-sector, which accounted for 24.7% of total manufacturing output, followed by foodstuffs including the stock feeds sub-sector, at 14.3% and textiles at 14.2%.[11]

[7] Kanyenze G, Textile and Clothing Industry in Zimbabwe, Bonn Friedrich-Ebert Stiftung,2006
[8] Mlmani Development, The Rates Center, Nairobi, Kenya, 2003.
[9] Kondo L, Kanyenze G, Chitambara P, Martens J, 2011. Beyond the enclave, Weaver Press.
[10] Ndlela D and Robinson P (1995), Country case studies: Zimbabwe. In Exporting Africa: Technology, Trade and Industrialisation in Sub-Saharan Africa, Wangwe S M (ed.) Routledge London.

Ndlela, Kanyenze and others indicate that the import substitution industrialization strategy had begun to run out of steam by 1980, and it continued to lose impetus in the years that followed. Much of the plant and equipment that was acquired under sanctions was second hand capital stock. The latter can be borne out by the capital stock that existed at ZISCO – the blast furnaces there having been made in 1948, the ammonia synthesis loop at Sable Chemicals in KweKwe, 1958 and some of the machinery at the David Whitehead textile factory in Chegutu, 1950s. All the members of the AFRICONSULT team had firsthand experience of seeing old machinery and technology in factories going back as far as the Second World War (1939-1945) during their working days in both the public and private sectors. In one extreme case, a foundry in Bulawayo had a forge dating back to 1902, which was still in use at independence. In the 1980s, it was found that the technology that came with the capital stock of the UDI era had become obsolete and needed upgrading, frequent maintenance and frequent procurement of replacement parts. In consequence, although on the one hand, the manufacturing industry at that time brought in foreign currency through exports, the same industry was on the other hand a major consumer of foreign currency, both for procurement of replacement parts and occasionally for replacement of major components of the industrial plant.[12]

UNCOMPETITIVE TRAITS OF THE TC SECTOR IN THE PERIOD PRECEDING THE ADOPTION OF THE ECONOMIC STRUCTURAL ADJUSTMENT PROGRAMME (ESAP)

Jackson (2004) found that the Zimbabwe textile and clothing sector's market structure in the years immediately preceding introduction of ESAP, (1991 to 1995) and in the years immediately after ESAP (1995 to 1999) was oligopolistic. A similar conclusion had already been arrived at by the Jansen study of the Zimbabwe manufacturing sector in 1983.[13] There were six large firms that controlled over 75% of the local market. This bred inefficiencies that, in the view of Ndlela and Robinson (1995), caused firms not to improve on the quality of their products, resulting in them meeting difficulties upon trying to penetrate the export market.[14]

Through import substitution, the TC industry had been a major beneficiary of the 1964 Bilateral Trade Agreement between Rhodesia and South Africa. Rhodesian manufactured goods, textiles included, enjoyed preferential treatment in the South African market. In time, this privilege bred complacency with respect to matters of quality and other best practice aspects of business that enable a manufacturer to penetrate a market and retain its position. South Africa ceased to be a captive market for Zimbabwean goods in the 1990s. South Africa did not renew the 1964 bilateral trade agreement after the attainment of democratic rule in that country in 1994, and the treaty was officially terminated by 1997.

Zimbabwe's independence in 1980 came with a loss of skills and experience, especially in the industrial sector. The loss of skills in industry was substantially replenished during the 1980s, due to the country's progressive education system,

[11] Chiripanhura B (2010), Sneaking up and stumbling back: Textile Sector Performance Under Crisis Conditions in Zimbabwe, Journal of International Development (22).
[12] Ndlela D and Robinson P (1992), Part II, Country Study, United Nations University
[13] Zimbabwe Government Policy and the Manufacturing Sector Volume 1: Main Report. Submitted by Dr. Doris J Jansen, 1983.
[14] Ndlela P and Robinson P (1995), Country case studies: Zimbabwe. In Export Africa: Technology, Trade and Industrialisation in Sub-Saharan Africa, Wangwe S M (ed.) Routledge London.

only for some of those skills and experience to be lost once again at the start of the 21st century. ESAP –induced transformations of the TC sector did threaten jobs, resulting in emigration of skilled workers from the sector. Most of those skills were lost to South Africa. The emigration of skills turned into a flood after 2000.[15]

Zimbabwean TC industries were not reputed for innovation and product differentiation. The production was largely routine, and there was no back-up of R&D institutions. The tradition in Zimbabwean commercial organizations, in general, tended to be that of relying on "the gifted amateur." The formation of the Scientific Industrial Research and Development Centre (SIRDC), in the early 1990s, spearheaded by the Research Council of Zimbabwe (RCZ), located in the Office of the President and Cabinet, was intended to provide for industry an R&D back-up service similar to that which the Department of Research and Specialist Services (DR&SS), under the Ministry of Agriculture at that time, provided to the farming sector in Zimbabwe.

Contrary to the situation before independence when the country was under trade sanctions and there was constant liaison between Government and industry, after independence dialogue between industry and Government became confined mainly to matters of securing foreign currency for the industry. The TC industry in Zimbabwe did not bother itself with global trends concerning the marketing of TC goods, namely the World Trade Organization (WTO) quota systems regulated by the Multi Fibre Agreement (MFA) and the Agreement on Textiles and Clothing (ATC) both of which were designed to be of limited duration and to expire on 31st December 2004. Firms that were going to survive in the future needed to have planned for such events associated with the reasons behind the MFA and the ATC, and to plan for the business scenario after expiry of those treaties.

Further the wage and salary structure in Zimbabwe was globally uncompetitive; the trade unions picked a lot of steam during the 1990s, under the umbrella of the ZCTU. The culture of measuring business practices in the country in the context of global competitiveness was largely missing in Zimbabwe.

THE SHORT ERA OF EXPANSION WITNESSED BY THE ZIMBABWE TC SUB-SECTOR AFTER 1980

According to Mlambo (2006), the 1980s was a period of rapid expansion of the Zimbabwean textile and clothing industry. Mlambo found that 50% of textile manufacturers and 61% of clothing manufacturers started their operations in the period between 1980 and 1989. Mlambo and Nkala (2012) attributed the growth of the industry in the 1980s to the following conditions.

- A range of export and investment facilitation and promotion schemes
- Zimbabwe's central location in Southern Africa
- An established and relatively new infrastructure
- A low cost but relatively highly educated labour force.

[15]Hurungo J (2010), An inquiry into how Rhodesia survived under economic sanctions: Lessons for the Zimbabwe Government.

Chiripanhura (2010) found that the textiles sub-sector increased its exports in the late 1990s only for the exports to decline after 2000, see Table 1. As observed earlier on, large firms in the textile and clothing sub-sectors were vertically integrated partly, as a legacy inherited from the UDI years and also as a strategy to ensure a constant supply of feedstock through in-house production and obviation of import controls and foreign currency bottle-necks.

Table 1: Contribution of the textile sector to the economy in the years 1997 to 2004.

	1997	1998	1999	2000	2001	2002	2003	2004
GDP growth	0.2	-0.8	-2.1	-6.1	-3.6	- 4.4	10.4	-4.2
Capacity utilization (%)	-	-	-	59	59	60	50	54
Manufacturing sector growth	2.5	-3.4	-4.4	-11.5	-5.4	-29	-	-
Manufacturing to GDP ratio	14.9	14	13.4	11.4	9.7	7.2	10.8	-
Textile production volume	74	79.1	87.3	72.8	69	49.4	32	39.8
Textile/Manufacturing production volume	69	74	87	78	79	65	50	-
Clothing and footwear production volume	106.2	114.6	125.7	120.8	123	108.4	104.4	96.2
Annual average inflation	18.8	31.7	58.5	55.9	71.9	133.2	365	350
Trade / GDP ratio	0.77	0.89	0.91	0.66	0.34	0.15	0.05	-

Source : Blessing M. Chiripanhura's own calculations based on CSO data (2003) & World Bank data (2000) and Kanyenze (2006).

Foreign currency shortages in the late 1980s began to throttle the economy, investment plummeted and employment levels were on the downward trend. The World Bank and the IMF (1989) leveraged for the abandonment of the political economy of state intervention and for adoption of a market-driven economic model (Kanyenze 2006). In 1991 the Zimbabwe Government introduced what was called the Economic Structural Adjustment Programme (ESAP).

Under ESAP (1991 – 1995)

- Trade was liberalized.
- Export incentives were abolished.

- The import-licensing regime was phased out.
- Foreign currency controls were dismantled.
- Price controls were eliminated.
- Tariffs were to be reduced to create a tariff band ranging from 0 to 30%.
- The economy was required to achieve an export growth rate of 9% per annum.
- 18 000 government jobs were abolished (with 7 000 retrenchments).
- The civil service wage bill was reduced from 15.3% of GDP in 1990 to 11.3% in 1994.

The conjecture behind ESAP was that technical and allocative efficiencies in all economic sectors were destined to improve as the level of trade protection declined. On the exports front, exports actually dropped from US$1753 billion in 1990 to US$1 531 billion in 1992.[16] The latter case pointed to the failure of ESAP on a facet where it mattered most. The Zimbabwe Congress of Trade Unions (ZCTU) charged that trade liberalization "tended to turn manufacturers into traders …….[as] firms have tended to stop manufacturing products locally, preferring to import them directly and sell them to local consumers". [17] Total manufacturing output fell by 24 percent from an indexed peak of 143 (with 1980 = 100) in 1991 to 109 in 1999, as de-industrialization ravaged the textiles (- 64%), metals (- 35%), transport equipment (-31%), and clothing (- 28%) subsectors.

THE TEXTILE AND CLOTHING SUB-SECTOR IN THE AFTERMATH OF ESAP

The cotton to clothing chain was affected dramatically in the manner that its parastatal, the Cotton Marketing Board (CMB) was subsequently wound up and replaced by private companies like COTTCO, Cargill, etc.

Following trade liberalization, the manufacturing sector was left exposed to international competition on the domestic market. The assumption had been that once the Zimbabwean firms were no longer enjoying a protected market, they would be compelled to become more efficient in their production systems and at the same time be more competitive in the pricing of their products while also achieving competitive quality standards. The promoters of ESAP had also taken the view that the currency in the pre-ESAP period had been over-valued, hence the advent of ESAP resulted in both devaluation of the currency and a rise in interest rates. Helvey Knitwear – a reputable textile firm - was one of the firms that were caught up in the net of risen financial charges as a result of which it was forced to shut down (Chiripanhura 2010).

Kanyenze (2006) found that following the introduction of ESAP, the share of the textiles sub-sector in manufacturing output declined from 11.3 percent in 1985 to 7.9 percent in 1995. The share of the manufacturing sector in GDP declined from a high of 27 percent in 1992 to 19.2 percent in 1995 and 7.2 percent by 2002. Kanyenze takes the view that the decline during the ESAP period (1991-95) was mainly due to the influx of competing cheap imports, while the further decline after 1995 reflected both liberalization of trade and the current economic crisis. The index of the volume of production for the textiles sub-sector plunged from

[16] World Bank, "Project Completion Report: Zimbabwe: Structural Adjustment Program," p163.
[17] ZCTU, Beyond ESAP, p52.

100 in 1990 to 59.3 by 1995 (due mainly to trade liberalization) and further to 39.7 by March 2005 due to both the liberalization of trade and the political crisis that took grip of the country at that time).

Table 2: Estimated Contribution of Sample Sub-Sectors to Manufacturing GDP, Exports and Employment in 1992

	Contribution to GDP		Exports		Employment	
Sub-sector	**Z$M**	**%**	**Z$M**	**%**	**Z$M**	**%**
Textile & Clothing	**1 475**	**19**	**518**	**20**	**59 000**	**29**
Footwear & Leather	165	2	130	5	9 000	4
Agriculture Machinery	89	1	120	5	1 200	1
Total Manufacturing	7 760	-	2 587	-	199 200	-

(Exchange rate during 1992 was approximately Z$5 =Us $1)

Source: Ndlela and Robinson 1992 in the Country Report for the United Nations University.

The statistics confirm the trends that are reflected in Table 2 above.

Important lessons can be learnt from the praxis of ISI in how Government policies shaped the characteristics and performance of the TC industry and its value chain. Lessons can also be drawn on how the players and stakeholders responded to those Government initiatives. After all they are almost the same entrepreneurs who need to be rescued to resuscitate the TC industry.

This report focuses its attention on the two periods after the introduction of Economic Structural Adjustment Programme, ESAP, in 1991 and the turn of the 21st century from the year 2000 to date. As already stated, ESAP liberalized the economy, including the cotton to clothing sector opening it up to global competition for the first time after it had initially been developed under a regime of import substitution industrialization. Then followed masive de-industrialization of the textiles and clothing industry between 2001 and 2013 and a new crisis in the small holder cotton farm sector from 2012 onwards.

The cotton, textile and clothing sector has been a major employer of labour in Zimbabwe. At some point in time the textile and clothing industry employed 51 000 people.[18] But as Table 2 above shows Ndlela reports peak employment in the industry at 59 000 in 1992.[19] By 2005 employment levels had reduced to 28 822 with 22 178 job losses recorded. Considering the clothing sub-sector alone, employment numbers sharply reduced from 13 500 in 2009 to 12 506 in 2010, then to 8 627 in 2011 and to a mere 4 748 in 2012 [Youmans, 2012]. Job losses in the clothing industry between 2009 and 2012 totalled 8 752, or 65% after dollarization. The textile industry fared even worse than the clothing industry during the same period with such giants as David Whitehead, Cone Textiles/Modzone, Merlin and Qualitex/Cotton Printers all collapsing leaving only Zimspin as the major textile firm in the midst of a handful of

[18] Kanyenze G, Textile and Clothing Industry in Zimbabwe. Bonn Friedrich-Ebert Stiftung, 2006.

[19] Ndlela D. et al. 1992

other small spinning and weaving companies (Kutaura and H & H) with less than 1 000 employees between them from 24 000 employees in 1990. Waverly Blankets remained as the only propylene spinning and weaving factory employing nearly 700 workers making blankets for the local and export markets.

This is how ghost towns such as Chegutu, Kadoma, Chitungwiza and others arose out of the ashes of these fallen textile giants. After ESAP the labour market in Zimbabwe has been dominated by the informal sector and informal employment. But before that period employment in the value chain, and particularly the TC industry, provided major opportunities not only for men but for women to be engaged in formal wage employment. They had decent and secure jobs and opportunities for rising wages. As wage employment rose in the TC industry Government benefited through increases in revenues to the Exchequer through PAYE taxes. Government revenues were used for further socio-economic development. With the collapse of the TC industry formal wage employment was lost. Government lost PAYE revenue. Experience has shown that self-employment or informal work has little or no scope for skills accumulation; least of all assured income.

Employment creation was strong for women in the TC industry before ESAP who then subsequently had to rely on the informal sector for income opportunities other than the household. With the de-industrialization of the TC industry the proportion of women and their children living in poverty has grown. The cut-backs in the financing of social services and other cost recovery measures instituted by both central Government and local authorities following ESAP have worsened the burden of women in maintaining their families and households. During the hyperinflationary era of the Z$, 2005 to 2009, it became the responsibility of the women to look after the livelihoods and welfare of their respective families. The women were informally employed, as temporary or subcontract level employees, less paid, but still worked at lower skill and value added sections of the TC value chain. Others moved to the diaspora where they sent remittances back home for the upkeep of their families. The women who were formally employed benefitted the local economy and raised their status by strengthening their economic roles and transforming social structures. Approximately 50-55% of workers in the TC industry –particularly in the clothing half - prior to ESAP and de-industrialization were women, whose income-earning opportunities had a far-reaching effect on family livelihoods and poverty reduction levels. The huge strides that had been made by the TC industry in addressing the important gender equality issues by securing wage employment for women in a labour intensive industry were reversed by ESAP and the de-industrialization of the industry. The revitalization of the TC industry must address these important issues going forward.

Cotton growing has supported over 300 000 rural households in recent years. Given that the average family size is 5.5 people,[20] cotton growing has supported upwards of 1.6 million people in the rural areas when times were good. The majority of those involved in cotton growing are women and youths. The sector is thus important for attaining the United Nation's Millennium Development Goals [MDGs],

[20] ZIMSTATS Compendium of Statistics, 2012.

particularly the creation of decent employment opportunities and eradication of poverty. Approximately 90% of the small holder farmers in rural Zimbabwe live on less than US$2 per day. There are remote areas of the country where the only activity which can generate income for a farmer is cotton. This has made cotton key in fighting poverty in the country. Under the ISI strategy of development, the TC industry provided opportunities for diversification away from agriculture and export of raw materials to export of value-added products, to a limited. The TC sector then, as is the case even at present, had higher wage earnings than in the agricultural sector, although the level has always been lower than in other manufacturing activities.

High levels of unemployment and poverty have been registered in such textile and clothing industry dependent cities and towns like Bulawayo, Chitungwiza, Chegutu, Kadoma, Norton and Mutare resulting from company closures and retrenchments. In Zimbabwe, cotton thus plays a pivotal role in uplifting the livelihoods of families and communities as well as eliminating poverty amongst them.

Production of cotton on the farms slumped from 350 703 mt in 2011-12 to 143 849 mt in 2012-13, a 59% drop in just a single season. Exports of lint similarly declined during the same period from 139 615mt in 2011-12 to 59 000mt in 2012-13, again a very sharp drop of 80 615mt, or 57.7%.[21] As a cash crop grown by 99% of small holder farmers in the drier regions of the country, it was not affected by the Fast Track Land Resettlement Programme (FTLRP) from the year 2000 onwards as were other crops grown by large scale commercial farmers (LSCF) whose farms were redistributed by Government. Table 3 below shows the export performance of the cotton to clothing value chain over the period 2005 to 2010.

Table 3: Cotton Supply Chain Exports, 2005 – 2010 US$(000,000) (Estimates)

Industry	2005	2006	2007	2008	2009	2010
Cotton Lint	96	108	103	114	65	120
Textiles & Clothing	23	17	18	15	16	55
Total C2C Exports	**119**	**125**	**121**	**129**	**81**	**175**

Source: Ministry of Finance, Reserve Bank of Zimbabwe

The period was at the height of the hyperinflationary era of the local currency when export revenues from gold and flue-cured tobacco took a nose dive while the value of lint exports in particular remained stable. Textiles and clothing exports were a pale shadow of their previous performance in bygone years. This still does not take away the importance of the cotton to clothing value chain in earning vital foreign currency for the country and improving its trade balance and the economy's balance of payments.

The textiles and clothing sub-sector is an important arm of the manufacturing sector in Zimbabwe as reflected in Table 4 below. The combined textiles and

[21] Cotton Ginners Association, January 2014

clothing industry accounted for between 12% and 15% of manufacturing gross output during the period 1985 to 1995. Over the ten year period between 1995 and 2004 the index of the volume of production for textiles and clothing taking 1990 as the base-100, was consistently above 70. The collapse of the sub-sector therefore leaves a very big structural hole in the manufacture sector. It is without doubt that the recovery and further development of the cotton chain has potential to underpin industrialization in Zimbabwe in future. The challenge before the Government is how to utilize the cotton resource to industrialize in the context of a liberal market and with global competitive pressures. The report will bring forward suggestions as to how this can be achieved.

The links of the C2C value chain have been weakened quite considerably in the last 23 years to a point where today the textile segment has almost been totally decimated. The garment industry today is dependent on imported cloth with very little fabric being sourced from the local spinning/weaving and knitting firms. The ginners exported 96.3% of the lint they produced between 2009 and 2013 leaving less than 4% for the domestic spinners whereas before they used to sale 70% of the lint abroad while the local textile industry consumed 30%. The farmers in turn are not producing enough seed cotton to satisfy the installed ginning capacity of over 650 000mt. Between 2012 and 2013, the merchants/ contractors drastically reduced the levels of input support to farmers to finance the growing of the crop by 50%. Without these loans, the majority of farmers are unable to produce.

Being one of the most globalized industries today; the C2C supply chain still remains as the first point of entry for broad-based economic empowerment leading to industrialization, just as it is important for poverty eradication. While in practice the clothing industry is tending to operate without integrating with the textile industry and all the other links are being dismembered from the value chain, optimum results for job creation, foreign currency realization and value addition are achieved only when the chain is fully integrated and utilized. The C2C supply chain has the capacity to produce to optimum levels at every stage of the chain. It has done so back in historical times to high standards of quality and still has the potential to do the same at even higher standards than before when it is turned around.

Table 4: Percentage Share of Textiles and Clothing & Footwear in Manufacturing

	% of Manufacturing Output			Index of Volume of Production (1 990 = 100)		
	Textiles	Clothing & Footwear	Manufacturing /GDP	Textiles	Clothing & Footwear	Manufacturing
1985	11.3	6.3	18.1			
1986	10.1	6.2	19.5			
1987	10.0	6.4	20.7			
1988	11.0	6.8	19.5			
1989	11.0	6.3	23.0			
1990	10.9	7.0	20.5	100.0	100.0	100.0
1991	10.8	7.0	24.1			
1992	8.3	5.5	26.9			
1993	10.9	5.9	21.0			
1994	8.7	5.7	19.1			
1995	7.9	5.0	19.2	59.3	82.9	96.0
1996			16.4	74.7	97.2	108.2
1997			14.9	74.0	106.2	108.0
1998			14.0	79.1	114.6	106.6
1999			13.4	87.3	125.7	99.9
2000			11.4	72.8	120.8	93.3
2001			9.7	69.0	123.0	86.9
2002			7·2	49·4	108·4	76·2
2003			10·8	32·0	104·4	64·0
2004				39·8	96·2	58·0
Jan-Mar '05'			39·7	95·2	62·5	

Source: Quarterly Digest of Statistics, CSO, June 2001 & March to December

CHAPTER 2

RESEARCH, PLANTING SEED PRODUCTION AND MARKETING VALUE CHAIN LINK

This is where the C2C value chain starts at the Cotton Research Institute (CRI) in Kadoma.
The Ministry of Agriculture, Mechanization and Irrigation Development (MAMID) has a whole Department of Research and Specialist Services (DRSS) under whose Division of Crop Research falls a specialist institute on cotton research, the Cotton Research Institute located in Kadoma. The CRI was established 1925 and therefore has a long history of research in the area of cotton growing. Research at the Government institute focused on four areas over this period; seed breeding, agronomy, entomology and pathology [CRI]. In short, the research covered all aspects of the cotton crop including the development of new varieties.

Research has played a major role in promoting the reputation of Zimbabwe's cotton in the past particularly in the highly competitive regional and international markets. Within the country the institute has come with no less than 13 varieties since 1982 as shown in Table 5 below. It holds intellectual property rights over the varieties.

Table 5: Cotton Varieties in Zimbabwe

CULTIVAR	YEAR OF RELEASE	COMMENTS
G501	**1982**	An Albar variety mostly grown in the major cotton producing areas of the Middleveld, i.e. Gokwe, Sanyati, Shamva, Bindura,Glendale, etc.
72B	**1982**	An Albar variety suitable for the Lowveld in places such as Chiredzi, Triangle, Chisumbanje, Middle Save, Ngundu, Beit Bridge, etc.
K502	**1989**	
AG4869	**1994**	Bred specifically for areas in low altitudes of between 300 and 600m above sea level to suit high input irrigated estates.
BB8714	**1994**	
BC853	**1995**	
CY889	**1996**	A high quality long staple variety that grows best under irrigation at medium altitudes of between 600 - 1 000m above sea level.
EU80910	**1996**	
FQ902	**1997**	
FQ904	**1997**	
SZ9314	**1998**	A medium staple variety grown in 85% of the country in NR 3, 4 & 5. Most popular variety with small holder farmers whose average yield currently varies between 500kgs to 1 200kgs/ha. Can attain yields of 4 000kgs/ha under high input conditions.

CULTIVAR	YEAR OF RELEASE	COMMENTS
LS9219	**2001**	A second long staple variety which is currently being grown in the country. Does well under irrigation in both the Lowveld and Middleveld. Can also be grown under rain-fed conditions in the Lowveld.
CRI MS1	**2006**	A medium staple cultivar that out performs SZ9314. Expected yields of up to 4 200kgs/ha under irrigation, or good season under rain-fed conditions. Has not been grown so far.
CRI MS2	**2006**	A medium staple fibre variety suited to growing in Middle Save, Zambezi Valley & the Low Veld areas of the country under irrigation. Yields of 4 300kgs/ha. Variety grown for the first time in the 2012-13. Yields 15% more seed cotton & 13% more lint than SZ9314. Very popular with farmers already in the Lowveld.

Source: Cotton Research Institute, Kadoma.& Quton Seed Company, Harare

One of the most widely used varieties today is the SZ9314, first released in 1998. The majority of the farmers (86%) in our field interviews were familiar with this apparently versatile cultivar. It is described by CRI as a 'medium staple variety grown in 85% of the country in N.R. 3, 4 & 5 with good yield and fibre quality characteristics.'

Table 6: CRI – Seed Cotton Yields Under Specific Conditions Kgs/Ha

YEAR RELEASED	VARIETY	HIGH INPUT PDN – Irrigation, fully funded inputs + good management.	LOW INPUT PDN- Dry land, no irrigation, fully funded inputs + not so good management.
1982	ALBAR G501	2700	1800
1989	ALBAR K502	2900	2000
1995	BC853	2800	1500
1997	FQ902	3500	2000
1998	Sz9314	4000	2240
2006	CRI Ms1	4200	2300
2006	CRI Ms2	4300	2400
2013	X (upcoming)		2500

Source: Cotton Research Institute

SZ9314 is a popular variety with small holder farmers whose yields currently vary between 500kgs to 1 800 kgs/ha. As can be seen from Table 6 above, the variety out performs all other cultivars on the small holder farms under low input conditions. Its yields compete favourably with those of the latest releases, CRI MS1 and CRI MS2, under high input conditions.

According to CRI, seed cotton yields improved by a range of 3% to 20% through the use of varieties better adapted to low inputs and moisture stress. Fibre quality, i.e. length, strength and finesse, has improved through the Institute's emphasis

on higher quality medium staple Albar staple varieties. DR&SS on behalf of CRI forged a public, private partnership (PPP) with Quton Seeds Ltd, a local but privately owned cotton seed breeder which is a wholly owned subsidiary of SEED Co. Limited in 2009. This was at a time when Exchequer annual allocations to CRI had literally dried up. Before then, the economic upheavals of the hyperinflation Zimbabwe Dollar era between 2006 and 2009 and the sanctioned withdrawal in 2001 of the EU's STABEX financial support and physical assets including trucks, tractors and other equipment following Government's FTLRP left CRI badly exposed but alive. The Cotton Research Institute had to fall back on production and sale of agricultural commodities as a survival strategy. The royalties from Quton have sustained the research institution in the absence of any meaningful grants from Government. Research into new seed varieties slowed down but did not completely stop during that difficult period.

Quton is a cotton seed breeder in its own right. It bred its first cultivars, Albar Plus QM301 and QM302 which were released in 2001 and 2012 respectively. These are medium staple varieties, highly adaptable for both Middleveld and Lowveld conditions. However, it is also involved in the multiplication and marketing of all Government cotton varieties besides its own. Until the 2012-2013 season, Quton had failed to multiply and market both the higher yielding CRI MS1 and CRI MS2 varieties developed by CRI while trying to get the market to accept its own cultivars which somehow had not found favour with the farmers. CRI would have very much liked the farmers to have switched to the new high yielding varieties from SZ9314. When the CRI MS2 variety was grown for the first time in 2012-2013, it became an instant hit with the farmers. The Kadoma based Institute could not have its way easily as it had largely been dependent on the 5% sales royalties from Quton for its survival since 2009. On average, Quton pays CRI annual royalties of US$500 000 - 600 000, sufficient to cover the bulk of the research institute's running costs although the amount was less than US$400 000 in 2013. There was a decline is seed sales volumes from 2010/11 to 2013/14 resulting in a decrease in the amount of royalties paid to the institute by Quton.

Though multiplication of the new CRI MS1 and MS2 varieties was delayed, Quton only commercialized its own Albar Plus QM301 in 2011/12. Multiplication of its own and CRI varieties between the years 2000 and 2010 was equally affected by the downturn in the economy and the reduced seed sales volumes in 2009/10 of 5 832 tonnes. As of the 2012-13 season, the multiplication programme for the CRI varieties which started in 2010 has grown by 450%.

CRI is not involved in seed multiplication and marketing. It is a centre of excellence in cotton research which provides research based technologies for the promotion of viable and sustainable cotton production in Zimbabwe. It researches on new and undertakes trials on varieties from other countries to discover if they can be grown viably under local conditions. CRI's partnership with Quton Seed Company, has been very fruitful to both the farmers and the C2C value chain. The two organizations have

complemented each other well as one does scientific research and the other propagates and distributes seed bred by CRI for which it pays royalties. The companies also compete between themselves as Quton also undertakes a research programme of its own, but on a smaller scale than CRI.

The relationship between the two technology cotton seed breeders initially created a monopoly in the multiplication and marketing of seed by Quton. Our cotton growing survey showed that farmers felt that at US$27/20 kg pocket, the price of planting seed tended to be on the high side. The farmers observed that the same seed company exported the same seed to farmers in neighbouring countries at lower prices. As an example, cotton farmers in Chisumbanje cross into Mozambique to purchase Zimbabwean produced planting seed from Espunga Beira at US$3/20kg pocket. Quton exports cotton planting seeds to Malawi, Swaziland and Mozambique. The high price of planting seed, therefore, impacts negatively on the competitiveness of the cotton to clothing value chain. In Mozambique the regulations stipulate that seed should be distributed to the farmer for free. This makes the seed cheaper for the Zimbabwean farmer to cross over into Tete/Xai Xai/ Espunga Beira.[22]

The DR&SS-Quton deal needed to be revised at some stage for the value chain to realize optimum benefits from scientific research and the adoption of higher yielding cultivars by farmers aiming for greater viability of the crop. This has happened to some extent as DR&SS has since 2010 signed on three other ginners – Alliance Ginneries, Cargill Zimbabwe (Pvt) Ltd, and Chinarda (Pvt) Ltd (a joint venture between a Chinese contractor and ARDA)- to undertake seed multiplication and marketing. However, the price of planting seed has not reduced as a result of anticipated competition as the three new players are still at various stages of seed production before they can deliver it to the market. In the absence of competition in seed multiplication, prices of planting seed will repeatedly be affected by high input costs, namely of ginned seed and seed treatment chemicals.

During the same survey, farmers pointed out the difficulties encountered in accessing planting seed on a "free cotton" basis, i.e. without a farmer necessarily being contractually tied to a particular contractor under a contractor's input credit scheme. Farmers also complained that planting seed was usually in short supply at the beginning of every season. The unavailability of planting seed in the market from time to time has two negative effects on the value chain. Firstly, yields are compromised because in farming, timing of planting operations is of paramount importance. Late planting because of the non-avaiability of seed reduces yields considerably. Secondly, our survey observed that there are virgin areas of the country which are close to existing cotton growing areas requiring planting seed to venture into the crop. The absence of seed then discourages them, among other reasons, to try the crop as the only solution to generate farming income and end poverty. Areas like Dwala near Filabusi in Matebeleland South, Gwaranyemba in Nkayi District and others surrounding Lake Kariba all desperately want to grow cotton as the only possible cash crop in those remote lying places. Only new farmers with initia-

[22] Written communication with Quton Seeds, February 2014.

tive and determination who have never grown cotton previously have travelled long distances to cotton capitals - Gokwe and Chiredzi - to obtain the seeds with little or no success. We estimate that national production of the crop has been reduced by between 10% - 15% annually as a result. Stakeholders from the TC industry were in support of the farmers urging the seed producers to increase supply and availability for the benefit of the rest of the value chain.

For the first time since 2011/12, Quton started distributing seed through retail agents in 14 areas namely; Harare, Glendale, Bindura, Karoi Chinhoyi, Chegutu, Kadoma, Sanyati, Rushinga, Gokwe Centre, Nembudziya, Chiredzi, Checheche and Masvingo. From the 120 tons that were distributed to these agents only 30 tons were sold over a three year period. High transport and fumigation costs have been incurred as uptake of seed on a cash basis has been very low. The low uptake of the seeds can be attributed to the subsequent problems farmers face when attempting to dispose of "free" cotton through merchants and ginners. The contractors in most instances offer ridiculous prices to dissuade farmers from growing "free" cotton.

CRI is open to signing on more ginning firms as seed producers and marketers to increase availability of planting seed and through competition to reduce selling prices to the farmer. Complaints have been voiced by new actors in the textile industry who wish to bring in foreign conventional or organic cotton cultivars. They reckon these can out yield the Zimbabwean ones to give the value chain a greater competitive edge. CRI has a mandate to test all new varieties for suitability under Zimbabwean conditions before they are released to the market. In one particular case, a Chinese company, Mountain Agrochemicals submitted some conventional cotton varieties for evaluation under local conditions. The varieties are in their third year of evaluation at various experimental sites in Zimbabwe. If they pass the test at the end of four years' trials, they will be grown in the country.

THE GMO VS NON-GMO COTTON DEBATE: RESEARCH INTO BACILLUS THURINGENSIS (BT) AND OTHER GMO COTTON SEED VARIETIES

Both CRI and Quton have accepted Government's position of not introducing GMO cotton at this stage. At one stage Quton formed an alliance with Monsanto to develop Bt cotton in Zimbabwe but the arrangement lapsed.[23] Syngenta then collaborated with Quton for the parallel licensing of its insect resistant transgenic technology in Zimbabwe. Quton has three varieties introgressed with Bollguard 11. One of these varieties DP486 is in second year confined trials in Malawi at Bunda College near Lilongwe.[24]

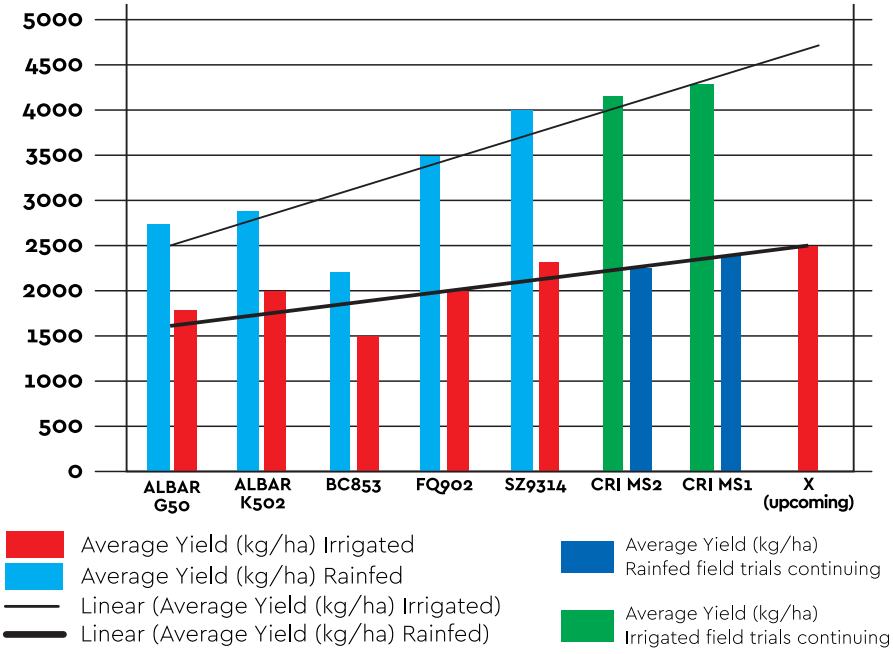
CRI and Quton are cognizant that GMO technology although being relatively new has certain advantages over the traditional varieties. For instance, currently, farmers need to spray 12 to 14 times to avoid boll worm attacks which end up as a huge expense to them. With the GMO crop, only two sprays are necessary to fight against cotton sucking pests. No sprays are required for boll worm attacks as the Bt cotton has

[23] Keeley & Scoones, 2003
[24] Communication with Quton Seeds, February 2014.

in-built chemicals in its DNA to resist the boll worm. This reduces the cost of chemicals – one of the biggest cost drivers in cotton growing and improves crop viability to the farmer.

As for the argument that GMO cotton yields are vastly greater than organic varieties, there seems to be inconclusive evidence to prove the argument. Should Zimbabwean farmers grow Bt cotton because the crop yields and farm incomes of their counterparts in Burkina Faso, Egypt, South Africa, Argentina, Brazil, China and India have been enhanced considerably? Consider the diagram, Figure 4, below.

Figure 4: Average Seed Cotton Yields of Cribbed Cotton Varieties under Irrigation and Rain-Fed Conditions since the Post Independence Era in Zimbabwe



Source: Cotton Research Institute.

CRI in particular points out that where irrigation is applied and farmers have full and adequate inputs, including management, the variations in yields from both types are not that different. The question that remains unanswered is, if GMO material was availed to smallholder farmers under their existing low input conditions would they realize the same or higher yields as they are doing now with conventional varieties?

It is issues relating to risks to human health and the environment which has not been disproved which makes it difficult to adopt GMO cotton in Zimbabwe. The Government through the Genetic Resource and Biotechnology Institute of the Ministry of Agriculture, Mechanization and Irrigation Development has so far not approved the growing of GMO cotton in Zimbabwe.

Instead, both CRI and Quton are directing their research efforts to coming up with cotton hybrid varieties that meet the requirements of the farmers and the spinners for greater yields and spinability. Current experiments at CRI have shown that yields can be increased by a factor of up to 30% with cotton hybrids. Quton has shown that the current seeding rate of 20/ha can be drastically reduced to a mere 3kgs/ha with hybrids whilst maintaining, or in some cases even surpassing existing yield levels. The seeding rate for hybrid seed is 3kg/ha owing to the value of the seed, characteristics and growth habit of the hybrid plants. For the open pollinated varieties Quton from its research has shown that 11kg/ha can be used and plant populations of 33,000 - 38,000 plants per ha can be achieved. However, due to the erratic rainfall patterns and farmers not using precision planting methods the recommended 11kg/ha is not sufficient as farmers need to gap fill or plant more seeds per hole to improve emergence.[25]

The cotton hybrid research programme is also targeting the increase in the value of fibre in the cotton vis-a-vis that of seed which presently is 85% for fibre and 15% for seed to give higher value, quality and bigger volumes to the fibre. The University of Zimbabwe's Agiobiotech laboratory has embarked on a long term research project to insert useful genes in existing cotton varieties. The University is developing its domestic version of Bt cotton cultivars from two angles. Two genes of interest arise: one to discourage the several bollworms that devastate the crop, and another that can provide relief from the back-breaking work of weeding, namely, the gene for resistance to glyphosate. The laboratory has a Bt gene developed by Rockefeller which can be used to derive a Zimbabwean Bt gene for the future. The other research seeks to find the glypohosate gene from the Petunia plant where it resides. As and when the country decides to adopt GMO cotton in future, the local varieties, information and knowledge will be there.

For CRI there are too many other unknown variables of the GMO technology to recommend it for adoption in Zimbabwe. CRI postulates that without fundamentally changing the operating conditions of the farmers, the results from them embracing GMO cotton would probably be very similar to the current yields with organic cotton. There is therefore no compelling reason at this stage to move to Bt cotton in the light of developments taking place at CRI and Quton in the field of research. However, for Quton Seeds, the company does not have any qualms about Bt cotton. Quton successfully tested GM cotton under the supervision of National Biotechnology Authority in 2004 at Cotton Training Centre in Kadoma. In the GMO debate, Quton hopes to promote research in order to facilitate evidence based decision making by Government.

[25] Communications with Quton Seeds, February 2014.

The debate on whether or not to adopt Bt products in agriculture has been on-going since the mid 1980s without resolution. Perhaps the best way to resolve the matter is to follow the middle path which is a compromise between the two extremes of either going GMO wholesale, or sticking to conventional/ organic material at all costs. At the recent December 2013 launch of the Open Forum for Agricultural Biotechnology Zimbabwe Chapter in Harare, the Minister of Higher and Tertiary Education, Science and Technology Development , Dr Olivia Muchena suggested that the compromise solution could be sought through the National Biotechnology Authority of Zimbabwe with the assistance of the African Agriculture Technology.[26]

OFAB Zimbabwe Chapter's role is particularly relevant as it brings together various stakeholders such as scientists, policy makers, journalists, civil society, industrialists, lawmakers and farmers to discuss and review biotechnology issues in agriculture. Commercial and small holder farmers in modern agriculture in Zimbabwe have so far not made use of or benefitted from traditional agricultural biotechnology techniques such as tissue culture, artificial insemination, bio-fertilizers and bio-pesticides. It is thus desirable for centres of technological excellence as CRI to collaborate with academia on traditional agricultural techniques to come up with home–grown GMO cotton seeds that not only compete yield wise with the best in the world, but that also adequately address the bio-safety concerns of Government. Zimbabwe could learn from the various OFAB initiatives launched since in Nairobi, Kenya, in September 2006 and since then in such countries as Burkina Faso, Ethiopia, Ghana, Mozambique, Nigeria, South Africa, Tanzania and Uganda.

The AU and its regional bodies - COMESA and SADC have intervened in the GMO Vs organic technology debate by establishing High-Level African Panels on Modern Biotechnology to advise continental and regional leaders on biotechnology.

Lint Outturn

Through research, CRI has bolstered the competitiveness of Zimbabwe's lint both within the region and globally. The lint outturn refers to the proportion by weight of marketable cotton lint produced from seed cotton after ginning. CRI has raised its lint outturn from 35% to 43% on a 40 saw gin at present [CRI]. The rest of the SADC region is still at the lower 35% lint outturn. The bulk of the remainder of the ginning process is the cotton seed which is sold to the oil expressing industry for manufacture of vegetables oil, soaps and fats. This illustrates the strength of CRI's cotton research in coming up with cotton seed varieties which are of superior quality. CRI's cotton varieties have greater ginnability than their competitors in the region. Zimbabwean lint has competed with top-end Californian and Australian styles. This has added value to the product and which can be pre-sold on forward contracts to compete favourably on global markets.

CRI wants more collaborative research with the country's universities and technical colleges to assess the spinability of the Zimbabwean lint based on its seed varieties to satisfy the requirements of both local and foreign spinners. A project of that nature is desirable if the top end of our local C2C value chain is to compete favourably with the best in the world. Government financial support will be required to make the

[26] HERALD, December 25, 2013.

project a reality as the skills and capacity are there. The stakeholders in the TC industry would be direct beneficiaries of the research. They can in fact contribute generously to the cause to make it worthwhile.

Recommendations on Cultivar Research and Development

So far R & D on seed varieties has raised the profile of the C2C value chain by assisting it to remain competitive over the years. There is still need for continuous research and development of both organic and GMO cultivars suited to Zimbabwean agronomic conditions. CRI, DR&SS, Quton Research Ltd, SIRDC and the University of Zimbabwe are doing a lot of research but more still needs to be done to keep up with new technological developments which enhance the competitiveness of the value chain.

While Government position on Bt cotton is still being reviewed, it would be wise for the scientists to step up research into hybrids of conventional varieties which have a potential to out yield the organic cultivars but still being on par with GMO types.

There is an urgent need for the Government, scientists, farmers and industrialists to reconcile their diverse positions on the issue of Bt cotton and exploit the potential advantages that this variety can bring to the C2C value chain. The scientists from CRI, the private sector and academia can assist by researching and developing home-made varieties of cotton that meet the competitiveness criteria of the TC trade and the bio-safety concerns of Government and the public. Such varieties should not only address the pest control issues but the problems of drought resistance and soil fertility for the small holder farmer. The launch of the OFAB Zimbabwe Chapter to promote open debate on biotechnology issues in agriculture amongst stakeholders is a good start to the process.

CRI's plan based on the earlier strategy of the G501 and 72B varieties to develop seed varieties suited to specific zones of the country either exclusively for the domestic market or only for export should be fully supported by the farmers themselves and by both Government and the TC industry. Egyptian seed scientists have followed a similar approach with success.[27] The varieties are tailor made for regional and global niche markets since such opportunities do exist.

Quton Research and Quton Seed are in a good position to spread Zimbabwean developed cultivars to the rest of the SADC Region. Quton Seeds already supplies planting materials to succountries as Mozambique, Swaziland and Malawi. The two privately owned seed firms can actually develop and spread the Bt cotton varieties to those SADC member states that have approved the production of GMO cotton in their countries in competition with the international giants like Monsanto and Syngenta. The idea is to build up a strong and effective regional C2C value chain on the basis of national value chains that are closely linked from seed, to lint, to fabric and to garment manufacture. This can only start with a Zimbabwe with capacity in cultivar research, ginning facilities, textile mills and linking to the clothing and garment factories of Mauritius, Lesotho, Swaziland and Madagascar.

[27] Gressel, J.P., 2013.

CHAPTER 3

SEED COTTON PRODUCTION VALUE CHAIN SEGMENT

The cotton value chain begins with the Government researchers who develop the seed with good yield characteristics and appropriate qualities for ginning and spinning. The researchers then provide the breeder's seed to private sector companies and groups which signed agreements with Government to multiply and market the certified seed to farmers. The farmers then grow the planting seed into seed cotton. Even though the first link faced a lot of hurdles at the turn of the century, the seed breeders and producers were able to overcome them to a very large extent and remained a strong pillar of the C2C value chain going forward.

As Table 7 reveals, the seed cotton production link has been the preserve of the small holder farmer since liberalization. The cotton is grown in the Middleveld and Lowveld dry areas of the country in Natural Regions 3, 4 and 5 mostly under rain-fed conditions. It is the most-if not the only-significant cash crop in those dry regions. The regions cover approximately 85% of the country where 70% of the population is found. The country is ideally suited to the growing of the crop from both a climatic and agronomic point of view. This is what the accompanying map below shows.

Large scale commercial farmers (LSCF) dominated the production of the crop prior to independence. They grew the crop until the advent of the FTLRP in 2000 as shown in the table when the white farmers were pushed off the land. ARDA (an agricultural parastatal) through its vast estates and out-growers scattered all over the country was at one time the biggest LSCF producer of cotton in the country until the turn of the 21st century.

The vast majority of the small holder farmers use basic equipment like animal drawn implements to do land preparation and the knapsack sprayer to control pests. The small holder farmers use fewer pesticides than the LSCF or the large ARDA Estates and therefore create less hazards to the environment. Most of the labour is from the family although hired labour can be engaged during cotton picking and weeding time. All the cotton from the small holder farmers is hand-picked and until recently commanded a premium for quality in international markets. The level of dominance by the small holder farm sector in seed cotton production has now reached 99%.

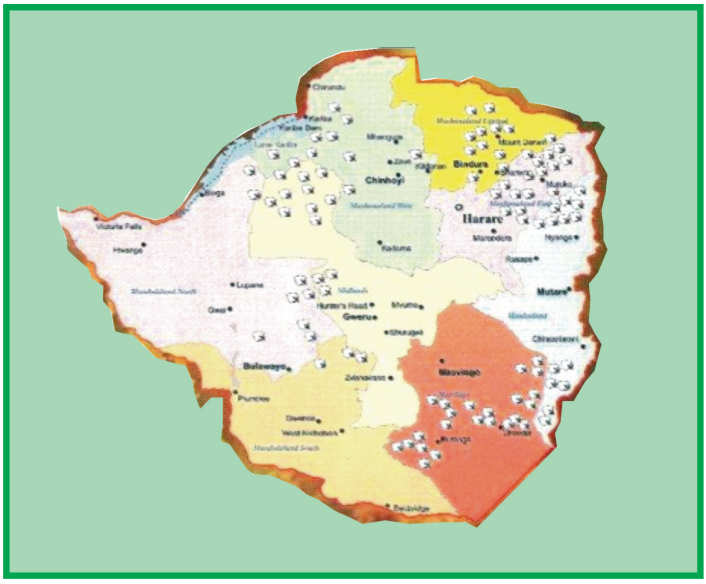
Two issues need highlighting in Table 8. The first is the effect of the severest drought in living memory in 1990/91 which hit both small and large scale cotton producers very hard. Production dropped to the lowest levels since independence because of the drought. Secondly, sources of historical data provide conflicting statistics which in some cases vary significantly. The sources like AMA, CRI, National Cotton Council and ZimStats are all supposed to be reasonably reliable. For purposes of analysis in this report we have been guided by the national statistical agency – ZimStats, where available, or otherwise used the original sources.

Table 7:Cotton Production By Farming Scale 1988/1989 – 2004/05

YEAR	SMALL SCALE PRODUCTION	%	LARGE SCALE PRODUCTION	%	NATIONAL PRODUCTION
1989/90	103 960	51	102 080	49	205 000
1990/91	138 000	53	123 000	47	261 000
1991/92	29 000	48	31 000	52	60 000
1992/93	134 000	63	80 000	37	214 000
1993/94	111 000	61	70 000	39	181 000
1994/95	60 000	60	40 000	40	100 000
1995/96	211 000	75	73 000	25	283 000
1996/97	198 000	71	80 000	29	278 000
1997/98	183 000	67	90 000	33	273 000
1998/99	227 000	75	76 000	25	303 000
1999/00	298 000	84	55 000	16	353 000
2000/01	295 000	88	40 000	12	335 000
2001/02	184 000	94	12 000	6	196 000
2002/03	250 000	99	3 000	1	353 000
2003/04	330 000	99	3 000	1	333 000
2004/05	196 000	99	2 000	1	198 000

Source: National Cotton Council

Figure 5: Map of Zimbabwe Showing Cotton Growing Regions



The major growing cotton areas of the country are in the Middleveld and Lowveld regions of the country. Table 8 below gives an indicative level of dependency on the crop by farmers in the major cotton growing areas. There are other areas lying close to the major producing areas which are inaccessible by road where farmers are literally dying to grow cotton as the only viable cash crop but cannot do so because of logistical constraints. In this case, dependency on cotton is measured by the suitability of an area to grow an alternative cash crop to cotton.

Table 8: Farmer Dependency on Cotton in Zimbabwe

Area	Percentage Dependency
Gokwe North and South, including Sanyati	**90%**
Kadoma, Chegutu, Chinhoyi, Banket, Doma, Karoi and Hurungwe	**50%**
Guruve, Glendale, Mt. Darwin, Rushinga, Mukumbura, Bindura greater part of Muzarabani, Shamva, Ngundu and Zaka	**50%**
Chisumbanje, Checheche, Chipinge, Birchenough Bridge, greater part of MiddleSave, Nyamaropa, Chiredzi/Triangle, Ngundu, Zaka and Beit Bridge	**65%**
Glendale, Bindura and Shamva	**40%**

Source: Chizarura L. 2005, modified by Collins Chihuri (2014) and AFRICONSULT 2014.

Zimbabwe grew on average some 250 million kilograms of seed cotton per year between 1990 and 2013 converted to average ratios of 125 000 tons of lint, and 175 000 tons of cotton seed. The varieties grown were mostly the Alba types SZ9314 and L9219 in medium and long staples in the ratios 95-98% and 2-5% respectively.

There are approximately 250 000 to 300 000 small scale farmers who grow between 0.5 ha and 5 ha of cotton on average. Our field survey in some areas discovered farmers with as much as 10ha to 20ha under cotton, for example in the remote Kariba District of Mashonaland West. In one odd case in Chisumbanje one farmer in the communal area had grown 80ha of the crop. He owned a 75hp tractor and implements and lived in a modern house connected to the ZESA grid all of which were cotton funded from proceeds of previous years. The survey found that 95% of the respondents were under contracted to ginners/merchants/contractors all of whom are members of the Cotton Ginners Association (CGA).

Essentially, the CGA contractors provide them with inputs in the pre-season. The farmers in our sample realized yields ranging between 400 and 1 800kgs per hectare. CRI and CTC in Kadoma estimate that small holder farmers in Zimbabwe average yields of 800kgs/ha. As contracted farmers, most of them grew good quality approved seed obtained from the ginners/contractors. We did not come across a single farmer who sowed poor quality seed. The only exception of bad planting material was when farmers opted to grow ratoon cotton as a survival strategy to contain production costs being encouraged along by merchants who paid uniform prices for both graded

and ungraded cotton at the farm gate. Farmers are required by law under the Pests and Diseases Act [Ch 19:08] to destroy stalks of cotton after picking by a specified date to prevent the build up of pests and their resistance tocrop chemicals. Failure to observe this requirment may expose the farmer to severe penalties and /or imprisonment.

Table 9: Trends in Seed Production, 1988/1989 – 2012/2013

YEAR	AREA (HA)	YIELD (KGS/HA)	PRODUCTION (MT)
1988/1989	217 486	944	324 069
1989/1990	274 222	952	349 227
1990/1991	235 777	254	100 629
1991/1992	246 300	870	201 085
1992/1993	221 300	820	183 705
1993/1994	213 560	469	100 000
1994/1995	257 620	1 102	284 000
1995/1996	313 255	888	278 000
1996/1997	286 000	954	273 000
1997/1998	329 500	920	303 000
1998/1999	369 000	957	353 000
1999/2000	369 000	957	353 133
2000/2001	398 071	842	335 176
2001/2002	398 600	523	208 468
2002/2003	329 470	769	253 362
2003/2004	354 375	940	333 113
2004/2005	320 000	619	198 000
2005/2006	330 000	788	260 000
2006/2007	330 000	768	253 622
2007/2008	337 671	730	246 757
2008/2009	261 191	660	172 129
2009/2010	n.a.	n.a.	270 000
2010/2011	198 824	754	249 904
2011/2012	246 559	569	350 703
2012/2013	241 848	700	143 849

Source: CRI for data from 1989 to 2009; ZimStats' Compendium of Statistics from 2001 to 2012 and AMA for data in the last column of Production figures from 2006 to 2013.

Tables 10 and 11 confirm the comparative advantage which Zimbabwe has in the region in the production of the crop by volume and is only second to Tanzania in terms of the numbers of small holder farmers involved. With the exception of South Africa and Zambia the quality of its cotton lint has been renowned globally since the rest of the other states tend to use uncertified seed to grow poor quality cotton. The impact of CRI's research, the training of small holder farmers by CTC

and AGRITEX' services have all contributed immensely to the advances made in this sector after independence , although now there are quality problems as discussed further below.

Zimbabwe's production has never reached the 400 000mt mark although it has potential to more than quadruple this figure. The decline in production between the years 2001 and 2005 can be attributed largely to the LSCF sector which ceased production following the FTLRP. Production then recovered in 2006 but fell steadily thereafter according to figures from Zimstats. AMA's figures for the same period indicate a similar declining trend although they are significantly higher than those from Zimstat's Compendium of Statistics.

Table 10: Cotton Production by SADC States

SADC State	Cotton Lint Produced (tons)	No. Cotton Farmers
Angola	1,000	?
Botswana	0	0
DR Congo	0	0
Lesotho	0	0
Malawi	28,000	110,000
Mauritius	0	0
Mozambique	29,000	45,000
Namibia	0	0
Seychelles	0	0
South Africa	8,000	1,000
Swaziland	700	2.000
Tanzania	90,000	400,000
Zambia	43,000	60,000
Madagascar	7,000	10,000
Zimbabwe	111,000	236,000
Total	**317,700 tons**	**863,000 households**

Source: Technical Report: Southern Africa's Cotton, Textile and Apparel Sector: A value chain analysis.

Suffice it to note that the new millennium marked a turning point in the history of cotton production with the entry of a number of new ginners/merchants/ contractors from the Far East in an industry which had been dominated by two contractors only, namely COTTCO and Cargill Zimbabwe. The new entrants' approach was to deviate completely from the standard practice of the contractor having to fund the production of cotton by famers before purchasing the seed cotton from those farmers they would have financed. They did not think it was any of their responsibility to finance farmers. So, they enticed farmers contracted by COTTCO inparticular to sell their cotton through side marketing activities to them at higher prices. In order to divert as much cotton as they could to themselves, the new players purchased the seed cotton on the basis of a single grade –ungraded - which would fetch the same prices as graded material. Until that point, both COTTCO and Cargill required farmers to grade

their cotton before it was taken in by the contractors for ginning. Farmers were then paid according to the agreed grades where the higher grades received better prices and lower grades were paid less. The players in rationalizing their "one grade, one price" policy explained to the farmers that all grading was to be done at the ginneries by the contractors themselves.

The battle for the maintenance of quality standards of Zimbabwean cotton which had been won previously by CMB, COTTCO and Cargill was then overturned with the arrival of the new players. This then led to the eventual withdrawal of the premium of Zimbabwean lint on global markets. Currently, Zimbabwean lint receives a 5% discount on international markets being regarded as part of the contaminated cotton from Africa. Simultaneously, COTTCO which previously provided between 60% and 75% of all small holder cotton farmers in the country with seasonal finance started to cut back on the level of support for the inputs credit scheme with these new developments. Without the input credit scheme from COTTCO, significant numbers of farmers found it difficult to grow the crop. Production thus fell giving rise to new phenomena of excess ginning capacity in the country, wide spread side marketing of seed cotton, occasional shortages of lint on the domestic market with some local spinners (e.g. Zimspin) having to import the commodity, the appearance of poor quality seed cotton for the first time in the value chain and the impoverishment of the once opulent cotton farmer.

SMALL HOLDER FARMER YIELD LEVELS WITH LOW INPUTS

The indicative yield levels on the small holder farm sector in the previous table ranged between a low of 254kgs/ha. in 1991 in Zimbabwe's worst drought year in living memory to 1 102kgs/ha in 1995 which coincided with a good agricultural season. For the rest of the 1989-2013 period average yield levels hovered around the 700-800kgs/ha. These are the realistic yields farmers can achieve under the lowest input conditions where the crop is grown under rain-fed conditions and where mid-season droughts are experienced. The farmer may be partly funded and not receive the "full" 60% seasonal loan from contractors for inputs. There is no assurance that inputs will be disbursed on time as full packages from contractors, or in adequate amounts as our field research discovered. The tendency was for the contractors to distribute seed to the farmers the chemicals and fertilizers. The farmer's management input deals with such operational issues such as budgeting and planning of season's programme, land preparation, thinning of plants, scouting for pests, correct mixing of chemicals and frequency of spraying. The yields achieved by the farmers under the lowest input conditions are, therefore, less than 50% of those realized at CRI's experimental stations (ranging between 2 000 and 2 500kgs/ha) all over the country under low input conditions described as "dry land, no irrigation, fully funded inputs + not so good management". Outside of climatic conditions which cannot be controlled, high and full input packages have the biggest impact on yields for the small holder cotton farmer.

Farmers in our field research in all the provinces of the country viewed the growing of cotton under the lowest input conditions as very risky. While those farmers in the more remote regions who had never grown cotton viewed the crop as the only realistic way to generate cash in their communities, a completely contrasting position to those currently growing the crop. At present, growers rightly or wrongly perceive the crop as a means of ensnaring them into perpetual penury by contractors who behave as the "Shylocks" of the segment of this value chain. The farmers were able to contrast the present dire situation they find themselves in and the "good old days" when they were masters of the "white gold". The "good old days" was that time in the 80s to about 2005 when the CMB, and subsequently COTTCO, used to actually provide between 60% and 65% of the farmer's total estimated production costs through their credit input schemes. Small holder farmer yields were higher, averaging 1 500 to 2 000kgs/ha. The farmer actually received three tranches of the seasonal loan; the first for basal fertilizer, land preparation and planting, the second for pest control, An fertilizer and hand weeding and the third for hand picking costs. With good yields and viable producer prices, the farmer was able to honour his debt obligations to the contractor by liquidating the current loan before the start of the next season. The bonus payments the farmer received for delivering mostly good quality Grade A seed cotton pre-sold on forward contracts by the ginner enabled him to improve his livelihood. The contractor was also able to compete favourably on the global markets of the Far East, Europe and South Africa. This was a typical win-win situation for stakeholders of the value chain. The farmer, therefore, had no reason to migrate to urban areas to seek paid employment as is common in other poor rural areas.

Below is a summary of the perceptions of farmers interviewed regarding their own past and present status and that of their counterparts who grow flu-cured tobacco.

COTTON INPUT PACKAGES, YIELDS AND FAMILY LIVELIHOODS.
THE PAST:
Input packs for 1 ha of cotton used to be at:

- 1 x 20kg bag of seed.
- 4 x 50kg bags of Compound L basal fertilizer.
- 1 or 2 x50kg bags of ammonium nitrate.
- A full complement of chemicals.

On average yield levels were between 1 500kgs and 2 000kgs/ha as a result of better input supply. The bulk of the cotton was always Grades A and B. Farmers were able to meet their loan obligations to the contractors besides using the rest of the surpluses to re-invest, purchase durable goods and meet their basic needs for education, health, shelter and food. Usually there was a balance which could be saved with the banking sector.

THE PRESENT:
For the same 1 ha of cotton input packages stand at:

- 1 x 15kg or 20kg bag of seed.

- 1 x 50kg bag of Compound L fertilizer, or nothing.
- 1 x 50kg bag of An fertilizer, or nothing.
- Some expensive chemicals, when available.

Average yield levels have dropped to +/- 500kgs/ha of mostly contaminated cotton.

- Loan value is around +/-US$100/ha.
- Income generated per ha at $0.35/kg for 500kg is $175.
- Less loan plus costs of land preparation, planting, weeding and picking borne by farmer which leaves him with a zero, or negative balance.

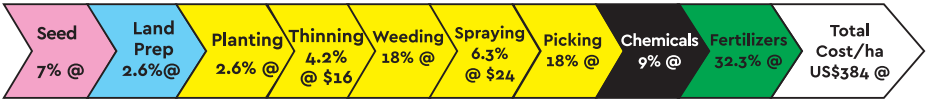
Cotton farmers now opt for other cash crops such as tobacco-if they can establish proper infrastructure like tobacco barns -, soya, sorghum for Delta Beverages, ground nuts and horticulture.

COMPARING STANDARDS OF LIVING BETWEEN COTTON AND TOBACCO FARMERS AT PRESENT

- Tobacco farmers are seen to be investing in farm machinery & implements, transport equipment, curing facilities, housing, sheds, etc.
- Tobacco farmers are also known for sending their children to good schools. They are able to pay tuition fees for their children for tertiary education.
- The same tobacco farmers purchase consumer durables like furniture, solar systems, etc.
- As for the cotton farmers, their assets and properties have been auctioned by contractors to recover debts. They have been left in situations of direstraits. They are failing to send their children to school and to pay school fees. In most cases, they cannot even meet their own basic requirements for food, clothing and medicines. Some contractors have gone to the extent of removing roofing sheets and auctioning chickens, goats, and farm implements and machinery. The worst crime some contractors have "committed" against some farmers is to sell "mombe yeuMai" (Mother's Cow) triggering the community wrath of women against the particular contractors and contractors in general as heartless individuals. (Culturally, 'Mother's Cow' is a gift bestowed on the mother of the bride at marriage by the son-in-law to thank her for bearing his wife. Only the mother-in-law has full rights over the cow as it is taboo for anyone else-relative or outsider to claim or dispose of the cow.

In short, they see cotton as having impoverished them since it does not generate positive revenue or livelihoods for them. An analysis of the cost drivers in the cotton growing value chain confirms the reservations of the farmers concerning not only the real costs of production per hectare, but also the lack of viability of the crop at present.

Figure 6: Cotton Value Chain Cost Drivers Per Hectare



Source: AFRICONSULT modified from COMESA's Regional Strategy for Cotton to Clothing Value Chain, June 2009.

As already outlined above, Zimbabwe's cotton farmers face a myriad of challenges which make it difficult for the sector to achieve its potential. At 500-800kgs/ha cotton yields are reasonable by African standards (379kgs/ha COMESA 2009) but still very low compared with those achieved in countries on other continents. Our field research established that the collapse of the cotton credit input scheme, the absence of a pre-planting price, the high costs of inputs charged by contractors in a one sided agreement favouring the contractors and the poor producer prices for the crop with no price assurance mechanism are the key factors forcing farmers out of growing cotton. With the conventional seed varieties that are being grown, labour items in the yellow colours (49%) and fertilizers in the extreme right box (32.3%) remain the major cost drivers of cotton production in the country constituting 81.3% of the cost of production per hectare. Zimbabwe's Competition & Tariff Commission estimated that in 2012, only 45% of the country's small holder cotton farmers used fertilizers in producing the crop.[28] The rest of the farmers do not apply fertilizers either because they cannot afford the input, or in specific areas of the Lowveld the alluvial black soils do not require fertilizers. Family labour which is commonly used for such operations as land prep (in the absence of animal traction or tractor tillage), planting, thinning, weeding, spraying and picking has been calculated at the rate of US$2.50 - US$3.00/person/day, or an equivalent of approximately US$50-60 for a 20 day working month. Hand weeding and cotton picking are manual activities which share equal costs of 18% each of total costs. The combined costs of crop chemicals and spraying (a manual activity) constitute the third largest cost driver of the sector after fertilizers. To improve the competitiveness of this segment, it will be necessary to reduce the proportion of labour costs of hand/mechanical weeding, picking and spraying significantly. Mechanization/chemicalization of some of these activities could be more efficient and cost effective than the manual systems being applied at present leading to increased crop yields. Relief from the back-breaking work of weeding could also come from the research being conducted at the University of Zimbabwe. The other investigation to reduce the number of sprays for cotton points the way to bringing about competitiveness in the chain. At 7% the cost of seed is also relative to the subsidized prices of Zimbabwean seed varieties exported to neighbouring countries of Mozambique and Malawi. The same countries enjoy subsidized prices of fertilizers at less than US$10 per 50kg bag for which local farmers fork out between US$36 and US$44. Little wonder the farmers apply minimal or no fertilizer at all on the cotton crop. Yields could increase dramatically if farmers could afford high input packages for cotton. Fertilizers are the biggest cost driver in growing cotton in the small holder farm sector.

[28] Report of the Competition & Tariff Commission of Zimbabwe into the case between the Zibabwe National Farmers Union and the Cotton Ginners Association involving allegations of restrictive and unfair business practices in the Cotton Industry. Case No: CTC/RBP-2013/02. August, 2013. p.10

Contractors give the cost per hectare of cotton producing in the small holder farm sector as between US$130 and US$160. Such figures are highly misleading as the real costs are shown in FIGURE 6 above which are US$384/ha. Because the small holder farmers use family labour the cost is usually not captured, but assumed to be "free" when it definitely has an opportunity cost. Family members may not be paid monthly wages but they receive their dues for services rendered in cash or kind at the end of the harvest. The value of the loan for the credit input scheme is thus not anywhere near the 60% of the total cost per hectare but a mere 34.1%. The farmer self finances the bigger portion of 65.9%. The most likely scenario, however, is that with inadequate finance he will spread the 34.1% portion the resources across the whole hectare with poor yields as a result.

The sooner the responsibility of financing the crop was taken away from the ginners/merchants/ contractors the better as it is not their core business. The production cost per hectare of cotton is very high and uncompetitive for the value chain. The lack of competitiveness is worsened by the low yields achieved by the farmers.

TECHNOLOGY IN COTTON GROWING IN THE SMALL HOLDER FARM SECTOR

One area in which cotton yields can be increased by small holder farmers is when their operations are mechanized. At present 60% of cotton farmers use intermediate technology of ox-drawn implements for land preparation and cultivation. According to the Competition & Tariff Commission, 33% of the small holder cotton farmers use the hand-hoe to prepare their fields and only 7% have access to tractors and implements for land prep.[29] The majority of the farmers (93%) lack the necessary resources to purchase tractors, combine harvesters and tractor drawn implements which could speed up operations and make them more efficient. The ratio of farmers dependent on tractors has shrunk to 4% over the years to 2006 because of the sharp rise in diesel prices and the scarcity of the commodity on the market. Repair and maintenance costs for tractors and associated equipment have also increased significantly until 2008 when Government embarked on the Farm Mechanization programme. The majority of the bulk of the farmers' operations are manual, tedious and back-breaking which restricts the area that could possibly come under cotton in any given year. Pest control is done through spraying chemicals using manually operated knapsack sprayers. Weeding is also done manually, another slow and inefficient activity.

LSCF farmers were able to grow huge hectarages of cotton and achieving high levels of production by using modern equipment including chemical spraying by light planes and mechanical harvesting of the crop. LSCF farmers used herbicides extensively to control weeds and applied supplementary irrigation where droughts threatened yields. Were the small holder farmers able to access similar resources to those availed to the LSCF farmers, there could be a phenomenal rise in output of cotton overnight. This is the direction cotton growing in Zimbabwe should be moving in future – mechanization and development of irrigation particularly in the Lowveld areas.

[29] Report of the Competition & Tariff Commission of Zimbabwe into the case between the Zimbabwe National Farmers Union and the Cotton Ginners Association involving allegations of restrictive and unfair business practices in the Cotton Industry. Case No: CTC/RBP-2013/02. August, 2013. p.10

[30] Verbal communication with an Agritex official in Mashonaland West during field survey in November 2013.

There are excellent opportunities to increase national production of cotton in the short to medium terms if the idle ARDA estates with 19 000 hectares of irrigable land can be put to productive use through joint ventures between the parastatal and ginners/spinners. In that arrangement, the industrialist investor would provide the capital while ARDA has the land and management, or adopt the Chisumbanje model of a semi BOT scheme. Large scale commercial production of cotton undertaken via ARDA estates open possibilities of realizing yields of between 3 000 and 4 000kgs/ha with conventional cultivars as opposed to the 2 500kgs/ha achieved with Bt cotton by South African growers under irrigation.

For the small holder cotton farming industry technological advances usually come through training by agricultural extension services. There are insufficient extension workers in the cotton sector at present despite the fact that the ginners/contractors/merchants provide their own to compliment those from Government. Agritex has estimated that currently the ratio is 1 extension worker to 5 000 farmers whereas the ideal ratio would be 1:200.[30] Here, too, there are huge opportunities to introduce technological know-how to raise productivity in cotton on small farms.

ORGANIZATION OF COTTON FARMERS FOR INCREASED COMPETITIVENESS OF THE C2C VALUE CHAIN

The more than 300 000 small holder cotton farmers in Zimbabwe are scattered all over 85% of the country making organizing them into a cohesive unit a herculean task. The fragmentation, even as members of the same ZFU umbrella body, sometimes makes it difficult for them to cooperate and agree on such critical issues as pricing models, toll ginning, local empowerment initiative proposals by Government, contract farming and lobbying for policy changes. The ZFU, as the representative umbrella body of all small holder farmers in Zimbabwe, is organized along commodity associations such as livestock, grain crops, oil seeds, cotton, etc.[31]

As a producer association, the ZFU has played an important role in representing small holder cotton farmers' interests in advocacy matters with Government, but particularly with price negotiations with other stakeholders. The ZFU has interacted with other organized bodies of the value chain like the National Cotton Council, Cotton Marketing Technical Committee (CMTC),[32] CGA, ZITMA and ZCMA on behalf of the farmers. But at the individual farmer level, the cotton farmer doesnot understand or appreciate his/her role in the supply chain. He/she suffers from information asymmetry on cotton prices; does not have contacts or communication with the other stakeholders or players beyond the ginners/merchants/contractors. Our field study confirmed that farmers do not have direct contact with the market, i.e. the TC industry. Only a few farmers in our samples were able to explain why they grew certified seed. The rest took it as a routine and mechanical exercise required by the extension agents for farmers to follow.

[30] Verbal communication with an Agritex official in Mashonaland West during field survey in November 2013.

[31] The ZFU is the biggest of the small holder farmer representative bodies. There are two other smaller unions which represent the interests of small holder farmers, namely, the Zimbabwe National Farmers Union and the Indigenous Commercial Farmers Union.

[32] TheCMTC was established in terms of section 3(3) of S>I. 142 of 2009. Its members were chosen by the Minister for "their knowledge, expertise or experience in any facet of the Cotton Industry including the growing and marketing of cotton and research related aspects of the growing and marketing of cotton and cotton varieties." The committee reports

In the light of the above situation, it becomes highly essential for ZFU as a cotton producer association to be strengthened within its structures much more than it is at present. ZFU must be in the forefront of the reforms in the supply chain to increase farmer participation and influence in policy decisions on:-

- The enactment of a Cotton Industry and Marketing Board Act to replace the existing SI 142 of 2009, and SI 63 of 2011. An Act of Parliament provides more confidence to investors which may not be the case with existing regulations which investors think can be changed "willy-nilly by Government. The Act will establish a statutory and regulatory body, CIMB, to replace AMA. Please refer to the sections on the Regulatory Framework and Recommendations for the rationale and functions of the CIMB.
- Reforms in the financing of cotton to establish a bigger crop of "free cotton" and the establishment of a Cotton Trust Fund under Agribank.
- Linking up with other stakeholders or independently to produce certified planting seed to improve on availability and reducing the price through competition amongst seed multipliers.
- Arranging and organizing local area farmers to toll gin their seed cotton.
- Go into joint ventures of ginners and farmers for purposes of financing growing of the cotton, ginning and beneficiation of ginned by-products.
- Entering into contract farming agreements with new players in the TC industry who have established vertically integrated operations from cotton growing to garment manufacturing.
- Empowerment of cotton farmers in local economic development initiatives arising from cotton clusters.
- Arranging farmer familiarization and study visits to some local and foreign markets.
- The ZFU on behalf of the farmers must have extensive cotton trade and marketing information, should be resource rich and be better organized to match other stakeholders in the value chain, particularly the ginners/ merchants/contractors.

The AFRICONSULT field study found ZFU in its present organizational state to be uniquely suited to play a transformative role with the cotton farmers. It has representatives at Provincial, District and at grassroots levels throughout the country backed by an elaborately equipped secretariat at head office in Harare. The teams in the country-side are made up of young professionals with wide and practical experience in technical, social and business matters. They are a committed, focused and an energetic group of staffers. They can gradually change this link of the value chain into a prolific producer of seed cotton with some capacity building. The multi-disciplined group of potential entrepreneurs can actually lead the cotton farmers into higher phases of value addition and new value chains.

Being close to the cotton farmers as well as being their representative, ZFU can identify local economic development (LED) nodes through its structures in order to address the local economic growth issues based on the C2C value chain particularly at the ginning stage. Cotton farmers in Mashonaland Central during AFRICONSULT's field investigations were eyeing going into local manufacture of

edible oil, candles and stock-feeds from the cotton seed from local ginneries. They did not know how to proceed, yet this is something that ZFU could assist them in doing.

The recent report on the cotton industry by the Competition and Tariff Commission[33] has come up with a legal determination proving that the CGA and its members have been involved in restrictive and unfair business practices in the cotton sector in the past and at present. The Commission proved that such anomalies were inimical to competition amongst the firms in the ginning industry as well as undermining the competitiveness of the C2C value chain. The CGA has not taken any steps to get rid of the restrictive and other unfair business practices after the determination. It is incumbent upon the farmers' representative body to take up the issue with the courts to enforce a legal decision in favour of the farmers so that they can continue to play their part in bolstering the value chain.

Recommendation
RATOON COTTON

The Plant Pests and Diseases Act Ch. 19:08 requires the slashing and destruction of all cotton residues by specific dates between June and September in the Lowveld and Middleveld growing areas to control the spread of cotton pests, in particular the pink bollworm. The destruction must render all cotton plants incapable of re-growth. There are penalties imposed on farmers who do not observe the regulations. These legal requires should be maintained. In order to strengthen the existing law, the proposed CIMB should prohibit merchants/ginners and auction floors from purchasing ratoon cotton. Culprits should be fined heavily and ultimately have their licences revoked for repeated violations Ratoon cotton should not have a market in Zimbabwe.

[33] Report of the Competition & Tariff Commission of Zimbabwe into the case between the Zimbabwe National Farmers Union and the Cotton Ginners Association involving allegations of restrictive and unfair business practices in the Cotton Industry. Case No: CTC/RBP-2013/02. August, 2013.

CHAPTER 4

THE GINNING INDUSTRY SEGMENT

The ginning segment is very important in the C2C value chain. It is linked both to the farmers on one hand and to the TC industry on the other through the spinning mills. With the continuing decline in production of cotton volumes as shown in Table 10 of Ch 3, the link which acts as the bridge between two key players in the supply chain is under serious risk of collapsing.

There were as many as 16 ginneries and 12 cotton merchants/contractors at one time at the beginning of the 21st century. However, there were only 5 active merchants as reflected in Table 12. The Cotton Marketing Board (CMB) was the first major ginnery in the country when it was established in 1952 just prior to the dawn of the short lived Federation of Rhodesia and Nyasaland. It was an important component of the ISI strategy of the Federation's industrialization of Southern Rhodesia as the hub ofits manufacturing sector. When the Federation collapsed in 1963, the CMB assumed a key role in the post UDI ISI strategy of the Rhodesians to accelerate the development of the manufacturing sector needed to create jobs in a country that was under international sanctions. As an agro-processor, it also had the important functions of being the sole buyer of seed cotton and marketer of the lint it produced.

Table 11: Structure Of The Ginning Industry: Support Levels In 2013

Company , Origins & Year of Starting Operations	Level of Financial Support US$	Hectarage Covered by Support Ha.	Total Production Expected MT.	Proportion of Market Share of Seed Cotton Intake %
Alliance (Indian) 2004	835 384	5 221	3 132	4
Cargill Zimbabwe (US) 1997	2 676 998	16 731	10 038	12
China Africa Cotton (Chinese)				
COTTCO (Zim) 1994	11 176 093	69 850	41 910	49
Cottrade (?) 2004				
CotZim (Zim)	275 194	1 720	1 032	1
ETG Parrogate (Indian) 2004	431 226	2 695	1 617	2
Fahad (Tanzanian)	98 784	617	370	1
FSI Agricom (Zim) 2002				
Ginmark (Zim)				
Grafax (Indian) 2003	2 126 430	13 290	7 974	9
Insing (Indian) 2004	505 178	3 157	1 894	3
Jinmac (Zim)	67 379	421	252	0
Olam (Singaporean)	1 739 060	10 869	6 521	8
Romsdal (Zim)	1 264 023	7 900	4 740	6
Southern Cotton (Zim)	62 738	392	235	0
Sinotex (Chinese)	675 041	4 220	2 532	3
SinoZim (Chinese) 2009	792 219	4 951	2 970	4
Terafern (?) 1998				
Viridis Agric Production (Zim) 2012	37 760	230	138	
ZESA (Zim) 2005				

Company , Origins & Year of Starting Operations	Level of Financial Support US$	Hectarage Covered by Support Ha.	Total Production Expected MT.	Proportion of Market Share of Seed Cotton Intake %
Totals	**22 729 523**	**142 057**	**85 230**	**100**
ADD				
Government Scheme			**36 000**	
Ratoon Cotton			18 770	
			140 000	

Source: Cotton Ginners Association

The lint was sold to local spinning mills or exported to South Africa. Its life as a parastatal monopoly came to an end in 1991 with ESAP. It was succeeded in 1992 by the Cotton Company of Zimbabwe (COTTCO) which started as a commercialized parastatal before being privatized in 1994. Soon, another privately owned ginnery, Cargill Zimbabwe P/L joined COTTCO in 1997 to form a duopoly in the processing and marketing of Zimbabwean cotton in the 1990s although the latter was the dominant player accounting for approximately 75%-80% of the ginning capacity and exports. Later at the beginning of the FTLRP, small ginneries from India as well as other locally owned ones established themselves in the country. This opened the flood gates to more investment in the industry from the Far East between 2004 and 2010 to intensify competition in the marketing of seed cotton. The new merchants/ ginners have not attempted to increase the size of the cake in volumes produced. Instead, they have left seed cotton production at existing levels by manipulating prices. COTTCO has remained the dominant player in the ginning industry with 9 state of the art ginneries spread across all the major cotton growing areas of the country. COTTCO's nine ginneries have a total capacity of 265 000mt per year. The remaining 7 ginneries have a capacity of 460mt between them, many of them using old machinery. Zimbabwe has an annual ginning capacity of 650 000mt. The installed capacity is far in excess of any annual production of seed cotton since liberalization in 1991. There thus exists severe competition amongst the ginners to buy as much cotton as they can from the farmers at harvest time in a tightly constricted market. The situation is explained in more detail under the section dealing with the regulatory framework of the industry.

PRICING AND QUALITY COMPETITIVENESS AND THE GINNING INDUSTRY

As far back as 1969 when the CMB was established as a Government parastatal charged with the responsibility marketing Zimbabwean cotton, the authorities clearly understood that the competitiveness of the lint on the domestic and world markets would not be determined by price alone. The quality of that lint would also be an important factor. Both the CMB (1969 - 1991) and its successor – the Cotton Company of Zimbabwe (COTTCO) were market leaders in the supply of the following services:

- Production and selling of certified planting seed to farmers;
- Financing of the crop and procurement through credit input schemes;
- Hands-on technical services to re-enforce and complement those of CTC and AGRITEX farmer training and extension services;

- Purchase of seed cotton from farmers;
- Processing – the ginning of the seed cotton into lint and cotton seed;
- Marketing and sales of lint to local spinners and the export markets;
- Disposal of cotton seed to the oil expressing and stock-feed manufacturing industries.

Both organizations religiously observed the principle of maintaining price and quality competitiveness. CMB's and COTTCO's philosophy was to be directly involved in all phases of the value chain from cotton growing through agro-processing to the marketing of the main product-lint. In doing so, they would have complete control of both production costs and quality at every stage of the process to guarantee product competitiveness. The two ginners were able to get a buy-in from their staff and the contracting farmers of their responsibilities for producing high quality products - seed cotton and cotton lint - while at the same time providing excellent customer services. COTTCO was certified ISO 9001:2008 helping the company and the country to maintain the C2C value chain competitiveness. On the other hand, Cargill was also involved in producing, promoting and marketing quality cotton through public private partnerships in Africa, through the brand "Cotton made in Africa (CmiA)." Key aspects of the brand include improvement in cotton production techniques, food security, health care and schools, environmental sustainability and gender issues.[34] As a quality product, CmiA commands a premium on international markets.

The structure of the industry and its ownership changed at the turn of the century with the arrival of many foreign players in the ginning industry post 2006. This followed the Government's "Look East Policy" to redirect Zimbabwe's trade from the West to the East and invite investors from there to explore opportunities in various sectors of the economy. The new investors were aggressive subsidiaries of multinational corporations or family businesses with extensive knowledge of the cotton industry in their home countries. They would in the interim compete with existing ginners they found in the industry for the limited domestic cotton supply without insisting on high quality cotton from farmers. The farmers were only too happy to deliver ungraded cotton in return for higher producer prices from the new players. The farmers abandoned the practice of quality control and started supplying an undifferentiated hand-picked product with varying degrees of contamination ranging from ratoon cotton to dirty cotton containing non-vegetable matter which the ginners accepted. Table 11 "Zimbabwe Ginneries and Cotton Merchants in 2013" shows that the regulator, AMA, anticipated deliveries of 18 770mt of ratoon cotton, 13.4% of national output of the crop during that marketing season. A poor quality crop is less competitive on global markets in all aspects. Lack of quality assurance at the farm level entails higher processing costs for the ginners even though they brought this crisis upon themselves. The new ginners assumed that higher producer prices would encourage farmers to grow more cotton. They overlooked that the industry regulations requiring them to finance all the cotton they wished to buy and that they could not purchase contracted cotton from other contractors.

Producer prices for seed cotton were fixed by Government prior to ESAP.

[34] Eliassen, 2009.

Government also announced pre-planting prices to assist farmers to decide whether or not to grow the crop and on the hectarages to be planted. With liberalization, Government abandoned its price interventionist approach in favour of market forces.
Between 1994 and 2006 a duopoly in the marketing of seed cotton existed between COTTCO with 55% of the purchases and Cargill with 20% of the market. A two tier price system was used to pay farmers with an initial payment when the farmers delivered their product to the market. A second payment followed as a "bonus" calculated on the basis of the actual value of lint sales at the end of the season. The farmers were awarded 40% of the export price of lint. The higher value addition of the seed cotton meant that Zimbabwean farmers received higher incomes than their counterparts in other Sub Saharan African countries.[35] The two tier pricing system worked before the regulation of the industry by Government, but it only worked on the good will of both COTTCO and Cargill.

Post 2006, the fluctuating lint prices on the Liverpool Cotton Index have been used by ginners to fix domestic prices for seed cotton. However, since the formation of the CGA in 2006, Government now requires the ginners through the CGA, farmers' representative bodies (ZFU and ZCFU) and the regulator (AMA) to agree amongst themselves on a formula and producer price for each season. If there is no consensus amongst the parties, Government usually comes in with a gazetted price in the end. While farmers insist on using a cost of production formula to remain viable, the ginners usually stick to the Liverpool Cotton Index prices as a guide. Ginners routinely ignore the Government gazetted producer prices for fear of being put out of business with "prices which are out of sync with market realities". As a counter to the ginners, or more as a protest, farmers in the field enquiry openly admitted to burning their cotton crops in the field, or leaving the crop to waste in the fields, or just storing the cotton bales on their farms until better prices are obtained from the ginners.

The impasse has its basis in information asymmetry between the cotton growers and merchants/contractors who in the main are ginners. The farmers in Africonsult field study felt that the ginners were being less than honest in arguing that they were price takers of international prices ruled by the Liverpool Cotton Index. There was a feeling at the farmer organization level that Government gazetted prices can be improved if contractors share proceeds from ginned cotton seed sales.Farmers are definitely correct in their assertions on producer prices. A World Bank study on Kenya in 2004 showed….." that revenue from the sale of cotton seed and its by-products is almost at par with that from the sale of lint".[36] Some members of CGA have of late started to agree with the farmers' position. For instance, COTZIM and SinoZim argue that farmers must be capacitated if the value chain is to succeed as any business along the chain must achieve adequate returns to stay there. The two ginning firms want an all out beneficiation thrust for the supply chain to ensure better producer prices for the farmer. Similarly, of late the biggest ginner COTTCO wants to be involved in the downstream beneficiation of the cotton seed it used to sell to third party firms

[35] Mugwagwa I. Analysis of Cotton and Tobacco Value Chains in Zimbabwe. A roundtable workshop discussion at Maastricht, May 2008.
[36] COMESA Regional Strategy for Cotton- to -Clothing Value Chain. June 2009

before. Such an investment thrust by COTTCO would enable the ginner to pass on some of the benefits to the farmers by way of higher producer prices, something which third party firms could not do. AFRICONSULT's field survey showed that because of a very low level of production in 2013 (143 907mt against 350 703 in 2012), some ginners who believe in ensuring viability for the cotton grower offered producer prices of between US$0.50 and US$0.70c/kg. Other ginners were paying farmers the gazetted price of US$0.35c/kg while COTTCO offered US$.35c/kg for Grade A and US$0.30c/kg for ungraded cotton.

Some local spinners like Zimspin are now feeling the adverse effects of a contraction in the supply of seed cotton to ginners as they are compelled occasionally to import foreign lint at a higher landed cost because of delays at ports, the high inland transport costs and other inconveniences. ZITMA's very detailed cotton cost analysis of the whole C2C value chain for 2013 showed that the costto the farmer of producing a kilogram of seed cotton was US$0.29c. A rational farmer would therefore not grow the crop given a producer price of US$0.35c/kg, the gazetted price for the crop in 2013. ZITMA, therefore, wants seed cotton producer prices to be improved as an incentive for farmers to grow more cotton and increase the capacity utilization levels of the ginning industry. The conclusion which comes out of this expose suggests that the ginning industry as presently constituted survives on rent-seeking tendencies against the farmer and the spinner rather than on business acumen. The ZITMA cost analysis figures also show that the TC industry can comfortably compete with the rest of the world with cotton producer prices of US$0.45c to US$0.50c/kg where the landed cost of imported lint is US$1.04/kg and the ginners' selling price to local spinners is between US$0.97 and US$1.00/kg. By way of comparison, the highest three-year local lint price was in 2011 at US$3.40/kg, while the lowest was US$1.50/kg in 2009-10. The ginners were charging local spinners US$1.90/kg for lint in November 2013. The ginners' profit margins on locally produced lint ranged between 100% and 251% over the period 2009 and 2013, hardly price levels to induce the competitiveness of the TC industry.

The case of SinoZim Cotton Holdings P/L, a Chinese FDI joint venture company with the Government of Zimbabwe recently established in 2009 in the TC industry is instructive. SinoZim is a vertically integrated firm involved in funding cotton production, ginning, spinning and weaving of cloth. According to its CEO, Mr Bu, it is converting all the lint it produces in Zimbabwe into yarn. 20% of the yarn is further value-added here and 80% is exported to South Africa and China. The company intends to move up the value chain to produce finished cloth before embarking on garment manufacture locally. It has already invested in oil expressing and stock-feed manufacture facilities using cotton seed as raw material. By exporting yarn rather than lint the company has discovered that the value of the lint increases three fold. From this, it is possible to raise cotton producer prices to improve cotton farmers' viability without being hamstrung by the prices on the Liverpool Cotton Index. Our field survey found out that contracting farmers with SinoZim the majority of whom are in the Chiredzi District of the Lowveld receive higher prices for their cotton than those contracted to

other ginners. But because SinoZim's ginnery and two spinning mills are located in Harare, it toll gins the seed cotton in Chiredzi with local ginners there and transports the lint and cotton seed to the capital for further beneficiation.

A ZEPARU Working Paper Series issued in 2006, observed that "The impasse (in cotton producer prices) sometimes persists, only to be broken by Government. In the long run such an imperfection can lead to market failure, which would be evidenced by a great and significant reduction in the overall quantity of cotton produced and traded".[37] The Competition and Tariff Commission has since made a determination against the CGA and issued a cease and desist order restraining the association from engaging in ant-competition behaviour.[38] Prospects for an increased output of cotton production in 2014 look dim. From our survey in the field, chances are that the current season, 2013/2014, may witness a serious decline in area planted and volumes of cotton produced. The planting seed uptake for the current season was very low at 4 500 tons compared with 8 500 tons in 2013 . Seed sales through contractors who in turn disburse these to contracted farmers have declined by a huge proportion of 47%. However, contractors usually have stock carryovers which they can use to achieve the same level of output of slightly above 143 000mt delivered by farmers in 2013.[39] Responses from field interviews nevertheless indicated a dire situation of decline of production across all the eight provinces where cotton is grown. The reason has largely to do with the unviable producer prices to the farmer currently gazetted at US$0.35c/kg. This must be seen against the cost of their inputs which they get from the ginners and other buyers under the contract growing arrangement that has become the predominant mode of financing for the crop. 92% of the respondents in our field survey were contract farmers.

We estimate seed cotton production in 2014 at between 80 000mt and 100 000mt.[40] We should nevertheless add a word of caution to such low figures. Assuming that in the final analysis farmers plant 6 500t of seed, enough to grow 325 000ha, total production could be in the region of +/- 227 500mt of seed cotton at average yields of 700kgs/ha. Weather conditions in 2014 would also need to be favourable for these results to be realized. Furthermore, yields will be compromised if planting is done in January as the crop might be affected by both mid-season droughts and early frost in the Middleveld areas.

Farmers in our sample survey indicated their strong desire to move out of cotton if Government failed to break the stranglehold of CGA on the C2C value chain by the end of 2013. Very few loans had been disbursed to farmers by mid December when the dry planting of the crop should have been wide spread. COTTCO as the major contractor was faced with a major financial crisis which threatened the company with possible receivership during the whole of December 2013, a critical period for land preparation and planting of cotton. Chibuku Breweries, a subsidiary of Delta Beverages had signed contract farming agreements with many farmers in the major cotton producing areas of Gokwe, Sanyati and Muzarabani to grow sorghum for its opaque beer operations in 2014. As an alternative cash crop, sorghum is attractive because Delta provides the inputs in full upfront and pays spot

[37] Rusare Masiiwa et al. ZEPARU Working Paper Series 2006
[38] Competition and Tariff Commission Ruling, May 2013
[39] Interview with Quton Seeds Co. Managing Director, E Mhandu, December 2013.
[40] Crop assessments by COTTCO has now put cotton production estimates in 2013/14 at between 240 000mt and 250 000mt as a result of the good rains that have covered the whole country during the farming season.

cash for all deliveries. Other farmers are already into horticulture producing for the lucrative markets of Harare and Bulawayo discarding cotton along the way. There are some with wild entrepreneurial spirit whom we discovered in our field study already into flu-cured tobacco production having done their seedlings nurseries, constructed curing facilities and in receipt of coal supplies at their farms. The cautious ones planned to venture into oil crops like soya and ground nuts. Such farmers can immediately switch back to cotton if conditions improve for a return. Virtually all the farmers we interviewed indicated that they are reluctantly going out of cotton with a desire to swiftly return once their grievances have been addressed by Government.

SEASONAL FINANCING FOR COTTON

CMB used to finance the growing of cotton by small holder farmers through annual Government grants and/or guarantees for its credit facilities for this sector with the Agricultural Finance Corporation (AFC), the fore-runner of Agribank. This method of securing seasonal loans for the cotton farmers was no longer available after liberalization of the economy under ESAP. Banks and financial institutions had problems extending credit to farmers who had no security. The ginners-specifically, COTTCO, came to the rescue with the strategy of providing a credit input support scheme in 1992. Since then any new player in the ginning industry, or merchant wanting to buy seed cotton must abide by the Government regulations stipulated under SI 142 of 2009 and its subsequent amendments to provide the growers with a credit input support scheme. He/she then can buy the materials only from those individual farmers in his/her scheme and not from anyone else. As long as there were one or two players administering such financing schemes, there would be few or no serious complications either between financiers and their clients, or between the financiers themselves.

As the originator of the scheme COTTCO wanted the firm's funds commitment on an annual basis to provide seasonal finance to smallholder farmers who could not access funding through the banking system to give cotton production the boost the company and the C2C value chain wanted. Under the scheme, the ginner/merchant/contractor registers all those farmers who want to grow cotton in a particular season before advancing the inputs in cash or kind. The loan is then recovered when the crop is marketed at the end of the season. Farmers sign loan agreements with the contractors which most of them do not bother to read because of the small print or the complicated legal jargon in the document. The field study was able to establish that in practice some merchants and ginners short change their clients by not providing the agreed full package of inputs. Only one area in ten had been supplied with the necessary inputs on time during the research period between November and December 2013. In three out of ten sampled areas, the farmers accepted only the seed and refused to take up the fertilizers whose prices were estimated at US$40/50kg bag by the merchants. Prices of the same fertilizers would be in the range of US$34-US$38 in retail outlets. Farmers in the study claimed that the merchants increased fertilizer prices at harvest time. The merchants would ultimately deduct US$44-US$46 per bag of

fertilizer from their sales proceeds when they sold their cotton instead of the US$40 indicated in the contract. In two sampled areas, inputs were delivered, but not issued to the farmers. After a few days the consignments were transferred to different districts with no explanations from the contractor. The merchants' records still showed that inputs of the same value and amounts were distributed in the first and second areas. No farmer had actually received those inputs in the two places.

It is against such a background that cotton farmers accuse the ginners and merchants of not only fleecing them, but of also creating conditions leading to their perpetual indebtedness to the financiers. The farmers rightly or wrongly then view CGA as a monopoly bent on putting them out of cotton production. The memories of the prosperous two tier pricing period of 1994-2006 are also still very fresh amongst many of them. The farmers feel justified when they engage in side marketing of the contracted crop. They begin to feel justified also to deliberately grow ratoon cotton which some ginners purchase at current market rates when it should be condemned. For the farmers, this is a survival tactic. Yet the behavior of both the farmers and ginners threatens the competitiveness of the value chain as a whole.

Table 11 lists the ginners and cotton merchants in Zimbabwe in 2013. It also indicates the level of support extended to cotton farmers by ginners in 2013 amounting to US$22.7 million. This was a 46% drop from the previous year when the ginners spent US$42 million on supporting the growers. From the table, COTTCO stands out as having contributed 49.2% while the remaining 15 ginneries accounted for the balance. Chinese owned ginneries/merchants sponsored approximately 60 000 hectares of cotton in 2013, confirming an increasing trend in the participation of the Chinese in not only cotton growing but the TC industry as well. The problem of side marketing of the crop led all the ginners to reduce the level of support for the crop. The problem was created by the ginners themselves in the first instance because of the vicious competition for limited supplies of seed cotton on the market. Our field investigations revealed that virtually all of them were involved one way or the other in buying cotton which had been sponsored by competitors. Some farmers also admitted to having taken advantage of the situation to side market in order to avoid repaying their loans.

In correspondence with the regulator, AMA, in July, 2013, one of the ginners observed that "……the cotton industry is at a crossroads (owing) to rampant theft of contracted cotton by…..unscrupulous merchants. Levels of inputs support have reduced to $22m for the current season (2013) from $42m in the previous season (owing) to the risk associated with a model where, the higher the level of financing, the less an investor can buy (owing) to the financial commitment towards inputs. Consequently, the cotton crop has reduced from 350 000mt to an expected 130 000mt. There is no future to speak of for the cotton industry (owing) to the impending total collapse of contract farming which produces 99% of the cotton crop". The death of the cotton sector spells the end of the competitiveness of Zimbabwe-

an lint on global markets. Theft of contracted cotton by merchants and side marketing by farmers are two sides of the same coin depicting regulatory failure of the ginning industry.

The risks which could lead to the collapse of the cotton sector and the death of the ginning industry can be summarized as:-

1. The current financial difficulties being faced by the biggest ginner and financier of the cotton crop in the country, COTTCO, accounting for 60% of inputs funding and 40% of ginning capacity.
2. Theft of contracted cotton by merchants and side marketing or credit defaulting by farmers .
3. Poor grower viability caused by inadequate input and agronomy support.
4. The insecurity of foreign capital in the industry. Our field survey found out that Olam Cotton from Singapore was reported in the media to be in the process of disinvesting from the industry in 2013. The local representative of the firm cited "extreme volatilities in the Zimbabwean cotton market" as the reason for ceasing operations. Its Nembudziya ginnery assets were bought by another foreign company, ETG Parrogate in September 2013.
5. The problems of operating in an uneven playfield in the industry; under-payment of labour and flouting of the country's labour laws by foreign merchants while their local counterparts have to abide by these laws which are highly protective of the workers and are not remunerated according to productivity.
6. The alleged failure cited by the farmers in our survey and some of the ginners fingered by the regulator, AMA, to enforce compliance by CGA members of the regulations particularly of SI 142 0f 2009 and SI 63 of 2011 to bring order and transparency in the marketing of seed cotton in Zimbabwe.

Both the ginners and the farmers have not been spared from the adverse effects of all the above risks. For all the financiers loan recoveries by smaller ginners and merchants was estimated by CGA at less than 25% and 50% or less for the bigger operators in 2013. The amounts of outstanding debts in the lenders' books have not been quantified as these have remained closely guarded secrets. The media has given hints on the extent of COTTCO's financial problems but without indicating how much farmers owe the company. For instance, COTTCO is reported in the print media as having spent close to US$800 000 in 2012-13 in payments to private security companies, ZRP, court officials and many others to trace, arrest, prosecute and convict delinquent farmer debtors from its credit input scheme.[41] In an earlier article in November 2013, it had been reported that AICO Africa Ltd., the holding company to COTTCO was facing foreclosure and possible sequestration after lenders called in the guarantees the parent company had provided for some of its subsidiaries, one of which was COTTCO.[42] The action on the holding company was reported to have arisen from COTTCO's projected US$23m trading loss for the year ended March 31, 2014, which the creditors felt might result in COTTCO failing to settle its debts. The newspaper alluded to COTTCO

[41] The Sunday Mail, December 15, 2013 "US$800k scandal rocks COTTCO"
[42] The Herald, November 28, 2013, "AICO faces foreclosure"

being borrowed to the extent of US$80m. In this particular example, farmers are failing to pay COTTCO which in turn cannot meet its obligations with its creditors. Should COTTCO cease operations that could spell doom for the value chain, particularly the ginning industry, over one million small holder cotton farmers, 4 000 employees, shareholders of the company (NSSA the major shareholder) and exports.

It is also not clear exactly how much the farmers owe the ginners and merchants. The contract farming agreements which the farmers are made to sign do not indicate the loan amounts except to state the quantities of inputs disbursed. Ginners have shown a lack of interest in recovering cash from farmers. What they require is the seed cotton. In our field study, farmers accused ginners of manipulating the value of inputs at marketing time so as to ensure that the loans can never be liquidated. The merchants/contractors do this to guarantee themselves of a steady stream of seed cotton from farmers year-in, year-out. The farmers also claimed that the situation is difficult to correct in any negotiations with the CGA members who hold the balance of power.

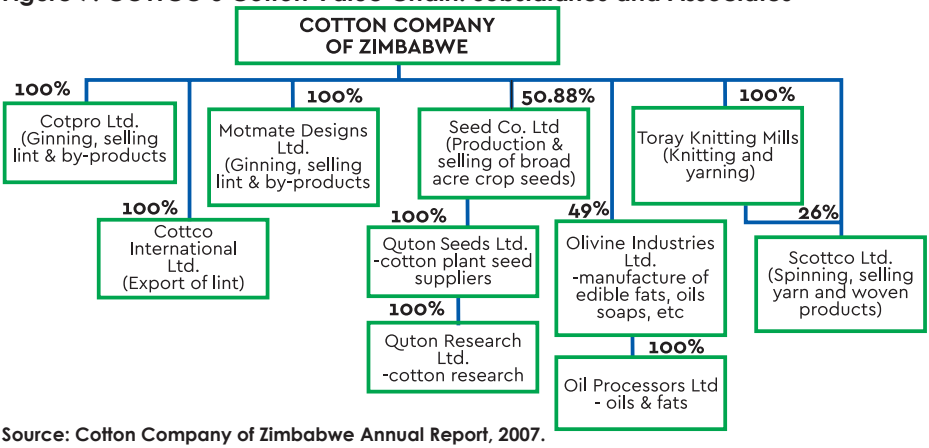
REGULATORY FRAMEWORK

Many of the challenges faced by the ginning industry and the small holder farmers would probably have not been serious had the industry remained under the monopoly of CMB or COTTCO. The performance and vision of each of these institutions as monopoly organizations provide good track records. Besides being the sole operator as planting seed producer and distributor, provider of seasonal finance for cotton, marketer and ginner, they also played the role of the regulator for the industry. Regulation could not be avoided in an industry which is globalized. Venture capital into ginning tried to bring in new ways of conducting business without success. New capital infusions were not sufficient to overcome the market dominance of COTTCO in terms of the size, geographical spread or technological sophistication of its ginning operation. Neither were the new players able to overtake COTTCO in funding cotton production. Conflicts between the two were, therefore, inevitable emanating from both business and governance issues.

The table below shows the web of COTTCO's predominance has been in the C2C value chain which no other company from outside or within Zimbabwe could challenge. It elaborates the group structure and main activities of the COTTCO subsidiaries and associate companies. The COTTCO C2C value chain serves a disproportionate portion of Zimbabwe's C2C value chain. It can easily be mistaken for the national one. COTTCO chairs the CGA and is has market leadership in the CGA. The problem of regulatory compliance starts here with the issue of governance of the industry. COTTCO has been a seed breeder through Quton Reaserch and has been involved in seed multiplication and distribution as Quton Seeds, both of them were 100% subsidiaries. It had two ginning subsidiaries Cotpro Ltd and Motmate Designs Ltd although Cotpro's operations ceased later on. Three subsidiaries - COTTCO International Ltd, Cotpro and Motmate Designs marketed lint internationally and

provided cotton seed to Olivine Industries Ltd and Oil Processors Ltd. In the TC industry, it supplied lint to two associates, Toray Knitting Mills and Scottco Ltd. COTTCO's value chain just stopped short of the stage of garment manufacture. The new players in the ginning industry could only effectively compete with COTTCO in buying seed cotton which COTTCO and Cargill had contracted. The major two ginneries reduced levels of seasonal funding for the small holder farmers with disastrous consequences. The new investors were reluctant to support cotton growing financially arguing that it was not a core business for them. Besides production falling, the quality of cotton deteriorated, incidents of credit default by farmers were on the increase as they became incapacitated. Regulatory compliance by the players in the industry fell by the way side as firms poached each other's contracted cotton. Productivity at the firm level declined. Suspicion developed between ginners (CGA) and AMA, the regulator; between the farmers and CGA and its members.

Figure 7: COTTCO'S Cotton Value Chain: Subsidiaries and Associates



Source: Cotton Company of Zimbabwe Annual Report, 2007.

Prior to the establishment of AMA by Government as the industry's regulator in 2009, all the stakeholders in the C2c supply chain had formed the all inclusive National Cotton Council to self regulate the industry at the turn of the century with minimal success. The contractors, merchants and ginners then created the CGA in 2006 with the same idea of improving self regulation amongst its members. Local Area Committees were then established in cotton farming areas for coordination purposes where CGA members would check on each other's operations in the distribution of credit input support and marketing of the crop amongst farmers. Although the Local Area Committees were manned by personnel paid by CGA, the problems of non-compliance continued. But when AMA became the regulator in 2009, it did not take over the registration of cotton farmers, a responsibility which remained with the CGA and its Local Area Committees.

Non compliance of the industry's regulations threatens seed cotton and lint production whose importance to poverty alleviation, job creation and industrialization cannot be over emphasized. Government has brought back the

CMB and is currently consulting stakeholders in the industry on what role it should play. There is need to improve the regulatory function of the industry to avoid failure and governance problems in future. Government should create a stand-alone regulatory body that is not encumbered with other equally pressing responsibilities. The regulatory functions of AMA can be transferred to the revived CMB as a first step. Thereafter CMB can gradually transform itself as the Cotton Industry and Marketing Board (CIM to operate alongsimilar regulatory lines as the TIMB in tobacco. The financing model for the seasonal credit input scheme has to be modified so that it can be administered by Agribank as a Trust fund with a Government guarantee. All cotton grown in the country under the Trust Fund arrangements becomes '' free cotton'' to be sold on auction floors through the bidding process.

The CIMB should be established as a statutory and regulatory body responsible for the control and regulation of cotton in the country and the promotion of exports of value added cotton products from Zimbabwe under a new Cotton Industry and Marketing Act. The CIMB should link with the global cotton to clothing value chains on all aspects of the competitiveness of Zimbabwe's C2C value chain. The CIMB should be charged with the following responsibilities:-

- Licensing of all cotton auction floors.
- Licensing of all contractors, merchants and ginners in the CGA.
- CIMB should encourage all the ginners to have SAZ and ISO certification for their products.
- The body will administer the new Cotton Industry and Marketing Act which is still to be promulgated for orderly marketing of cotton and advising Government on all matters relating to the cotton industry in Zimbabwe.
- Registration of all cotton growers.
- Administration of the lint quota reserved for local spinners where applicable.

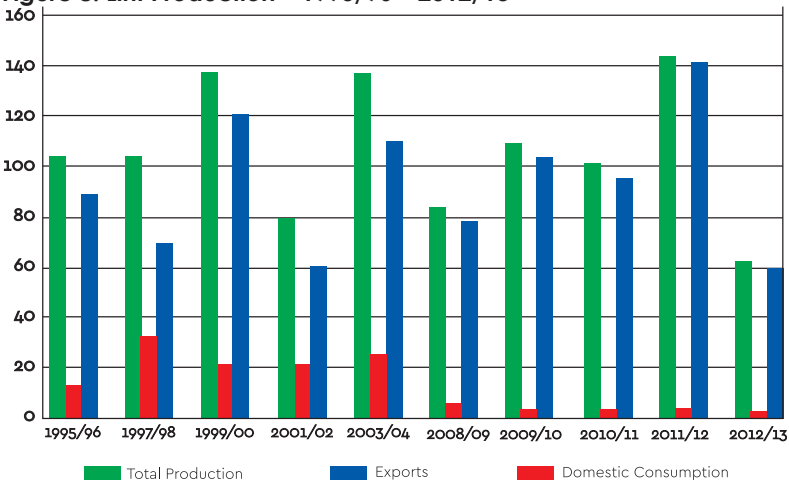
The proposed CIMB should restore Zimbabwe's C2C value chain to be in sync and to be competitive with the best in the world. What is coming out of the analysis of the ginning industry is that not only is there suspicion and subterfuge amongst the stakeholders but there is also a resultant lack of cooperation amongst them across the board. Yet it is cooperation which drives all value chains through markets. Cooperation is necessary for the various elements of the value chain for mutual gain or benefit in accessing specific markets, achieving economies of scale, reducing financial and political risk, improving bargaining power, attracting FDI and technology transfer and achieving competitive advantage for the value chain. CIMB as regulator should be able to create conditions for optimum cooperation amongst all the players in the C2C value chain. Stakeholder cooperation will be a pre-requisite for its sustainability and optimum performance.

PRODUCTION OF COTTON LINT

The world over including Zimbabwe, cotton is produced primarily for its lint which is the main product of the ginning process. When the wool (lint) is separated from the seed, the cotton seed becomes the ginned by-product. Lint is the major ingredient of the downstream value addition anufacturing processes in the textile indus-

try. It is therefore key to the whole industrialization strategy of the country as was exemplified during UDI and the period immediately following independence. Figure 8 shows production of lint over the period 1995/96 to 2012/13. There is a break in information between 2005 and 2008 during the hyperinflationary period of the Z$. Production of lint has fluctuated between lows of 60 000mt and the highs of 140 00mt. The markets for the lint have either been domestic or foreign ones. Government policy has always been to allow 70% export of the lint while reserving 30% for the domestic TC industry. As already pointed out at the start of the report, liberalization and de-industrialization of the TC industry have led to undesirable consequences, namely the total destruction of the textile industry in Zimbabwe. As the diagram shows, domestic consumption of lint from the 90s to date has declined steadily from a peak of 27 000mt per year to a paltry average of 2 000mt per annum between 2010 and 2013. The ginners have been exporting upwards of 95% of annual lint production. The figure implicitly confirms the uncompetitive nature of the later stages of the C2C value chain, i.e. the TC industry, and the disappearance of value addition in the supply chain.

Figure 8: Lint Production – 1995/96 – 2012/13



Source: Seatini 1995 – 2004 and Cotton Ginners Association 2008/09 – 2012/13

Although in Zimbabwe there are 16 cotton ginneries registered to trade in cotton and cotton lint, the local demand is not enough to consume a significant percentage of cotton lint There is current debate on how the lint should be financed after ginning.

With increased investments and greater capacity in the ginning industry which has not been matched with rising through-put from cotton growers, there is excess ginning capacity coupled with increased unit ginning costs. This has made Zimbabwe lint more expensive and thus less price competitive in global markets. Without quality assurance at the farmer level which has led to lint from Zimbabwe being regarded as "contaminated", the

product can only be disposed of at a discount on international markets as it is neither price nor quality competitive. The competitiveness of the value chain can only be restored when the regulator – AMA or CIMB – stamp their authority to bring discipline and order in the industry. Measures to incentivize farmers to increase seed cotton production to match ginning capacity and to encourage them to observe quality standards at the production stage will be required to correct these anomalies that have compromised the value chain' competitiveness lately.

The cotton seeds as ginned by-products present another important avenue for further industrialization through non-textile products under-pinned by cotton. Cotton seeds are processed into edible oils, fats, soaps, detergents, stock-feeds, speciality papers like cheque books, bank notes, candles, chemicals and a host of other products. From cotton linters the range of products that can be manufactured can possibly be substantial. This is an area which has not received due attention for research and value addition in the past which now needs to be exploited to the full especially under local economic development cluster initiatives. The proposed model of industrialization in this report places a lot of emphasis on ginned by-products to consolidate the gains of competitiveness by the C2C value chain particularly in balancing farmers' poor returns from depressed international cotton prices with additional incomes from cotton seed.

TECHNOLOGY AND THE GINNING INDUSTRY

In the industry, size has usually determined the level of investment and consequently the technology used by a ginner. Investment has been driven by competition in the past but has begun to taper off as a result of the excess ginning capacity created since the beginning of the new millennium. The smaller ginneries have gone for the old technology of double breast roller gins from India. Bigger ginneries have settled for high capacity state of the art technology such as the 170 saw type. In between, the five-gin stand, or 116 saw ginneries have been installed in most major cotton producing areas. The state of technology and investment in the industry is satisfactory given lack of adequate through-put. Both roller and saw gins are extensively used in the industry.

For small holder farmers who may want to set up their own ginneries in areas not accessible by road transport, there is a local firm which manufactures mini ginneries that could be ideally suited for their purposes. Another source of supply of small ginneries would be to import them from India, a country with a long history and tradition in the use of this equipment. The alternative is for such farmers to toll gin their cotton if they wish to engage in direct exports to earn foreign currency. However, the issuance of an export licence for lint by Government is linked to the pre-finance support extended to farmers during the just ended growing season.

SUMMARIZING LESSONS LEARNT FROM NEW INVESTMENTS IN THE GINNING INDUSTRY

The question which needs to be asked and answered is, what attracted Asian FDI into the ginning industry during the period 2001 to 2009 in the first place? Was it Government's new Look East Policy, or was it a reaction by their multi-national corporations seeking to re-locate their plants to countries with low cost production of seed cotton and cotton lint to feed their textile mills in the Far East and elsewhere? Perhaps the Asian FDI was behaving like the numerous local merchants who saw an opportunity to "rake in" huge revenues in foreign currency from the export of lint? The foreign currency thus earned was then used by speculators to fuel the foreign exchange black market in the country. The EPZs incentives which were still available to investors at the time must have attracted that FDI to Zimbabwe.

The AFRICONSULT research team could not find evidence to show that Government had a plan for the new investors to direct their FDI to where it was most needed in the C2C value chain. Given the severe foreign currency and liquidity squeeze faced by the manufacturing sector at that time, this would have probably called for a strategic engagement of foreign capital and the attraction and regulation of FDI to support industrialization and technological development by Government. With the ending of the Multi Fibre Agreement in 2004, the spinning-weaving-knitting and fabric formation value chains of the textile mills needed fresh capital to meet the new exacting demands for quality and price of a wide range of fabrics by the local and regional clothing industries. Instead the scarce capital resources flowed to an already capacitated ginning industry which did not require a single cent of that investment.

There is no evidence to show that the subsidiaries of the multinationals which relocated some of their ginneries in the cotton growing areas brought new equipment and upgraded technology. The responsibility was left to the already established firms like COTTCO and Cargill which invested into modern and high capacity ginneries. The new investments did not add value to the C2C value chain as overall cotton production declined, smallholder cotton farmers were impoverished, Zimbabwean lint on international markets received discounted prices, input support for growing cotton from contractors tumbled while cotton wars amongst merchants and ginners intensified. Increasing numbers of farmers defaulted on their loans threatening the very foundations of the cotton industry in 2013.

Elsewhere in this report, it is indicated that SinoZim Cotton Holdings P/L has shown the way on what FDI from China can achieve by doing most of the things expected of a good foreign corporate. The company has been funding cotton growing by smallholder farmers, constructing ginneries and investing into two modern textile mills with the objective of establishing an integrated value chain in-house that ends up with garment manufacture. The SinoZim value chain has proved itself by being

competitive on the local, regional and global markets which it has been able to penetrate.

This is why the report has argued in the African Lion Model in Ch. 6 that the transition to the turnaround of the C2C value chain requires the "big cats" to go for the major investments in textiles since they either have the investment resources or can access them from other sources. This will leave the "small cats" with the small projects for which they have some resources and for which they have the capacity to manage in cotton growing, value addition of non-textile goods from ginned seed and SMEs in the clothing industry. Some of these small, cottage and micro enterprises may grow into huge corporates.

Another key lesson from the ginning industry has to do with the by-products of the ginning process – cotton seed. The domestic market for this product has been declining since 2009 as a result of the failure by the three major oil expressers in the country – Olivine Industries, United Refineries and National Foods – to beat the prices of South African cooking oil manufacturers. From what was considered good prices of around US$280/t prices have declined to belowUS$200/t. Ginners are finding it not worthwhile to dispose of their huge stocks of cotton seed. Some of the bigger ginners are not so keen to go into beneficiation of the cotton seed. If critical mass could be achieved firms like IDC's Surface Investments would find it viable to manufacture stock-feeds and express oil from cotton cake on a massive scale. Additionally, instead of concentrating ginneries in Harare and a few other towns, some could be sited in the remote areas where local people can engage in value adding products from the cotton seed.

The spinning mills have discovered that the present arrangement which separates ginning activities from spinning has compromised the competitiveness of the C2C value chain as a whole. Since lint constitutes up to 60% of their production costs the price, quality and procurement conditions of the commodity will always determine the level of their competitiveness. SinoZim's example has proved that the company can beat the competition globally because it is able to control all aspects of the seed cotton and the lint. ZITMA wants a re-modelling of the textile industry to incorporate ginning. See Ch 5.

RECOMMENDATIONS
Enactment of New Legislation to Govern the Cotton Industry

Parliament urgently needs to come up with an equivalent of the TIMB Act in the cotton industry to deal with every aspect of cotton and related matters in the cotton to clothing value chain. The recommendation is that the revived CMB should have a similar status to the TIMB as a new CIMB – Cotton Industry Marketing Board – in the cotton supply chain. The role and functions of the CIMB will be as outlined under the Regulatory Framework of this chapter.

Regulation of the C2C Value Chain

There is need to improve the regulatory function of the industry to avoid failure and governance problems in future. Government should create a stand-alone regulatory body that is not encumbered with other equally pressing responsibilities. The regulatory functions of AMA can be transferred to the revived CMB as a first step.
Thereafter CMB can gradually transform itself as the Cotton Industry and Marketing Board (CIMB) to operate along similar regulatory lines as the TIMB in tobacco. The financing model for the seasonal credit input scheme has to be modified so that it can be administered by Agribank as a Trust Fund with a Government guarantee. All cotton grown in the country under the Trust Fund arrangements becomes "free cotton" to be sold on auction floors through the bidding process.

However, ginners/merchants/contractors under the new arrangements would still be free to secure seed cotton from the auction floors or directly from contracted farmers as before. The association of ginners and merchants - Cotton Ginners' Association (CGA) - will be the exclusive buyers of the crop on the auction floors as it already constitutes the market for cotton grown in Zimbabwe. All buyers must be registered with CGA. The CGA members will gin the cotton and market it to local and foreign spinners. The cotton seed by-products will also be auctioned to local firms for further beneficiation. Alternatively, the CGA can establish its own enterprises to add value to the by-products in similar fashion to what COTTCO's associate companies are doing. Part of the realized value of the beneficiated by-products has to go to improve cotton producer prices.

The CIMB could be established as a statutory and regulatory body responsible for the control and regulation of cotton in the country and the promotion of exports of value added cotton products from Zimbabwe. The CIMB should link with the global cotton to clothing value chain on all aspects of its responsibilities. The proposed CIMB should restore Zimbabwe's C2C value chain to be in sync with the best in the world.

CHAPTER 5

THE TEXTILE AND CLOTHING INDUSTRY SEGMENT

The TC industry houses the Siamese twins of the C2C value chain – textiles and clothing. Until the dawn of trade liberalization and de-industrialization they could not be separated. Since then, each twin has been living a separate and independent life. The textile half was more affected by deindustrialization than the clothing sector. The clothing industry is now mainly dependent on imported raw materials to manufacture goods for the local and export markets.

Zimbabwe's cotton to clothing value chain has become less competitive in the recent years. There are many reasons for this including, globalization, consolidation, over capacity and lack of preparedness. The surge of cheap imports from low cost countries into the region and Zimbabwe has however led to a drastic reduction in the capacity utilization of the local and regional C2C value chains. This has resulted in broken value chains, creating a reduction in the size of the economy and throwing thousands of people out of work. The Zimbabwe Textiles Workers Union has bemoaned the demise of the textiles sub-sector particularly since 2009. 94% of textile companies were operational in 2009 but in 2013 only 34% of them were still running. Thus, the textile half has been on the verge of collapse with capacity utilization down to 10% and employment levels falling from a peak of 24 000 to less than 4 000 in 2013[43].

The aim in this segment was to determine which strategy would be best for reversing the regression trend of this once promising but now ailing value chain with a view to re-establishing a profitable and sustainable model. The research *inter-alia* sought to find the key factors that are driving competitiveness of the top C2C exporting nations for the purposes of benchmarking for the local industry.

Key Issues

The research used a concurrent triangulation methodology; both qualitative and quantitative data was collected simultaneously in addition to field-based in-depth interviews. Reference was made to Michael Porter's Diamond Model. Key findings include the absence of a long-term strategy that links the interests of actors in the sector and enhances the performance of cotton growing and textile and clothing manufacturing The absence of a local currency and adoption of the US dollar as a medium of exchange in the economy presents its own challenges when costing at the firm level. Industry lobbyists presented Government with divergent and sometimes conflicting views on a number of fundamental TC industry issues. Some industry players wanted Government to promote imports and free market policies, while opponents urged the State to protect the local market for locally produced goods. Other findings included perceptions of inconsistent Government policies, especially that on indigenization that is viewed as unfinished and unclear several years after it was introduced: this creates uncertainty besides working against long-term investments in the value chain and in Zimbabwe. The shortage of liquidity in the market created a cash economy, eliminated credit facilities and slowed down trade.

[43] Zimbabwe Textiles Workers Union Secretary-General Silas Kuvheya quoted in the HERALD of January 29, 2014.

SWOT ANALYSIS OF THE ZIMBABWEAN TEXTILE SECTOR

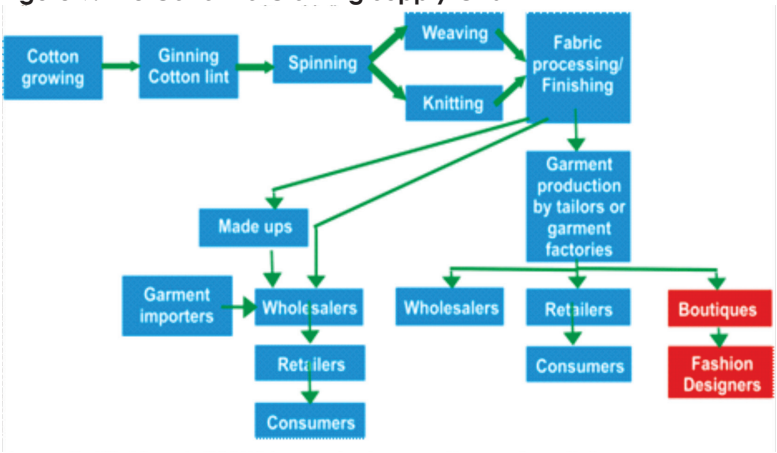
Table 12: Textile Sub-Sector: Strengths, Weaknesses, Opportunities and Threats - Zimbabwe

Strengths	Weaknesses
Good quality cotton Skills and experience Good proximity to market	Lack of new capital. Low productivity. Poor marketing. Inadequate research and development; slow uptake of research outputs by industry & weak mechanisms of technology transfer.
Opportunities	**Threats**
Rising production costs in Asia & Instability of the Bangladesh TC sector. Allow new FDI in cotton purchasing. Adoption of Bt cotton to reduce costs of production. Improved SADC Trade Protocol. Zim Government to buy from local suppliers of TC goods. ZimAsset and local value addition promotion. Economic Partnership Agreement with Europe.	High transport costs. High rates of interest and poor liquidity. Unreliable supply and relatively high cost of electrical power. Porous borders; smuggling of cheap TC goods and daunting administration of Rules of Origin with respect to TC goods.

Source: AFRICONSULT 2013.

THE POSITION OF THE TEXTILE LINK IN RELATION TO THE C2C VALUE CHAIN

Figure 9: The Cotton to Clothing Supply Chain



Source: Modified from COMESA'S Strategy for Cotton to Clothing Value Chain

The analysis of the TC industry segment starts with spinning and ends with garments and made-ups. The textile industry is the first to be observed and it involves spinning, weaving, knitting and fabric processing. The clothing section will be looked at subsequently.

What the Value Chains Within the Textile Industry Do?

SPINNING

This section focusses on the spinning, weaving and/or knitting (fabric formation), and dyeing and finishing of textile goods. Spinning is the first process of the textile value chain and involves the conversion of cotton lint (produced at ginning), into spun yarn. Cotton lint is first opened and cleaned in the blowroom, then the randomly aligned fibres are aligned into a continous rope of loose fibres. The continuous rope (or sliver) is then drawn and a mechanism twists the fibres tightly into a continuos strand of yarn. A successful spinner needs to ensure there is consistency in yarn quality and so there is a need to ensure that raw materials are of a consistent quality. The quality of yarn is determined by consistent color, strength, and finess. This means that the spinner needs to plan in advance mixes of cotton bales from different regions as cotton grown in different areas has different quality characteristics.

The theory behind spinning has not changed very much in recent years. However new technology has ensured that modern plants have automation, saving on labor requirements, skills and electrical power. There are two methods of producting spun cotton yarn, i.e. the rotor or open end system, and the ring spinning system. Both are illustrated below:

Figure 10: Ring Spinning Process

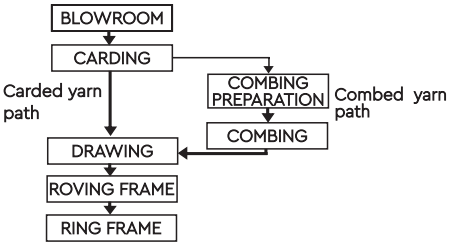
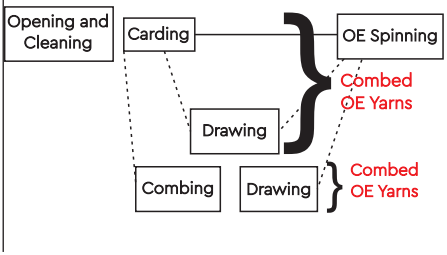


Figure 11: Rotor Spinning Process



Source: uni-textiles.com

The open end system is a shorter process and is generally of a higher output that the ring spinning. However the ring spinning system requires more processes and laboour, produces yarns that are softer and yarns that are more expensive. If the ring spinning yarn goes through a combing process, then the resultant yarns are very soft to the feel, more consistent and are very expensive. The open end and ring spinning systems are two separate processes requiring different machinery which are not interchangeable. The spinner will also decide what raw material is spun, e.g 100% cotton, polyester or a mixture, coarseness or fineness of yarn to spin, and how many twists to put into the yarn. The table below attempts to illustrate the costs of producing yarn by the rotor and ring spinning methods:

Table 13: Pricing Of 25 Tex Yarn

Yarn that is of a finess described as 25 tex can be priced as follows in the market:

Yarn Fineness	Generic Name	Spinning Type	Spinning Process	Price per kilogram
25 grams per kilometer	25 tex OE	Open End	Cleaning, carding, drawing, spinning	$3.00
	25 tex carded	Ring Spinning	Cleaning, carding, drawing, roving, and twisting, winding	$3.20
	25 tex waxed	Ring Spinning	Cleaning, carding, drawing, roving, twisting and waxing	$4.20
	25 tex combed and waxed,	Ring Spinning	Cleaning, carding, drawing, combing, roving, twisting and waxing	$4.85

Source: AFRICONSULT 2013.

Table 14: Spinning Value Chain

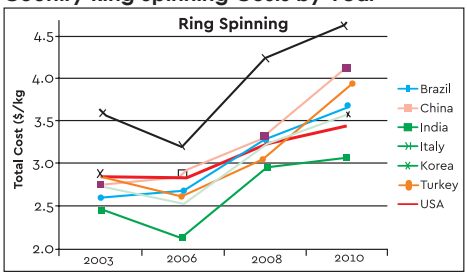
Raw materials: Ginned cotton lint procured from cotton gins dotted around the country. Gins are required to avail 30% of all ginned lint to local spinners	Pricing: FOT Spot pricing of cotton lint is the price as shown on the day on the liverpool price index, or forward contracts at an agreed price. Lint is currently sold at $1. 50 per kg	Payment: Cash before delivery. Spinners in Zimbabwe generally finance raw materials from own sales.	Transformation: Lint is converted into spun yarn. Course yarns are generally cheaper than fine yarns. Lint is also bleached and converted into absorbent surgical cotton	Marketing and Sales: Knitting and weaving firms place confirmed orders generally a month or two prior to delivery. Yarn prices can vary from $2.40 per kg to $4.80 per kg	Service: Electricity supplies are critical to ensure capacity maximisation: Transport in is critical. Finance is crucial to minimise stock outs.

Source: AFRCONSULT 2013

During spinning, the yarn can be made into weaving yarns or knitting yarns. Usually, weaving yarns have a high twist as this gives them strength required in the weaving processes. Again these are two separate processes which require different machinery. The weaver/knitter can only produce a fabric consistent with the yarns received. The fabric can then go through a myriad of processes to further finish it. Each one of these will further define its application, particularly dyeing. Knitting yarns on the other hand are low twist, and soft to the handle. This ensures that knitting yarns produce soft fabrics, a desired characteristic for inner garments. The value chain as it pertains to spinning is as follows:

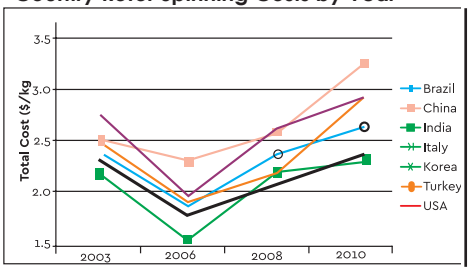
Figure 12: Country Spinning Costs by Year For Ring And Rotor

Country Ring Spinning Costs by Year



Source: ITMF International Production cost Comparison (2003-2010)

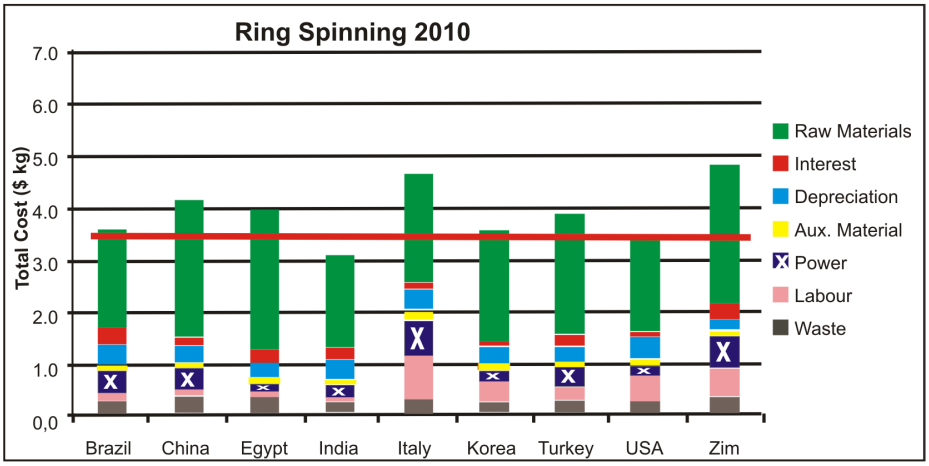
Country Rotor Spinning Costs by Year



Source: ITMF International Production cost Comparison (2003-2010)

It is interesting however to note that the total costs of producing a kilogram of yarn in Asia[44] and Brazil are not necessarily cheaper than that of Zimbabwe.

Figure 13: Cost Components of Ring Spinning



Source: Modified from ITMF International Production Cost Comparison (2010) Zim (2013)

According to the figure above, the cost of waste is almost similar in all the countries, while power and labour are highest in Italy. China and Egypt pay nearly $2.50/kg for raw materials and India paid approximately $1.75 / kg.

Fabric formation

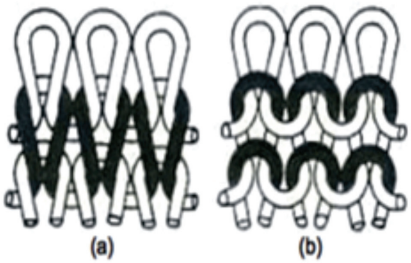
The country still has both knitting and weaving fabric forming systems installed in different companies. The yarn from spinning is processed at this stage to form either woven or knitted fabrics. Weaving and knitting are processes for making fabric. Each of the processes uses appropriate yarns from spinning and converts the yarn through interlacings into grey fabrics. The following diagrams[45] illustrate images of knitted and woven fabric.

[44] Ibid

The fabrics were then finished as loom-state (greige), white (bleached), in a single colour (dyed), printed (multiple colours and designs) or dyed and printed depending on the end use of the fabric. Zimbabwe has a number of firms that offered a single value addition process only (e.g. spinning) and others that offered a mix of two or more value chains (e.g. spinning and knitting). For example, Merspin in Bulawayo has spinning, weaving, dyeing, printing, and garment making value chains under one roof. Scottco has only two value chains, i.e. spinning and weaving.

KNITTING

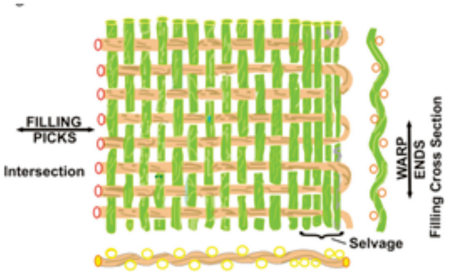
Figure 14 Knitted Fabric



Technical Face (a) and Technical Back (b)

Source: www.materialsciknits.com/principleswoven.pd

Figure 15 Woven Fabric



WRAP CROSS SECTION

The knitting process is very short, and is as follows: creeling, knitting, and packaging. This makes the production process labour extensive and cheap. Creeling is the loading of cones of yarn on positions on the knitting machine ready for processing. Knitting is where needles interlace the creeled yarn forming a fabric. And packaging involves the removal of the knitted fabric away from the knitting zone and into 20 or more kg rolls.

Weaving

Weaving is a longer process that is labour intensive. Weaving involves a long preparation process

The weaving/knitting value chain is as follows: beaming, sizing, weaving, packaging. Beamng and sizing (starching) are long processes that are required for preparing to weave. Yarn is wound onto a beam to produce a back beam. The back beam is passed through a starch solution at sizing to strengthen the yarns and wound onto a weaving beam. The weaving beam is then drawn into shafts and a reed that facilitate interlacing. The weaving beam, shafts, and reed are loaded into a weaving machine and weaving begins. Packaging is the removal of the fabric away from the weaving zone.

Table 15: Fabric Formation Value Chain

Raw materials: Yarn is secured directly from spinning mills and in rare occasions from merchants.	**Pricing and procurement:** yarn prices are generally between $2.50 per kg and $4.00 per kg before VAT, and FOT.	**Design:** Fabric designers employed by knitting or weaving factories analyze customer supplied fabric swatches and produce production patterns for in-house production.	**Transformation:** Yarn is converted through a series of interlaced patterns into fabrics, woven or knitted. The fabric produced at this stage is greige (or grey).	**Marketing, Sales & Distribution:** Grey fabric is delivered internally or sold externally to houses. Prices of grey fabrics are typically in the range of $5.00 per kilogram.	**Services:** chemicals are added to yarns for both weaving and knitting to minimize breakages and stopped machines during processing. Uninterrupted electricity, coal for boilers and water supplies are critical

Source: AFRICONSULT 2013

Fabric coloration stage

Fabric coloration involves many processes where fabric is treated to prepare it for application of color. The processes are as shown below:

Table 16: Preparation Through To Dyeing Process

Inspection This checking woven fabric for faults and classifying fabric into quality grades	**Stitching** The rolls of fabric produced at weaving and knitting are short in length, a number of rolls of fabric are joined to make a desired efficient length for processing	**Brushing** Fabric that has been stiched is run through a series of brushes to remove loose fibres and particles from the surface of the fabric	**Singeing** After brushing, the hairs on the surface of the fabric are singed or burnt off.	**De-sizing** This process involves the chemical removal of starches applied onto yarn for weaving
Scouring The application of sodium hydroxide solution to fabric so as to chemically remove impurities, residual cotton seed, and cotton wax	**Bleaching** Making the fabric absorbent and a uniform white across its width and length so as to ensure a uniform color after dyeing	**Washing** Removal of the residual chemicals that may prevent even dye application	**Mercerizing** application of a strong sodium hydroxide solution to the fabric so as to swell cotton fibers to increase color when dyeing	**Dyeing** Applying dyes onto the fabric in a way that the color is even and uniform, and does not rub or wash off easily

Inspection, stitching, brushing and singeing are mechanical process that are applied to greige fabric. De-sizing, scouring, bleaching, washing, mercerizing and dyeing are generally known as wet processes as they involve passing fabric through chemical solutions. As such much clean and demineralized water is required to affect wet processes. It is imperative at this stage that electricity supplies are not interrupted as the processing chemicals require consistent temperatures for processing.

Table 17: Dyeing, Printing and Finishing Value Chains

Raw Materials: Grey (greige) fabrics are sourced from weaving and knitting value chains	**Procurement:** An average price for un-processed fabric is $5.00 per kg FOT and before VAT. Procurement also involves that of pretreatment chemicals, dyes, and chemicals for finishing.	**Designs:** The finisher will employ a colourist to match the colors and finishes required by Customers
Transformation: Fabric is colored, i.e. dyed or printed in accordance to customer preferences. Fabric is also finished to meet its end use, eg militia fatigue, water proof tents, soft under garments, etc.	**Marketing and Sales and distribution:** Generally 80 to 90 % of fabrics dyed or printed to customer specifications. Dyed or printed fabrics are usually sold to the garment industry or to middlemen who supply smaller cottage clothing businesses. Dyed fabric can cost as much as $2.00 a meter or $10.00 a kg.	**Service:** Computerized color matching systems are now a prerequisite. Dye and chemicals suppliers are crucial as they hold stocks of dyes and chemicals. Electricity should not be interrupted here. If interrupted, the fabric is unevenly colored and is rejected. Rejects are expensive at this stage.

The Spinners' Dilemma in Supplying Fabric to the Local Market

The garment manufacturers only want to buy fabric from the local textile industry which they can use to make clothes that they know their customers will buy. The decision on whether or not to buy from the local textile manufacturers will be based on such considerations as price, but price can be offset by quality, delivery lead times, availability of product and range, continuity of supply, technical assistance and credit terms. The textile manufacturers want to produce the fabrics which their machinery is set up to produce and is the most efficient for them. Whilst technically a spinning mill can produce any yarn and a weaving mill can weave any fabric, it is not economically viable to chop and change the set up willy nilly. If a mill has a steady market for coarse yarn, medium weight fabric in certain colours, and has set up its factory to manufacture this, the firm will only change if it makes commercial sense to do so i.e. there is sufficient, ongoing demand, at the right price and on the right credit terms etc. So if a garment manufacturer needs fine yarn, light weight fabric in a different colour, but not on terms sufficient to induce the textiler to change the factory operations, then the customer needs to source it from elsewhere. Efforts to resuscitate the local textile industry will not succeed by compelling the textiler to manufacture what the clothing manufacturer needs or trying to force the clothing manufacturer to only use what the textiler wants to make. The main reason for the large volume of fabric being currently imported is simply because it is not manufactured in the country. It is not going to be a simple import substitution issue until all those fabrics being imported are actually manufactured in Zimbabwe.

TEXTILE ECONOMICS IN ZIMBABWE

HOW THE TEXTILE INDUSTRY GREW IN ZIMBABWE ON THE BACK OF IMPORT SUBSTITUTION INDUSTRIALIZATION

The TC industry grew on the back of import substitution industrialization strategies. It began in 1965 when the country was under sanctions after the UDI and spanned until 1991 when ESAP was introduced. Under this strategy the economy was closed and was heavily protected and supported by Government. Import substitution industrialization was a policy that was inward looking. Instead of allocating scarce foreign currency on imported goods, the country could produce its own goods for its market and be self-sufficient[46]. The idea was to "expand domestic production and employment through import substitution industrialization"[47] . The strategy involved a high degree of government controls over productive activities and especially the allocation of foreign currency. Control over foreign currency allocations determined the fate of corporations depending on the size of the allocation if any. The government controlled the economy and especially prices, interest rates and wages[48]. There was a scarcity of foreign currency especially after independence. The same industrial base that was generating foreign currency through its exports demanded more funds for working capital and re-capitalizing than it generated. Pressure mounted and government gave in to ESAP in 1991.

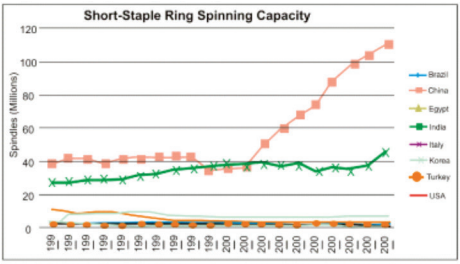
THE IMPACT OF ESAP, GLOBALIZATION AND THE END OF THE ATC

The increase of imports into Zimbabwe and the region was caused by a number of factors, but it has mainly been as a result of globalization, the end of ISI and the introduction of ESAP in 1991. The expiry of the World Trade Organization (WTO)'s Agreement on Textiles and Clothing (ATC) at the end of 2004 added further to pressure on the local market to absorb imports. This era brought about the end of the quota system of trade in TC goods in world trade. After the expiry of the ATC, the following issues were observed:

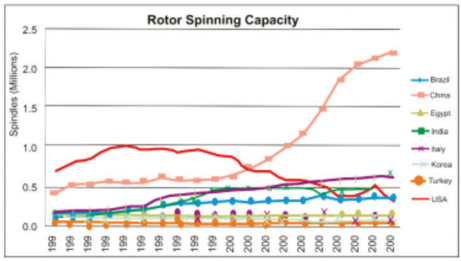
- There was liberalization of trade agreements in the global setting.
- There was an upsurge in the manufacture of TC goods in the Asian countries.
- For Zimbabwe, there was an emergence of a thriving trade in second-hand TC products.
- There was an upsurge of imports from low cost countries on the domestic market outcompeting local production.
- The majority of textile firms failed to compete on both the local and foreign markets against imports from Asia and S.A.

[46] www.zimtrade.co.zw
[47] Ndhlela T (2011)
[48] Ndhlela T ibid

Figure 16: Spinning Capacity



Source: ITMF International Textile Machinery Shipment Statistics (1991 - 2010)



Source: ITMF International Textile Machinery Shipment Statistics (1991 - 2010)

The diagrams above illustrate how competitive the spinning industry has become over the years between 1991 to 2010. Between 1991 and 2002, China's investments in spinning production averaged 40 million ring spindles, but after the ATC expired in 2004, investments surged to nearly 100 million spindles [49]. The same trend is observed with investments in rotor spinning systems.

The diagrams above illustrate China's strategy to dominate the world's textile market through its heavy investment in textile production capacity upon the removal of export quotas. Such an investment in rotor and ring spinning ensured that weaving and knitting operations were supplied with abundant raw materials therefore creating economies of scale never experienced before across the value chain.

It can be clearly seen that China was a closed economy between 1991 and 2002, although China was already superior in performance to the rest of the world, it realized that the strategy by the western countries to buy ten years of time between 1994 and 2004 was coming to an end. So in 2003 it seems to have started its massive investments in increasing its capacity in spinning and other textile manufacturing activities. By 2004 when the ATC actually came to an end, its capacity had gained momentum and had increased by 50%. By 2006, its capacity had doubled its 2002 capacity. This was a superior strategy indeed.

From a study by Adebayo (2013), it is clear that China and India both increased capacity to exceed other competitors. What is interesting from this study is that the increase of capacity was hardly by way of new machinery. The survey by Adebayo illustrates that the installed capacity in both China and India is not new technology, but that it is technology older than 10 years. This suggests that the technology in Zimbabwe could still quite competitive. The survey showed that South Africa has relatively new technology but was not able to compete with China and India. This also supports Michael Porter's Diamond theory that certain factors need to be in place for a country to be competitive in any one sector.

CONSTRAINTS FACED BY ZIMBABWE'S TEXTILE INDUSTRY

These are some constraints that are faced by the textile manufacturing firms in Zimbabwe. The majority of firms in the Zimbabwean TC industry were (and some

[49] ITMF International Production Cost Comparison (2010)

still are) using old technology. Wages are rising and utility supplies are inefficient and costly. The sector has gone through an involuntary restructuring phase, and inefficient firms have either shut down or downsized; the textile sub-sector now only employs 5,000[50] people down from a peak of 18 000 in the mid 90s. Whereas over 200 companies used to supply 90% of the cotton fabric requirements of the clothing industry, currently, less than 20 active textile companies continue in operation at very low levels of capacity utilization.

A few local manufacturers realized earlier on that to survive into the future, it was not going to be possible to compete against imports on price alone. These surviving firms adapted and focused on segments of the market where local production has a competitive advantage over cheap imports. They took active steps to re-capitalize through own resources and as a result they are still in operation today.

Use of Aged Technology

Some of Zimbabwe textile industry used technologies older than 10 years that is inherently labour intensive. The old equipment has high maintenance costs and down time. In spinning, higher output technologies with higher levels of automation are now being used globally to reduce production costs. The average local weaving loom speed is 400 revs per minute translating to about 12 meters of fabric per loom per hour against over 1 000 revs per minute per loom per hour with lower manning levels of modern weaving looms.

Product Categories of the Investigation

The investigation looked at processes of producing cotton yarn, cotton fabrics made of 100% cotton fibres. Zimbabwe had, and still has a spinning industry that uses both open end spinning and ring spinning systems. Prior to 2011, Zimbabwe had a spinning capacity of roughly 27,000 metric tons annually[51].

Structure of the Textile Industry

The structure of the textile industry previously was that a number of large plants were vertically integrated, i.e., they had all the value chains possible, and formed the backbone of the industry. Small specialist textile firms then developed from these large organizations. The large businesses were:

- David Whitehead Textiles Limited (DWT),
- Modzone (former Cone Textiles),
- Qualitex, and,
- Zimbabwe Spinners and Weavers (ZimSpin).

All four businesses were similar in size and in their growth patterns. The businesses comprised of spinning, weaving, knitting, dyeing, printing, and finishing value chains. Only Qualitex did not have a knitting section. The businesses also produced sewing thread. David Whitehead Textiles in addition produced cotton wool or absorbent cotton. DWT, ZimSpin and Modzone consumed an approximate combined total of 15,000 tons, whilst Qualitex consumed 2,200 tons of lint a year. All these firms consumed over 80% of all the yarn they produced in-house and the balance was exported or sold to local third parties. The firms also produced a broad range

[50] NEC textiles 2014
[51] ZITMA 2010

of fabrics ranging from 115 grams per square meter (shirting fabrics) to over 800 grams per square meter (industrial filter cloths). Fabrics were sold in the loom-state as unprocessed, partially processed and or in the finished form for both the local and export markets.
Excess yarn was sold to specialist fabric producing companies such as Textile Mills, Security Mills, Zimbabwe Hosiery, Matt Knitting, and Towel Tex. These firms converted yarn into products that were not produced by the big four. Three of the four major textile companies have ceased operations.

Zimspin is the only large firm remaining and operating of the pioneering major textile companies in the country currently. There are other small and specialized textile firms still in existence as shown in the table of the spatial distribution of the companies.

SinoZim Cotton Holdings P/L is a firm that is unique as a newcomer to the textile industry. It is a joint venture enterprise between the Government of Zimbabwe and a Chinese private company established in 2009. It is involved in both contract growing of seed cotton and also has spinning operations. It has plans to move up the value chain to produce finished fabric in its two mills in Chitungwiza. The second spinning mill is waiting commissioning because there is inadequate electrical power supply. The company generally buys up to 8% of the nation's cotton crop and toll gins its seed cotton. It installed new ginning plant during 2013 in Chitungwiza. SinoZim has an installed spinning capacity to spin 3,600 tons of lint a year with both ring spinning and open end spinning systems. 80% of the spun yarn is exported to China and South Africa and the remainder is consumed locally. SinoZim can begin to help mend the break in the C2C value chain when it achieves its organic growth target.

Waverly Blankets P/L is an off-shoot of the now defunct Cone Textiles P/L. It specializes in spinning and weaving of polypropylene products for the local and export markets. It has modern equipment which it uses to beat cheap imports from the Far East. It employs upwards of 600 permanent staff in its Harare factory.

Table 18: Spatial Distribution of Textile Firms

Bulawayo	Harare	Chitungwiza	Norton	Rusape	Chegutu	Glendale	Kadoma	Mutare
Qualitex	Scottco	Modzone	Modzone	Health & Hygiene	DWT	Zimspin	DWT	Karina
Cotton Waste	Centape	SinoZim					Zimspin	
Zim Hose	Socktex	Flooktex						
Merspin	Porsche							
Gloweave	Kutaura							
Matt Knitting	Twine & Cordage							
Security & Textile Mills	King Fisher							
	Twine & Allied							
	Waverly Blankets PL							

Source: AFRICONSULT 2013

Merspin Limited in Bulawayo was a vertical textile business which had spinning, weaving, dyeing, finishing and making up value chains. This business had an installed spinning capacity of 2,200 tons a year. Its business model was to sell half of its spun yarn to third parties whilst it processed the other half through its installed value chains. The business produced terry towelling goods for the local market in the main with the balance going into exports. Merlin is under judicial management. Gloweave had export processing zone status and is a sister company of Merspin Limited. It bought in yarn and through its weaving and dyeing processes, it produces towels and napkins for the South African export market.

Scottco (Private) Limited was associate company of COTTCO. It is a spinning and weaving company with a capacity to produce 3,000 tons a year of spun yarn. 90% of its yarns were sold to third parties and it consumed through its weaving factory the balance of the yarn it produced. Its weaving business produces basic packaging and calico fabrics which it supplied to cotton ginneries (as packaging fabric), and to specialist dyeing and printing businesses. The company has recently been placed under a liquidator.

Zimbabwe Hosiery Company, Socktex, Cotton Waste Company, Matt Knitting, Kutaura (Pvt) Ltd, and Flooktex represent specialist small to medium scale firms that buy in yarn and process the yarn into finished goods. With the exception of Socktex, the other firms listed here produce knitted t-shirting goods, dress-socks, sport and school socks, and socks for uniformed personnel, and mutton cloth. Socktex has both knitting and weaving value chains. Socktex also has a dyeing facility and dyes yarn and fabrics on commission for third parties.

Twine and Cordage, and Twine and Allied are specialist Spinning firms that buy in cheap spun yarns and convert them to twines and to cords. These are products generally used for industrial purposes and for the tobacco and meat tying requirements.
Health and Hygene (H&H), Porche Investments (Porche) and Centape (Private) Limited are cotton wool processing businesses. These businesses purchase low grade and reclaimed cotton lint, the lint is bleached and processed into absorbent cotton products. H&H and Porche have relatively new plants whilst Centape has older machinery. The three have a capacity that is greater than local demand.

RECENT FACTORY CLOSURES AND PROBLEMS ENCOUNTERED

Modzone is a typical FDI project that did not get the funding it needed to recapitalize and so it collapsed recently. DWT was fraught with shareholder infighting to such an extent the business went into receivership. Qualitex was owned by the Meikles family, and the family decided to divest in the business several years ago. It handed over the plant and machinery to the former workers and offered to lease the buildings to the same workers. The workers rejected the offer demanding that their retrenchment packages should have included the entire business including buildings. There is an impasse and the firm is shut.

Merspin Limited was shut down owing to balance sheet issues where the firm borrowed expensive off-shore loans in hard currency during the Zimbabwe dollar currency days. The firm failed to repay the loans and to service the interest burden, and is now under receivership. Scottco has also recently been placed under liquidation. Similar to Qualitex, the firm had elevated the NEC levels of all its workers during the hyper-inflation period to cushion workers against eroding incomes. These elevated levels were then transferred to the US$ currency regime and labour became expensive for the firm.

Table 19: Local Consumption of Lint by the Textile Industry against Exports, 2008-2013

	2008/09	2009/10	2010/11	2011/12	2012/13
Local Consumption (mt)	6 247	4 608	3 190	2 655	2 000
Exports (mt)	78 623	105 272	99 310	139 615	59 500

Source: Cotton Ginners Association

Table 19 confirms the destruction of the textile industry as it dramatically reduced the use of its major raw material – cotton lint – over time. The contrast is significant when compared with earlier periods in the 1990s (as reflected in Fig 8 of Chapter 4). The question that immediately arises is what can be done to reverse the deindustrialization which has been taking place in the industry since about 2001?

Single stage or double stage transformation
This problem of closures and or under performance of the textile sector has now set the stage to divide ZITMA and ZCMA on whether the government should relax

the rules of origin (RoO). Zimbabwe is a member of both COMESA and SADC trade protocols. Whilst COMESA RoO are relaxed, and effectively permit single stage transformation to confer origin to goods produced in the member states, SADC still requires that goods undergo a double stage transformation to confer origin. The garment manufacturers lobby the government for SADC to relax its RoO to single stage transformation. This is so they can import finished fabrics from low cost countries, process them and export the garments duty free as goods that originate in Zimbabwe.

Textile manufacturers lobby the government not to relax the SADC RoO. If SADC relaxes RoO, then the industry will not recover, as its cost structures are higher than those of imports owing to insufficient capacity utilization. They argue that the RoO are a competitive advantage for Zimbabwe, as the infrastructure is already in place and once finances are made available, the firms can easily recapitalize and take advantage of a regional market. The textile industry has questioned the wisdom for the country to rely on imports as this increases the country's import bill and it exports jobs. The ZCMA is of a contrary view which argues for single stage transformation. The clothing manufacturers have observed that the local textile sub-sector is unable to supply their fabric requirements on a commercial basis and therefore should be allowed to import the same from elsewhere. Government should not "force" them to order materials from the local textile industry which are not suitable.

However, COMESA, EAC and SADC were in tripartite negotiations to agree on a common regional position regarding the issue at the time of writing this report.

Table 20: Zimbabwe Textile Industry's Competitiveness Analysis In 2013

Cost Item	Current cost US$	Target cost US$	Import parity US$
260 gsm drill fabric - dyed/m			
Enabler			
Cotton Lint	0.90c	0.50c	
Operations Model			
Labour	0.60c	0.20c	
Technology			
Electricity	0.40c	0.15c	
Coal	0.20c	0.10c	
Dyes & chemicals	0.40c	0.25c	
R & M	0.15c	0.05c	
Administration	0.15c	0.05c	
Total cost	2.80	1.30	
	3.40	**1.95**	**2.00**

Source: Zimbabwe Textile Manufacturers Association

Zimbabwe's Competitive Advantages

Zimbabwe has the following competitive advantages in the manufacture of textile goods:

- Reputation for production of high quality and clean hand picked cotton.
- Has comparative advantage in the growing of cotton.
- A well trained, educated and skilled labour force.
- Excellent location and with its proximity to SA, Mozambique, Zambia, and the DRC. It can easily export its goods to these countries duty and quota free.

APPLICATION OF PORTER'S DIAMOND MODEL TO THE TEXTILE INDUSTRY

Firm Strategy, Structure and Rivalry

At this stage, Porter's Diamond model was applied to the research to bring out the issues and to establish the most suitable strategy for the local TC sector. The first factor looked at was that of strategy for the sector as it applies to the local textile industry. Zimbabwe government recently announced that it would pursue the ZimAsset policy, explaining that value addition of raw materials was at the forefront of this policy. Cotton beneficiation (or in other words textile manufacturing) was enshrined as paramount because the industry has the potential to create jobs and export revenues.

The current structure of the industry is such that there is a competitive spinning capacity in Zimbabwe. Two large and one small spinning firm are operational and the others have slid into judicial management. There are numerous knitting only factories in the country, but only four are operational. There is one large and two small weaving companies left that are still operational. This implies that rivalry is not great and there are monopolistic tendencies in the market. However there is idle capacity in both spinning and weaving that can be re-capitalised within a six month period. Adebayo *et al* showed the following:

Table 21: Age of Machinery Installed 10 Years And Less[52]

Technology level	Nigeria	India	RSA	Indonesia	China	Pakistan
Ring Spinning spindles less than 10 years	3.6%	29%	39%	17%	38%	16%
OE Rotor spinning less than 10 years	28%	3.5%	91%	34%	28%	6%
% of shuttleless looms per 100 million population	1.56%	0.62%	80%	10.42%	9.30%	6.15%
Shuttleless looms less than 10 years	8%	69%	93%	36%	74%	29%

Source: Adebayo *et al* (2013)

China, Pakistan and India, the most competitive of textile producing countries did not require new technology in the spinning arena. China and india were however well invested in modern weaving technology. South Africa with its good new technology investments still could not compete with China, Pakistan and India. Most of the factories that shut down in RSA sold their plant and machinery to India and Pakistan. Zimbabwe's spinning, weaving, and knitting factories have plants that

[52] Adebayo et al (2013)

are new (2013) and aged i.e. 10 years and older. It is a moot question why South Africa sold its textile machines to Pakistan and India and not to Zimbabwe when Zimbabwean companies had expressed an interest to buy the machinery. The answer could be company regional rivalry.

Between 1999 and 2009, a certain group of companies invested US$36 million in new plant and equipment in its S.A. factories. By 2009, the spinning factories were capacitated with 53,000 ring spindles, and 5,000 open end rotors converting 25,900 tons of short staple yarn per annum. This is equivalent to the maximum capacity of the entire Zimbabwean spinning industry. The weaving factories owned by the group produced 33 million linear meters of woven fabric per annum[53].

Despite this capacity and size, the owners of the group would not sell any of the replaced machinery to Zimbabwe. At that time David Whitehead Textiles approached the group with a view to purchasing its replaced machinery. The group refused to sell to David Whitehead and to other firms in the region for fear of anticipated competitive pressures. Instead South Africa monitored each kilogram of textile goods that entered the country to ensure the necessary duties were paid. The Zimbabwean textile industry had to be contained as it threatened the South African textile industry on efficiency and cost of production basis. Zimbabwean workers were seen to be more hard working, easier to manage, and more productive than most workers in the region.

Strategy of Foreign Direct Investment in the Textile Industry

There is no overall Government strategy for the cotton to clothing sector in Zimbabwe. Zimbabweans often talk of the need for FDI, but there are both benefits and challenges that FDI brings. In addition, FDI is not always the a solution on its own. There are many examples of FDI in the region, e.g. Ramatex in Namibia, Algo in Botswana, and Modzone in Zimbabwe that have not produced results that were expected of them. All these investments were fairly large in size and were somehow backed by host governments. At the end, the investments failed. The Zambian experience and the experiences of other countries in the region provide an insight into some of the causes of failure from which Zimbabwe can learn.

Strategy of Zambian FDI and lessons for Zimbabwe

The Zambian economy progressed and made many gains[54] after its structural adjustment programs of the 1980's and 1990's[55]: The Kwacha then strengthened and made imports cheap and exports expensive. This opened the door to imports as manufacturing slumped. In response, Zambia invited Chinese FDI in the 2000's, through a government instrument known as the Multi Facility Economic Zone.

The Chinese brought in FDI together along with their culture of doing business, which often ran into conflict with the Zambian business practices, and, to the new movements in the ILO. China brought to Zambia FDI for the following reasons[56]:

[53] Renato (2010) the ReDress Consultancy "One South African textile company to shed 1400 jobs."
[54] www.imf.org/external/NP/PFP/1999/Zambia
[55] Saasa O.S. (1996) Policy reform and structural adjustment in Zambia
[56] Ina Eirin Eliassen (2012)

- Long history of friendship between Zambia and China and Zambia has abundance of natural resources
- China's economic success was based on an export strategy, and Zambia offered access to SADC, COMESA, and AGOA.

When Zambia took on Chinese FDI, it needed to have known that in China, wage levels are low, and there are no formal employment incentives for employees. The transition from low to higher income occurs through a sustained period of industrialization, and upgrading through creation of industrial linkages.
Chinese FDI failed despite a wide range of sweeping incentives introduced by the Zambian government that included 0% tax on profits[57] and on dividends for 5 years after a firm makes its first profit. At the end, when the WTO's Multi Fibre Agreement (MFA) expired at the end of 2004, most Chinese firms operating in that country returned their operations to China.

The WTO and Zambia
However if Zambia[58] had used safeguard measures to protect its industry, the Zambians who had suffered earlier on from protectionist policies, would not have supported a return to the old order. This would be fatal to any politician proposing such policies. Protection caused prices to soar and so most Zambians would frown upon a return to those difficult times. With such little manufacturing activity, Zambia's trade agreements are in-effective and non-functional. Zambia did not have a real answer to globalization, and its policies to attract FDI were not practicable since the country could not pursue protectionist policies. The FDI rules in country need to be clear to all investors as they invest especially where work cultures differ. The soft issues including labour relations must be part of the overall understanding. This is the message of the Zambian experience.

Strategy by Sub Sahara Africa's (SSA) to the rivalry from Asia
Until the globalization affects of the 1990's, SADC states produced garments for their own consumption[59]. Most manufacturers in the region had been protected by the MFN tariff protection, however many firms did not invest adequately during this period and could not compete when the tariffs were lowered. Incentives given by host governments to local TC firms failed to produce competitive firms, whereas in Asia, incentives were better designed and were invested in an expanding market-share. SSA's host governments did not expand electrical power supplies[60]. The power shortages resulted in missed delivery deadlines, and in idle resources. In Asia, governments took on huge projects to develop infrastructure and through long-term strategic plans, they created enabling environments for TC production. Asians sought technology patents from the West to boost productivity and competitiveness. Meanwhile, Africans ignored the long term view of the industry[61], only settling for short term results that sought cheap used plant and equipment from Europe to increase production at home.

It is also important to be aware of the strategies of developed countries and the responses of other players to emphasize the importance of always being alive to changes in the trading environment by all players and stakeholders in the value chain.

[57] ibid
[58] ibid
[59] Rates (2005)
[60] Africonsult (2013)
[61] European Scientific Journal vol 9, No. 2 (January 2013)

Strategy by western countries to competitive pressures from Asian exports
In 1994, developed countries placed quotas on clothing imports of TC through the WTO's MFA. This strategy was intended for Western nations to buy time to re-tool their uncompetitive TC industries over a period of 10 years. Many textile firms from developed countries took on new markets, or shifted production to low cost Asian countries at this time. Asian countries responded by shifting production to countries that had unfulfilled quotas for export to the West (quota hoping). In some cases new investments were put in countries that had inherent inefficiencies for the TC sector. A good example is the huge Malaysian investment[62] in 2002 of Ramatex, and vertical textile and clothing business in Windhoek. Namibia has no comparative advantages for textile manufacturing. When the MFA expired in 2004, and quotas were removed, the Asian countries were better prepared than anyone else and subsequently overwhelmed the world markets with their TC goods.

Strategy of least cost through consolidation, integration and globalisation
Consolidation, integration and globalisation are the buzz words in business strategy today. This is made possible by advancements in technology of banking, transportation, manufacturing, and in telecommunications[63]. Consolidation is the bringing together of corporate activities such as buying, marketing, management and finance. The drive is to make improvements in business efficiencies. Fragmented corporate activities are said to be wasteful and increase costs.

Integration of the textiles and clothing is seen to provide advantages in speed of response to market demands and avoids duplicated processes of quality control, research and development and sampling, which can add up production costs. Successful integration is seen to save up to 25%[64] of total costs. A number of textile firms are seen investing upstream into clothing.

Although there is renewed globalization of markets, the sourcing of inputs has become regional. Regional sources of TC goods are usually coupled with easy availability of raw materials, abundance of labour and a tradition of textile processing facilities. In addition, there is globalization of major brands.

Many of the leading exporters of TC goods are also major importers of TC goods. Germany imports greige fabrics and finishes them to a high standard for export. China imports finished fabrics for conversion into garments. The Chinese model was to develop the textile industry through the development of the clothing industry.

Strategies of supply chain management
Sourcing strategies can be broken down into: long term (1 year), medium term (6 months) and short term – immediate. Prime contractors put great pressure on weavers and garment suppliers as lead times are getting shorter all the time. Asian companies are integrated and offer raw materials, yarn and fabrics all in-house[65]. Price is a key parameter in supplying the American and the EU market.

[62] Namibian Sun (Friday November 23rd 2012)
[63] Gherzi (2006)
[64] Gherzi (2006
[65] Bennette M. Ibid

American buyers based in Asia have raised the quality bar. Asian suppliers in response, have improved overall business practices.

Strategy by international buyers and agents to improvements in Asia
Buyers and agents found many advantages in sourcing from fewer countries that could offer all goods and services under one roof. Bangladesh and China were beneficiaries as they had cheap labour and subsidized production. Market-share was taken away from African suppliers despite them having duty free access into the US and Europe. Mauritius and Madagascar developed their industries during the time of quota hoping and have become strong suppliers of high quality TC goods. In Southern Africa, the main TC exporters were and still remain Lesotho, Madagascar, Mauritius, and Swaziland. These African countries benefitted from quota hoping investors from India, Taiwan and Hong Kong. The investors developed strong connections with buyers from their home countries based in the USA and Europe.

Rivalry from regional suppliers and incentives for regional manufacturers
Currently, Botswana, Lesotho, Swaziland and Tanzania supply[66] a lot of finished garments into South Africa. In 2011, 15% of all Woolworth's (RSA) garments were sourced from Lesotho, up from less than 12% in 2004.[67] There are significant opportunities to grow in trade within SADC, although local firms are hoping between member states, searching for production cost advantages. In 2009, South Africa imported from SACU some $180 million worth of value chain commodities, but exported $230[68] million of same. There is much fragmentation of the value chain within the region, and many manufacturers are not aware of the inputs they can source from within the region. Where fast fashion is concerned, there is a real opportunity for regional integrated supply. This is owing to market proximity advantages.

Ethiopia offers very generous incentives for investors. Botswana, Lesotho, Swaziland, Madagascar, Mauritius, and Tanzania[69] offer new investors tax holidays of up to 10 years on new investments. Lesotho and Swaziland offer the Duty Credit Certificate Scheme (DCCS), which is a cash incentive of 14% of export sales out of SACU. Most SADC firms protect their manufacturing firms with MFN tariffs, some as high as 45% in SACU – ad valorem on clothing imports. Tanzania charges 50% on some textile products, thus forcing producers to look at SADC and COMESA protocols.

Rivalry from Retail revolution
Similar to the intense rivalry that exists in the textile and clothing industries, the retail industry is faced with the same. As a result of competitive pressure at home, the larger and more established US and EU retailers are moving to emerging markets[70] as competition at home intensifies. There are new mergers and acquisitions of foreign and domestic retailers. The American giant retailer Walmart acquired a majority stake in the South African Massmart business in 2011[71]. Wireless shopping *(e-commerce)* allows anyone anywhere to shop anywhere at anytime.

[66] Bennett M Ibid
[67] Bennett M. Ibid.
[68] International Trade Centre: South Africa: A market for clothing from Africa (2010)
[69] www.tic.go.tz
[70] gherzi (2006)
[71] www.corporate.walmart.com/our-story/our-business/international/africa

PORTER'S RELATED SUPPORTING INDUSTRIES

The second factor in the Diamond Model applied to the research was that of related supporting industries. The research looked at the suppliers of lint, electricity, water, transport, spare parts and capital.

Suppliers and pricing of lint

Lint purchases constitute about 60%[72] of all raw material costs of a spinning factory. Most factories in Zimbabwe were designed to convert a minimum of 200 tons of lint a month. The problem is that all the sales are cash before delivery. Zimbabwe's smallest spinning factory has a capacity of 40,000 kgs of spun yarn a month. This factory would need to outlay US$200,000 a month in lint purchases alone if it was to maximise production. A well run spinning factory requires three months cover of cotton lint supplies to ensure high quality and capacity maximisation.

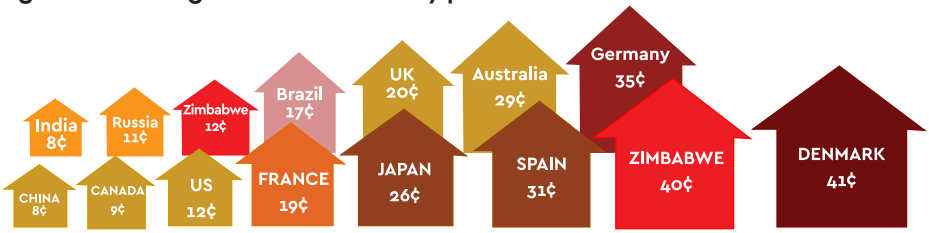
The CGA and the local spinners agreed on a pricing formula where spinners can purchase lint using either a spot price or a forward contract price[73]. The spot price is the most commonly used as spinners are afraid of the penalties resulting from infringing contractual obligations. The price of lint in Zimbabwe is determined by a formula where the costs of exporting are discounted from the Liverpool price index. The lint price has been hovering between US$1.69 and US$1.90 per kg in recent years.

In India, domestic cotton lint prices are discounted by 5 to 7 cents per pound to cotton spinners[74], whilst the China Cotton Association announced that the CC index 3128 B settled at 19,720 Yuan per metric ton in China[75]. Zimbabwe has well over 20 suppliers of cotton lint, and their preference would be to supply the local market ahead of the export market.

Suppliers of Electricity

The most important of the supporting industries is the electricity supply industry. The following diagram illustrates costs of electricity per unit, i.e. per kWh in competitive countries:

Figure 17: Average national electricity prices in selected industrialized countries.



Data: average prices from 2011 converted at mean exchange rate for that year

Source: Modified from IEA, EIA, national electricity boards, OANDA shrinkfootprint.com

[72] Africonsult (2013)
[73] Ministry of Industry (Zimbabwe) 2013
[74] China Cotton Association report 19 11 2013
[75] Website of China Cotton Association 18 11 2013

The cost of electricity in Zimbabwe is stipulated by ZESA as 12c/kWh is higher than in India and China i.e. the world's major textile producing countries. Electricity supplies have become erratic in Zimbabwe. There are frequent electrical power outages that are unplanned for and can occur at any time. Erratic supplies, such as that which exist in Zimbabwe, result in idle machinery and idle labour. To make matters worse, if fabric is under-going the dyeing process when electrical power is cut, then the batch of fabric being processed is spoiled. This leads to a high reject rate and increases fixed costs such as labour per unit of output. Some plants were losing 5 hours of electrical power outages a day. Most textile factories cited that they have such a high power demand that to install a back-up generator even for the simple processes would not be cost effective. To make matter worse, the electricity sub-stations comprise of huge capacity transformers and all are on maximum electricity power demand. The power drawn at any resumption of operations, especially after a power cut are huge and there is a mismatch to productive capacity resulting in high and unsustainable actual power charges at 40c/kWh. The above diagram clearly shows that power this effect.

Suppliers of Transportation

Transportation costs have become exorbitant in Zimbabwe and this is as a result of the collapsed NRZ railway system. Because of under utilization of capacity, the costs of moving consignments by rail are at par with the costs by road. The following are some costs of moving goods to Zimbabwe:

Table 22: Road Transportation Costs Applicable To Zimbabwe for 40ft Container (US$)

From/To	China	Bulawayo	Johannesburg	Durban	Beira
Harare	9 000	700	1 800	3 500	1 800
Johannesburg	5 000	800	-	-	-

Source: Waverley Blankets P/L 2013

For Zimbabwe's trade with the Far East, the shortest route by road or rail is through the port of Beira. The port of Beira has other problems of inefficiency and delays not experienced with using Durban[76]. The importation of raw materials suffers when containers are delayed at both inland border posts and sea ports for weeks on end. The cost of delivering a container of yarn is also prohibitive and makes Zimbabwean export goods non-competitive even in regional markets. The clearing of goods twice between borders takes a lot of time and is inimical to business. There is a need for Government and neighbouring states to promote the policy of one stop border posts.

Suppliers of Water

The supply of water is most critical for textile processing. The water that is used in textile processing needs to be de-mineralized[77]. Water must not contain hardness salts as these interfere with boiler steam generation and with colouration processes during dyeing. Ultimately, if the quality of water is poor, then the quality of colouration is also poor, and this can result in the production of rejects. In one

[76] Waverley Blankets P/L (2013)
[77] ZITMA (2013)

extreme case in Harare, Waverley Blankets P/L because of the failure by ZINWA to supply treated water, the company purchases borehole water which is not de-mineralized for its mill operations. New technology is now available to ensure reduced water consumption at the boilers and at processing. Adebayo *et-al* cited that raw water had the following cost structures in the countries shown below:

Table 23: Raw Water Cost Comparisons by Country

Country	Nigeria	India	RSA	Indonesia	China	Pakistan
Raw water costs (US$ cents/liter)	15 - 37	13 - 37	45	5	15	14.71

Source: Adebayo et al (2013) Modified by AFRICONSULT.

Suppliers of Spare Parts

Nearly 90% of all spare parts for textile and clothing machines are imported into the country. Machine suppliers strategically design spares that are not easy to replicate. This creates a dependency syndrome between the supplier and the user of machines. Manufacturers cannot engage in just-in-time principles of manufacturing as there are delays in the sourcing and the receiving the spare parts ordered from abroad. Manufacturing plants have to ensure that they are well stocked with essential spare parts, and that ties up working capital. The alternative is to engage small parts suppliers, but the costs of the spares become too high and the small Importers cannot afford to hold full inventories.

Whenever spares are not available, the affected plant and machines are stopped. In Zimbabwe the repairs and maintenance costs can vary between 15% and 20% of total costs. Spare parts are not duty free; instead an import duty of 5% is charged, as a result the holding of spares in stock is expensive. However in a study in 2003 the Competition and Tariff suggested that duty relief could be recommended. It is the mandate of the Commission to make recommendations to Government on matters of protection and assistance to industry. This avenue needs greater publicity.

Suppliers of money

Textile factories are typically high volume low margin businesses. They have to operate at efficiency levels above 95% to survive. The availability of electrical power is therefore a critical success factor. Nearly all the firms in the industry complained about the lack of affordable financing for their operations. A typical well run textile factory must operate along the following ratios:

- One third of its stock should comprise of unprocessed stock awaiting processing.
- One third of the stock should be work in progress at different stages of value addition.
- One third of stock should be split between finished stock ready for dispatch and stock delivered to customers awaiting payment.

This implies that firms should have enough capital or credit facilities to secure inputs in such a way that the firm maximizes stock turnover and sales at every stage.

Table 24: Cost of Capital in Sample Countries

Cost parameter per country	Zimbabwe	India	Nigeria	RSA	Indonesia	China	Pakistan
Cost of interest rates (long term foreign currency	18 - 30	2.5%	2.5%	3%	2.5%	6%	5 - 6%
Special Fund for sector	n/a	7%	n/a	n/a	19 - 18%	3%	13 - 14%

Source: Adebayo *et al* (2013) Modified by AFRICONSULT.

PORTER'S DEMAND CONDITIONS FOR PRODUCTION AND PRODUCTS

Demand for Zimbabwean produced textile goods

RoO enshrined in the SADC trade protocol surprisingly create a sustainable competitive advantage for Zimbabwe's textile and garment producing sectors. By insisting on double stage transformation, the rules require that exports entering any member country should have been transformed by at least two stages in accordance with the WTO's Harmonised System of Codes for all tradeable goods. For example, for a consignment of fabric to enter into SADC duty free, it must have undergone two processes any member state, ie spinning and fabric formation. Although Zimbabwe has a number of firms that are stopped or under judicial management, the SADC RoO ensure that these businesses have a duty free market in the region that is awaiting exploitation. Many SADC countries do not have textile factories and so this gives Zimbabwe a huge advantage. The small nature of the Zimbabwean market requires that any sizeable firm should adopt an export led growth strategy to maximize capacity utilization. The higher the export potential the more sustainable the textile industry and industrialization based on cotton will be.

Globalization began in the 1990's when economic structural adjustment policies (ESAPs) were adopted in Zimbabwe and in most of Africa and some parts of Asia. The local markets that had been protected and reserved for local manufacturers were suddenly exposed to an influx of cheap imports. The difference between Africa's slumping and Asia's spectacular[78] performance during structural adjustment programs was due to the fact that the Asians gradually deregulated their economies, whereas most of Africa rushed and implemented structural adjustment programs before local manufacturers had prepared themselves. Zimbabwean markets are still exposed to global suppliers who have crowded out local production. However in Zimbabwe there is now a[79] shift as prices of these imports have increased significantly in some cases. Table 25 below compares retail prices of selected imported clothing items in Zimbabwe and South Africa where they were sourced:

[78] jerome (1998) and Stein (1992)
[79] Africonsult (2014)

Table 25: Price Comparison of Selected Clothing Items in Different Retail Shops in Harare

Item/Shop	Boxer Shorts	Golf T-shirt s/j	Chinos	Ankle Socks	Woven Shirt	Ladies sleeveless T shirts
Shop 1	6	10	30	2	15	3.50
Shop 2	7	11	33	1	18	4
Shop 3	9	9	36	2	19	5
Shop 4	10	15	45	3	21	9
Mr Price, S. Africa	3.33	15	12	1.67	10	1.99

Source: AFRICONSULT, 2013

Notes:
Shop 1 and 2 were shops in downtown Harare.
Shop 3 was a flea market stand.
Shop 4 was a South African retailer newly established in Zimbabwe.
Mr Price is a retail shop based in South Africa.

Demand for locally produced goods in the Regional markets

The TC industry has a great opportunity to use global and regional trade and investment agreements to industrialize and develop the local C2C value chain. Zimbabwe is an original member of the World Trade Organization (WTO) which regulates world trade in TC goods. The country is also a contracting party to the General Agreement on Tariffs and Trade (GATT). The goals and functions of the WTO are as enshrined in the Marrakech Agreement [80]which are:

- To Raise standards of living, and strive for full employment.
- To Ensure steadily growing real incomes and demand, and,
- To Expand the production of and trade in goods and services.

In the case of Zimbabwe, the goals of the WTO are falling short. Standards of living have regressed, there is high unemployment, real incomes are suppressed and not growing, and there is a contraction in the production and trade of textile goods manufactured locally. The WTO[81] allows a member country such as Zimbabwe to take the following actions where trade practices are deemed unfair:

- **Anti dumping actions,**
- **Safeguard measures.**

Within the WTO, Zimbabwe is an active member of the African, Caribbean and Pacific (ACP) group. Zimbabwe is also a member of the WTO African group, the G-90, the G-33 and G-20 groups of developing countries on agricultural matters. Innocent Mugwagwa (2008) states that Zimbabwe has bilateral trade agreements with the following countries:

- Zimbabwe / Malawi Bilateral Agreement
- Zimbabwe / Namibia Bilateral Agreement
- Zimbabwe / Mozambique bilateral Agreement
- Zimbabwe / Botswana Bilateral Agreement
- Zimbabwe / South Africa Bilateral Agreement

to legally encourage and stimulate trade between Zimbabwe and its trading partners through elimination of tariff and non-tariff barriers to trade[82].

[80] www.lisd.org/trade/handbook/3_2.htm
[81] www.wto.org/english/res_e/bookssp_e/index_e/wto_agree_e.htm
[82] www.zimtrade.co.zw.

Zimbabwe has also entered into continental/regional agreements. The country is a member of the AU and its continental African Economic Community (AEC). The AEC aims to create an African customs and monetary union in six stages by 2028. It is also has membership of COMESA and SADC as regional bodies. The effectiveness and relevance bilateral agreements have been reduced by the establishment of the SADC FTA in 2008.

The SADC Protocol[83] presents Zimbabwean goods access to a potential market of over 200 million people. The COMESA region has 19 member states and a population of 390 million people[84]. SADC requires that goods can only qualify for free trade where they are[85]:

1. Wholly produced or obtaining or
2. Sufficiently worked.

COMESA's trade agreement[86] allows for the following duty structure on imports into the region from member countries:

1. Raw materials 0%
2. Capital Goods 0%
3. Intermediate Goods 10%
4. Finished Goods 25%

There is a conflict of application of opposing terms and conditions in those countries with dual membership of both SADC and COMESA such as Zimbabwe. Zimbabwe was originally a beneficiary of AGOA but has since been delisted. However, the country continues to benefit from the Generalized System of Preferences (GSP) schemes of Australia, Canada, EU, Japan, Korea, New Zealand, Norway, Sri Lanka, Switzerland, and the US.

As already pointed out above, Zimbabwe is an active member of both the SADC and COMESA trade blocs. Meanwhile the bilateral agreement with South Africa has posed new problems for Zimbabwe. The South African Customs Union (SACU) took the decision in the context of the SADC-FTA to exempt some member countries of the SADC FTA from complying with the double transformation requirement for exporting into SACU countries. The countries that were exempted were Malawi, Mozambique, Tanzania and Zambia. The argument for what SACU did was that these four countries happened to be less developed. Zimbabwe and Mauritius were left out because the presumption was that they are more developed. Using GDP comparative figures, Zimbabwe cannot be in the same league as Mauritius as the table below shows. Table 26 below demonstrates amply that in fact the GDP per capita in Zimbabwe is practically half that of Zambia; while the GDP per capita in Mauritius is more than ten times that of Zimbabwe.

Table 26: GDP Per Capita: Comparison Of Mauritius, Zambia And Zimbabwe (Us$)

Country Name	2009	2010	2011	2012
Mauritius	6,929	5,787	8,741	8,124
Zambia	998	1,225	1,409	1,469
Zimbabwe	476	568	723	788

Source: World Bank (www.data.worldbank.org/indicator.NY.GDP.PCAP.CD)

[83] www.sadc.int
[84] www.ustr.gov
[85] www.sadc.int.
[86] http://about.comesa.int/.

Accordingly Zimbabwe has cause to request for a review of the SACU position on this issue. The SACU market is critical for Zimbabwe primarily for reasons of proximity and size.

Zimbabwe is a member of the COMESA sub group of member states of the Eastern and Southern Africa (ESA) negotiating with the EU on an Economic Partnership Agreement (EPA). Zimbabwe signed an interim EPA with the EU in 2009 which was concluded in early 2013. Trade between Zimbabwe and the EU grew to US$800 million in 2012[87]. The agreement has safeguard clauses that allow Zimbabwe to protect infant industries and ensure rural development in the event of market disturbances by imports. Through the EPA, Zimbabwe can access funds for industry from the 11th European Development Fund (EDF)[88]. Zimbabwe last accessed the funds in 2002 and should be eligible in 2014 to apply for this funding. The country can access grants and loans, as well as a market of over Euro 120 billion annually[89].

Under the "New Look East Policy" Zimbabwe has signed an agreement on trade, investment, and technical cooperation with China. The agreement will no doubt stimulate increased trade and investment between the two countries not only in mining and agriculture but in manufacturing with special reference to the TC industry.

Demand for imported textile goods in Zimbabwe and in the region

Zimbabwe imports over US$100 million annually while South Africa imports over US$2 billion of textile and clothing items annually[90]. Clearly the markets are available. Zimbabwe has a crude live birth rate of 32 per 1000 population, and this implies that 512,000 new persons are added to the populace each year. If each baby requires 10 nappies, this implies a demand of 5,120,000 units valued at US$4 608 000 per year. If Zimbabwe's consumption per capita of clothing is 2 kg per annum, then there is a demand for 3 shirts and 3 trousers per capita: this equates to 48 million shirts and 48 million trousers annually. If both items are priced at $5.00 each, then the potential revenue is US$480 million a year to the clothing sector. The demand for fabric would thus be 48 million x 2 x 3 meters per shirt and trouser combination, or 288 million meters of fabric. If each meter is sold at $2.00, then the potential is an annual demand of USD $576 million.

Demand for textiles from local institutions

The government was a big customer for local textile goods between the period of UDI and 2009. Procurement policies in government shifted and allowed foreigners to supply basic fabrics and garments. The following is a table showing an estimated demand for local textile goods by government institutions.

Table 27: Government of Zimbabwe as a Market for Local Goods

Organization	Army	Police	Prisons	Hospital beds	Schools
Population	50,000	19,500	17,900	48,000	4,000,000
Demand (m) @ 4m each	200,000	78,000	71,600	192,000	16,000,000

Source: AFRICONSULT (2013)

[87] www.zimbabwesituation.com
[88] http://ec.europa.eu/europeaid.
[89] www.cbi.eu
[90] ZIMSTATS

It is clear there is a sizeable demand for fabric and uniforms from various Departments and arms of Government. To the extent that the civil service wears work uniforms ,it employs 30 000 workers, and this is the largest employer, and as such could form a substantial market for Zimbabwe's TC goods.

Demand for local goods arising from increased costs of production in China and Asia China is accused of manipulating its currency to support its export led growth. The currency is however gradually gaining in strength against major currencies. This presents an increase in production costs. After 2010, some European manufacturers and famous brands such as H&M, Reebok, and M&S[91] and some major US retailers are looking to source from SSA items such as towels, sheeting, t-shirts, polos, jeans and chinos. The interest in sourcing from SSA is due to rising costs of production in China, where wages have escalated by 200% in the past few years, and in some cases, wages are higher than those in SSA excluding RSA. The China Business Insight in its report on the "China Textile Industry (June 2013) reported that China is now looking to enter the high end of textile and clothing manufacture. This is owing to the rising costs of labour, the rising exchange rate, and a need to increase domestic consumption. China also cut its export rebates to encourage its producers to sell locally. If China succeeds in creating a high domestic demand for its own locally produced goods, then international importers will have a deficit in supply.

Political instability in Pakistan and Bangladesh is also seen as a threat to supplies of TC products. Costs are also seen to be rising in Vietnam[92]. Overall, African countries are have a great opportunity to supply TC products in the coming years. International buyers would prefer it if Africa could supply all its needs within the continent. Close proximity between fabric suppliers and garment makers is an added advantage, as it can take up to 45 days to source same from the East to African ports.

Demand and performance of the Region

Imports of fabrics from outside the region alleviate the shortages of fabrics in the region[93]. Fabric production is not significant in SADC. Fabrics are smuggled, dumped, and under-invoiced. The South African industry has domestic suppliers of fabrics but they are not price competitive. In South Africa, labour unions demand high wage increases annually and this is a threat to South African buyers. The response of the buyers has been to look to SADC for steady suppliers. South African firms mainly source their cotton fabrics from Lesotho, Swaziland and Mauritius. Zimbabwe is seen as an unstable supplier.

Mauritius has a significant fabric industry but most of what they produce is consumed locally. Lesotho has a single fabric plant for denim, yet it is Southern Africa's largest exporter to the USA[94]. Swaziland has a single knitting plant. There are no fabric producers in Botswana, Mozambique, Malawi, Namibia and Zambia.

The region has a shortage of woven wide width fabrics, especially shirting fabrics, thus forcing apparel manufacturers to look outside SADC for imports. The region fails to supply a variety of fabrics coupled to good pricing.

[91] Gherzi (2006)
[92] Overview of the textile and garment sector in Vietnam (Nov 2010)
[93] AFRICONSULT, 2013.
[94] Bennette M. December 2011, Southern Africa's Cotton, Textile & Apparel Sector, A Value Chain Analysis

Demand through high quality production

As supply surpassed demand, intense rivalry rapidly grew and power shifted from sellers to buyers. North American markets are the highest consumers of TC goods and therefore the buyers there dictate the supply terms and conditions. The American market demands high quality standards, and looks to cut costs by trading with reliable suppliers, it is imperative that shelf space in retail shops do not go empty owing to inefficient suppliers. North American buyers now demand a full package[95], i.e. export in duty land no longer in FOB, and garment suppliers are responsible for meeting tight delivery deadlines. Deliveries are usually due within 30 days after a purchasing order is confirmed. Therefore those regions that have efficient industries and where there is intense rivalry are preferred over scattered and unconsolidated regions.

Demand for local goods caused by high costs of sourcing from Asia

Sourcing from Asia needs payment upfront before delivery or a telegraphic transfer. In the absence of cash, then irrevocable letters of credit must be raised and taxes are paid prior to shipping. Although shipping capacity is abundant, target markets for Asian goods are 45 days away. Asian suppliers are generally specialised in a particular commodity and therefore demand high volume minimum order levels; this usually means that a large sum of money is out laid[96]. Small garment producers located in Africa will find it difficult to import inputs from Asia. In addition, the swings of currencies make it risky to depend on foreign inputs.

Demand at final consumption resulting from population growth

The world population is expected to grow from 7 billion to 11 billion over the next 50 years this is despite a declining growth rate[97]. Stabilization is expected in 2100. Over 50% of the world's population lives in China, India and Brazil, and the demand for textile goods is growing in these countries. Prices of goods from these regions will rise as demand and incomes continue to grow.

PORTER'S FACTOR CONDITIONS

Cost and productivity of labour

While the industry's major competitive advantage is that it has an abundance of labour that is well skilled and trained, the problem is that the country's costs of labour is high in relation to the competition. In Zimbabwe the least paid employee costs the firm US$194.00/month. Further, if electricity outages are factored in, the wage costs can double.

Botswana gives incentives towards wages for this particular sector, such that the lowest paid only costs the company US$70.00. In South Africa the wages are as follows: in[98] large cities - US$198, outside large cities - US$175, and in semi-rural areas $140 per month. In Swaziland wages are US$120, and in Lesotho wages are US$120 per month. Wages in China (Shanghai) were the most costly @ 1,620 yuan per month of all Chinese provinces[99]. In India[100], wages were US$1.81 per day, and considering a 20 day month, this brings wages to US$36.20 per month.

[95] Gherzi (2006)
[96] Interview with CEO, Waverley Blankets P/L, December 2013.
[97] www.wikipedia.org/wiki/population_growth
[98] www.texfed.co.za
[99] www.tradingeconomics.com
[100] Abraham V et al (2010) Labour cost and export behavior of firms in Indian textile and clothing industry

Trade unions in Zimbabwe were very strong (particularly in the 1990s) and enjoy significant support from the International Labour Organization (ILO). The result of having powerful trade unions was a high labour cost structure for the country. Meanwhile in Asia, especially China, there are no labour unions in the way they are known here. Wages remained low during the development phase of the TC industry in China.
Another comparative disadvantage for Zimbabwe's TC industry relates to labour productivity. The comparison of labour productivity by value added per worker in four countries in the textile and clothing industry says it all. Zimbabwe has a lopsided wage structure where waged employees have relatively high wages, but management has relatively low wages.

Value added per worker[101]:

- Zambia US$1 773
- India US$15 238
- ChinA US$14 118
- Zimbabwe US$2 250

The emerging competitive scenario
As the world's economies continue to struggle, competitive pressures acting in the TC sector will intensify. This will lower barriers to entry and encourage international diversity of firms as companies fight for market share. More and more firms will use technology to compete. The low cost countries have dominated the low priced goods supplies: The rest of the world with higher cost structures have to compete for niche or middle to high end markets. Companies will have to select strategies that clearly target global, regional, or local markets. Innovation will be the key driver of competitiveness.

The major competitive advantages that Zimbabwe has over other textile manufacturing countries
Proximity to the industry's primary raw material, namely cotton, is the major competitive advantage that Zimbabwe has over other textile manufacturing countries. Zimbabwe has a climatic comparative advantage to grow cotton. In addition, it has skilled labour and a literate population, although there has also been loss of skill through emigration.

Reviving the Textile Industry
The textile industry needs to recapitalize and restructure to achieve the following:

a. Plant and machinery upgrades. As a high volume, low margin business equipment with technology upgrade is necessary to raise production capacity in order to reduce production costs. Costs of energy and employment can then be amortized besides an improvement in product quality, production efficiencies and competitiveness. Approximately US$200 million will be required as medium to long term loans for the TC industry recapitalization. Of the total amount US$50 million will be required as seed capital for the Trust Fund for cotton growing and a similar amount of US$50 million for textile plant upgrades.

[101] USTIC, 2009:3 - 11

b. Remodelling of chain link operations. Presently, farmers and ginners are grouped together separately from textilers and garment manufacturers who form a different group. Because of the structure of the present C2C valuechain links, all textile operations begin at the spinning or yarn production stage. Experience has shown that the current system does not provide optimum benefits to the links in the chain. The set up disadvantages the textile firmsvery much. The chain linkages should permit textile operations to start at the ginning stage to benefit from local cotton supplied directly from farmers at competitive prices while still paying farmers viable producer prices. SinoZim Cotton Holdings P/L has already proved this model to be workable and advantageous to both the textile firm and the farmer. SinoZim's locally produced yarn competes favourably against imports in terms of price and quality. The firm's textile products have managed to penetrate regional andmarkets in the Far East.

c. Other successful value chains at the regional and global levels have established vibrant retail and design chain links at the upper end of the chains, something which is desirable for the Zimbabwean C2C value chain.

Financial resources could be pooled together before being extended to individual textile firms to fund cotton growing if it is found inappropriate for Agribank to manage the Trust Fund. This has been discussed in the section on funding of credit input schemes for small holder farmers.

Table 28: Current Cotton Cost Fact File

	COMPANY TARGET	COMPANY TARGET	NATIONAL TARGET
Target fabric metres per month	500,000 mtrs	1,000,000 mtrs	4,000,000 mtrs
Target fabric metres annually	6,000,000 mtrs	12,000,000 mtrs	48,000,000 mtrs
Annual cotton lint requirement	2,520,000 kgs	5,040,000 kgs	20,160,000 kgs
Annual seed cotton requirement	6,300,000 kgs	12,600,000 kgs	50,400,000 kgs
Hectarage	3,706 ha	7,412 ha	29,647 ha
Ave cost per Ha	500.00 US$	500.00 US$	500.00 US$
Target yield per Ha	1,700 kgs	1,700 kgs	1,700 kgs
Total Field input cost	1,852,941.00 US$	3,705,882 US$	14,823,529 US$
Ave field cost per kg seed cotton	0.29 US$	0.29 US$	0.29 US$
Seed cotton buying price per kg	0.30 US$	0.30 US$	0.30 US$
Seed cotton buying budget	1,890,000 US$	3,780,000 US$	15,120,000 US$
Ginning equipment capex	250,000 US$	400,000 US$	1,800,000 US$
Admin cost	250,000 US$	300,000 US$	600,000 US$
Ginning cost	315,000 US$	630,000 US$	2,520,000 US$
Ginning Cotton seed output	3,150,000 kgs	6,300,000 kgs	25,200,000 kgs
Ginning Cotton seed price per kg	0.25 US$	0.25 US$	0.25 US$
Ginning cotton seed sales	787,500 US$	1,575,000 US$	6,300,000 US$
Sub cotton lint total cost	2,455,000 US$	4,710,000 US$	18,240,000 US$
Total lint cost Less cotton seed sales	1,667,500 US$	3,135,000 US$	11,940,000 US$
Net Cotton lint cost per kg	0.66 US$	0.62 US$	0.59 US$

Source: Zimbabwe Textiles Manufacturers Association, 2013

The two tables, Tables 28 and 29, on the current and proposed cost structure of the cotton to textile links respectively bring out some interesting policy positions for Government. In both tables, ZITMA attempts to show the organic link between cotton farmers and the textile industry. There is need to rationalize the prices of cotton to the farmer and the price of lint to the spinners and weavers. In the "Current" Table28, ZITMA argues that the two sets of prices are not related to the costs of ginning by the ginners. Ginners were paying the gazetted price of US$0.30c/kg for seed cotton to the farmer and selling lint at US$1.90/kg to the spinners with the net cotton lint cost per kg being between US$0.60c/kg and US$0.66c/kg. The ginning costs were estimated in both tables at US$0.25c/kg. ZITMA considered the cotton producer price to be unviable as it acted as a disincentive to farmers to remain in production. On the other hand, the lint price did not enable the textilers to be competitive on fabrics sold domestically or on the export markets.

Table 29: Proposed Cotton Cost Fact File

	COMPANY TARGET		COMPANY TARGET		NATIONAL TARGET	
Target fabric metres per month	500,000	mtrs	1,000,000	mtrs	4,000,000	mtrs
Target fabric metres annually	6,000,000	mtrs	12,000,000	mtrs	48,000,000	mtrs
Annual cotton lint requirement	2,520,000	kgs	5,040,000	kgs	20,160,000	kgs
Annual seed cotton requirement	6,300,000	kgs	12,600,000	kgs	50,400,000	kgs
Hectarage	3,706	ha	7,412	ha	29,647	ha
Ave cost per Ha	500	US$	500	US$	500	US$
Target yield per Ha	1,700	kgs	1,700	kgs	1,700	kgs
Total Field input cost	1,852,941	US$	3,705,882	US$	14,823,529	US$
Ave field cost per kg seed cotton	0.29	US$	0.29	US$	0.29	US$
Seed cotton buying price per kg	0.45	US$	0.45	US$	0.45	US$
Seed cotton buying budget	2,835,000	US$	5,670,000	US$	22,680,000	US$
Ginning equipment capex	250,000	US$	400,000	US$	1,800,000	US$
Admin cost	250,000	US$	300,000	US$	600,000	US$
Ginning cost	315,000	US$	630,000	US$	2,520,000	US$
Ginning Cotton seed output	3,150,000	kgs	6,300,000	kgs	25,200,000	kgs
Ginning Cotton seed price per kg	0.25	US$	0.25	US$	0.25	US$
Ginning cotton seed sales	787,500	US$	1,575,000	US$	6,300,000	US$
Sub cotton lint total cost	3,400,000	US$	6,600,000	US$	25,800,000	US$
Total lint cost Less cotton seed sales	2,612,500	US$	5,025,000	US$	19,500,000	US$
Net Cotton lint cost per kg	1.04	US$	1.00	US$	0.97	US$

COTTON LINT PRICE COMPARISON

Highest 3 year lint price per kg - 2011	3.40	US$
Lowest 3 year lint price per kg - 2009/10	1.50	US$
Current lint price per kg at November 2013	1.90	US$

Source: Zimbabwe Textiles Manufacturers Association, 2013

In the "Proposed" Table 29, ZITMA offers a producer price to the farmer of US$0.45c/kg coming out of the cross subsidization from the value of cotton seed by-products. The net cotton lint cost per kg goes up in sympathy to be between US$1.00/kg and US$1.04/kg. The market would dictate that when producer prices increase, lint prices would also increase in sympathy. But this is not what the spinners would like to happen during the period of revival of the textile industry. During such a transition, stable and relatively low lint prices would be what the spinners and weavers need, but of course without driving the

farmers out of business. The spinners now want to have direct access to cotton from the farmers at correct prices. ZITMA talks about remodelling of the textile industry's operations along similar lines to those of SinoZim for the industry to achieve competitiveness. By so doing, the textile industry would access reasonably priced good quality cotton by paying the farmers a viable price while containing ginning costs.

FINDINGS AND THE WAY FORWARD TEXTILES

In order for the textile industry to recapitalise the following points were said to be important:
A long term strategy on the entire C2C sector is needed first and foremost. Both India[102] and China had very clear strategies for developing their C2C sectors. There is a need for clear goals for the sector: for example, if Zimbabwe can declare short, medium and long term goals for the sector. It can declare that by the end of 2015, spinning capacity should have doubled, and in two years time, spinning capacity should have quadrupled. In five years time, spinning capacity must be at 25,000 tons a year. In ten years time, spinning should consume 75 % of the lint ginned in Zimbabwe. In 15 years time, Zimbabwe should have a spinning capacity greater than 300, 000 tons a year and turn over of $450 million a year.

There is a dire need for the creation of an enabling business environment to prevail in Zimbabwe. Investors will always follow where there is potential for profit and where risks are predictable. Zimbabwe needs to complete its chapter on Indigenization once and for all. Local investors are waiting on the sidelines shortly after the uncertainty brought on by the general elections. Locals have enough capital to re-ignite the economy, but they are holding back as the country is perceived to be hostile to investment.

The country should create competitive advantages through legislation. The WTO's instruments are available to protect infant industries. These are important tools at the disposal of member countries. The rest of the world is subsidising its infant industries in one way or another. Zimbabwe has the capacity to produce middle to high end 100% cotton yarns and twines. However twines from Pakistan are landing in Zimbabwe as finished goods and are priced at below local production costs. If the Zimbabwean government does not have capacity to offer financial subsidies then a level playing field should be created by ensuring that dumping, smuggling, trans shipment and other mal-practices are halted. Legislation can be used to reduce production costs to local firms for example by the removal of duties and taxes levied on spares and chemicals. Stocking spares in the country introduces costs associated with holding spares. Duty on spares, makes them more expensive to the end user.

It is important there to be uninterrupted electricity supplies to the sector, and the electricity should be cheap. It is important for Zimbabweans to re-align themselves to realistic labour costs. Government can legislate and ensure wages are a function of productivity. Lobbyists promoting single stage transformation have raised alarm that the cost of recapitalisation in the textile sector is

[102] www.thehindubusinessline.com (July 25 2013)

high and requires millions of dollars. If the business environment is conducive for good business then the cost of recapitalisation is not a factor. A well equipped industry minimises wasted energy and resources and therefore enables least cost production. If the sector invests in new capital, then jobs are created and the economy will be jump started. A snap survey showed approximately US$200[103] million will be required as medium to long term loans for the TC industry recapitalization.

Cotton is the cornerstone of the textile and clothing industry in Zimbabwe. It is most imperative for the spinning industry to be supplied with cheap cotton lint. The benefits can be passed upstream to fabric formation and then garment producers. For most well run spinning businesses, cotton constitutes over 65% of all costs. A small benefit in terms of price will go a long way in ensuring pricing of yarn and fabrics are competitive.

During the research of this subject, it was established that there was a competitive advantage created when a textile business was integrated with a ginning plant. The same spinning business benefited from procuring cotton lint at cost. In addition, the spinning business did not have to incur transport costs for the delivery of the lint as the lint was ginned on the same premises housing the spinning.

Transportation was found to be expensive in Zimbabwe. The cost of moving consignments across borders and to overseas markets was slow and expensive. It is safe to say inspections at the border of goods leaving the country were fairly thorough. However it was also observed that goods entering the country were not always inspected as thoroughly and hence smuggling was rife as duties were not paid for non-originating imports into Zimbabwe. As a consequence Zimra had initiated some post clearance inspections but these seem to have been abandoned for some unknown reasons.

Textile manufacturers insisted that the cost of labour in Zimbabwe is high, and that the labor laws are archaic. It was difficult to discipline workers and as a result management of workers is difficult. Most manufacturers suggested that productivity based remuneration for workers would stimulate productivity in the industry and increase competitiveness.

Sampling of cotton and cotton spun yarns to customers in the region and abroad is a long and arduous process. There are phytosanitary regulations that need to be observed before a permit is issued. In addition, samples for export must be registered under a certificate of declaration 1 (CD1) form. In this day and age where speed of delivery is a competitive advantage, there is need to reduce the processes involved in sampling.

Data recording the trading within the C2C sector is difficult to obtain. In many cases the institutions that should have this data do not have up to date information. ZITMA should have a website showing its members and the products produced by each firm.

[103] ZITMA (2010)

SECTORAL MARKETING INITIATIVES (SMIS), GROWTH STRATEGIES AND NICHING

The textile industry needs to embark on a 'cause marketing initiative' to highlight the challenges it is facing, contributions it has made before in the country and is capable of making in the future, the sectoral impact and linkages. The ultimate goal is to create and sustain a 'nationalistic/ patriotic brand preference' for the Zimbabwean textile and clothing sector's range. A strong industry emphasis on 'Buy Zimbabwe' and 'Made in Zimbabwe' initiative must be implemented and capacitated with relevant, skilled and qualified marketing personnel.

It has been said that industries and companies could grow on two dimensions, namely the product and market dimensions. The industry identified shrinking markets as one of the causes of industrial decline, as such, market expansion is critical in this sector. Market expansion will be achieved through aggressively opening up of lost export markets and linkages with regional and global value chains and penetration of existing domestic markets through Government local contents thresholds.

The sector needs to identify niches that it will satisfy that are offering growth opportunities like industrial and medical textiles. Companies in workwear, protective and children's clothing have carved a niche and have done better in the clothing sector. These niches will move the sector away from commodity type segments that are being saturated by the Asian textiles.

The industry will have to do research and development into new products and designs. Textile design schools need to capacitate industry with new skills and research. Areas of research should include designs, processing (dyes and chemicals), alternative technologies and benchmarking. The country needs to create incremental value chain platforms through brand and design development through Original Brand Manufacturing (OBM) and Original Design Manufacturing (ODM) and link up and market these in the region through regional retailers like Jet.

There is need to develop technical and artisan skills that will remove Zimbabwe from its net importer of dyes, chemicals and spare parts status to a self-sustaining and even net exporting status to other regional firms doted around SADC and COMESA.

SUMMARY

The driving forces in global trade in TC goods

C2C business and trade environments have been shaped by a number of activities that were sparked off by the emergence of international trade agreements such as the MFA. As demand for goods rose, technology rapidly developed and created an oversupply. Governments have entered the game to defend their domestic industries. They developed strategies within the WTO's regulatory role to deal with the competitive forces of oversupply and globalization.

Zimbabwe and its neighbors are in a great position to take advantage of the rising production costs in Asia and become the new least cost suppliers to the global village.
The availability of cheap abundant cotton lint supplies is the single most important success factor for the revival of the C2C sector. There is a need to revise the supply and purchasing system of cotton lint between ginners and spinning companies in Zimbabwe. High capacity utilization decreases costs and so a strategy to achieve economies of scale is needed in order to increase competitiveness of the textile sector.

Ginneries should be motivated to sell locally (as in India) and textile firms should be incentivized to increase productivity.

Both local and foreign investors are concerned with the unfinished indigenization policy discouraging new FDI coming into the country. Local investors are also marking time waiting in the wings to appreciate how Government will execute the policy in practice. Once clarified, it is important to ensure the investing public is made aware of the terms and conditions of the policy.
Electrical power supply is erratic and overpriced in Zimbabwe. This increases production costs in manufacturing. Operators in the textile sector should be allowed to purchase power at cost from the utility.
Rules of Origin are an unsettled matter in Zimbabwe. Currently the country adopted two trade protocols with conflicting rules of origin. It is questionable if Zimbabwe is managing both protocols efficiently.

The cost of transporting goods in and around Zimbabwe is expensive. If the rail system was to be re-capacitated, and if it were to operate efficiently, then road prices would fall as rail is cheaper in general than road.

Labor laws in Zimbabwe are detrimental to worker productivity. Zimbabwe scored low when value added per worker in the textile sector was found to be 1/7th of that in China and Asia.

It is difficult to find up to date data on the textile sector in Zimbabwe. This makes it difficult to design policies to enhance the sector.

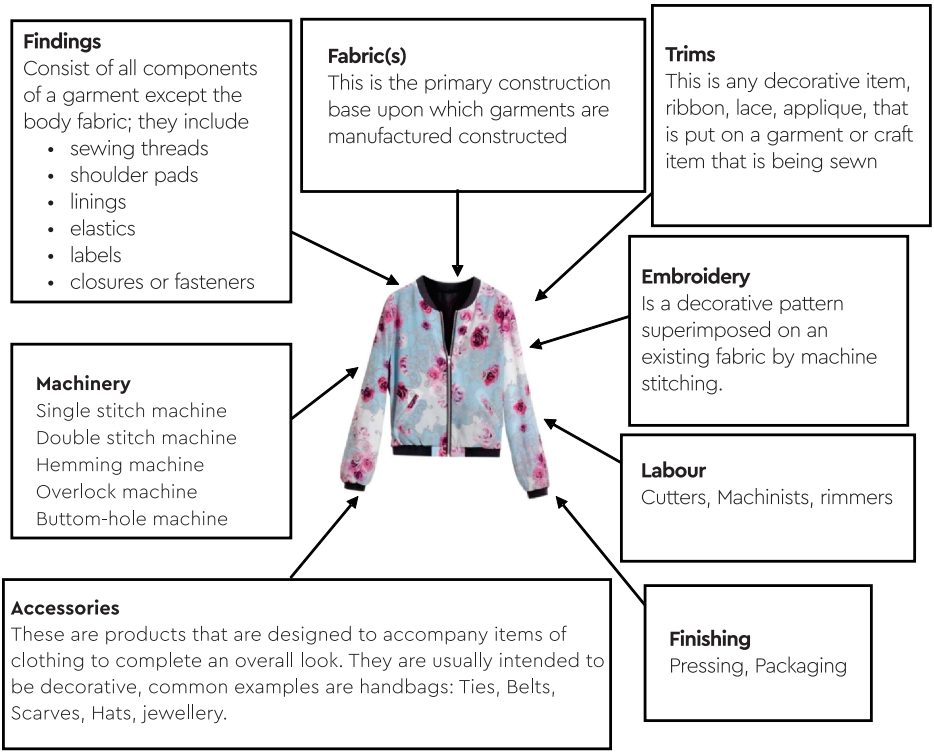
THE CLOTHING / APPAREL INDUSTRY

The clothing / apparel sub-sector constitutes the last industrial manufacturing stage of the cotton to clothing value chain. Nkala (2012) defines the clothing / apparel materials as articles that are worn to cover the body. They can be referred to as apparel, attire, clothes, dress and garments. Nkala identifies the range of products that are manufactured by the clothing industry as falling in the following categories:

- men's outerwear - consisting of shirts (casual and dress), trousers (casual and styled), jeans, jackets (casual and formal) , and suits
- ladies' outerwear – consisting of dresses, blouses, trousers, jeans, suits, and skirts

- children's wear - girls and boys full range (casual, formal, jeans)
- sports / leisurewear tracksuits, t-shirts, sweat shirts
- protective clothing – consisting mainly of overalls, work suits and dust coats.

Figure 18: Inputs Involved in the Construction of a Garment/Apparel Accessories



Source: Moyo A, B.Textile Technology Honours, National University of Science and Technology.

These are products that are designed to accompany items of clothing to complete an overall look. They are usually intended to be decorative, common examples are handbags: ties, belts, scarves, hats, jewellery.

Cluster industries spawned by a clothing factory

What is of note in Figure 20 is that garment manufacturing requires first and foremost supply of fabric, which the local textile factories are able to supply and have supplied in the past. In addition there have got to be suppliers of working technology, in the form of machinery, presenting an opportunity to manufacturers of machinery to equip both the local clothing manufacturing factories and those of the region, to start off with, and in future export to the wider world. The smaller enterprises run by artists have a market for their embroidery services in the garment assembly factory. SMEs and artists operate in tandem with the garment assem-

blers on the accessory provision side. The findings could either be furnished by an independent or horizontally linked organization of the cluster.

As is generally acknowledged, the clothing industrial sub-sector is both labour intensive, high intensity competition arena and last but not least a low entry barrier industry. It is among the foremost employers of both unskilled and semi-skilled labour in the industrial setting.

Clothing sub-sector industry density and employment in the sub-sector

As stated above, the clothing industrial sub-sector is both labour intensive, high intensity competition business and a low entry barrier industry. It is among the foremost employers of both unskilled and semi-skilled labour in the industrial setting.

According to the Zimbabwe Clothing Manufactures Association (2011), 2000 there were 495 clothing firms in the sub-sector which employed 20 000 people. By 2008, a total of approximately 111 firms in the sub-sector had shut down, representing a 44 percent shrinkage; with employment having declined to 12 000. In January 2011 the number of firms in the sub-sector had dropped to 296 and the number in employment was 9 000 (Zimbabwe Clothing Manufacturers Association 2011, Mpofu)[104]. ZCMA also reported that employment in the sub-sector had started to increase and was at approximately 6 000 in 2013 having fallen below that figure at some point.

Table 30: Number of Firms and Employment in the Clothing Industry

Year	Number of Companies	Number of employees
2000	495	20 000
2008	395	12 000
2011	296	9 000

Courtesy of Tongesai Mpofu[105]

The Chairman of the Zimbabwe Manufacturers Association, Jeremy Youmans, was interviewed by the Sunday Mail in 2011where he made the following observations:

- The textile sector is not just focused on the value addition of cotton and supply of raw materials to the clothing industry.
- Many other goods are manufactured within the textile industry, for example, cotton wool, blankets, elastics and tapes, twine and cords.
- The clothing industry manufactures many different items of clothing from many different types of fabrics.
- It is possible for the textile industry to operate without integrating with the clothing industry and vice versa.
- The maximum value addition is achieved when the chain is fully utilized.
- Zimbabwe is one of the few countries that have the capacity to produce at all levels of the chain, and historically it did so to the highest standards of quality.
- While the textile industry is being recapitalized and redeveloped, the clothing industry is able to operate by importing its raw materials from other countries.

[104] Mpofu T 2013. IOSR, Journal of Business Management (IOSR-JBM). Vol. 13 (5) pp 83-84.
[105] ibid

- Most economic models have followed this sequence, for instance, that the clothing industry develops into a competitive sector, creating a constant and regular demand for raw materials and supply companies develop to meet this demand, particularly textiles. Examples are Mauritius, Lesotho, Swaziland, Bangladesh and even China followed this model.
- At its peak the clothing industry employed 35 000 people. By February 2009, the number had fallen to about 13 500 in about 225 companies.
- In August 2010 there were 12 506 employed in 195 companies. As of August 2011 there had been a further deterioration, 8 627 employed in 131 companies.
- The arbitral pay award of October 2010, whereby the minimum wage was increased by 34%, backdated 6 months to 1st April 2010 contributed directly to some 64 companies opting to close down, throwing 3 879 out of work.

Youmans, in the interview, partially captured above, provides some useful insights, in respect of the cotton chain whose fortunes have suffered significantly in recent years. He argues that the clothing sub-sector could be developed and made competitive in the market place independently of the textile sub-sector in Zimbabwe. A developed and viable clothing sub-sector could then, in Youmans' view, be the source of demand for textile products and by so doing stimulate investment in the textile sub-sector of the cotton to clothing value chain.

Status of the Clothing Industry in the major cities of Bulawayo and Harare
According to the National Employment Council for the Clothing Industry - Matabeleland Region, there were as of December 31st, 2013 thirty four (34) operational clothing companies around the City of Bulawayo employing 2 378 people.

Established clothing retail shops located in the central business district of Bulawayo include, *inter alia*, the following: Edgars Stores, Jet, Truworths, Topics, Meikles, Pep, Number 1 Stores TAFZ, Mzansi 4 Sure.
Harare based clothing firms are in the directory contained in the magazine of the Zimbabwe Clothing Manufacturers Association, Stitch, covering the period August - October, 2013. See Appendix 2 which lists the clothing manufacturing firms in Harare in 2013.

The Clothing Industry vis-a-vis the Small - to – Medium Enterprise (SME) Sector in Zimbabwe
The Ministry of Small - to – Medium Enterprises determines the ranking of a business or enterprise by reference to three considerations, namely employment levels; annual turnover and asset values.
The Ministry ranks an enterprise that employs no more than five people, has an annual turnover of less than $50 000, and has a maximum gross value of assets (excluding immovable assets) of not more than $50 000, to be a micro-enterprise.

The magazine *Stitch*, to a large extent, has information about the clothing firms that are based in Harare. Unfortunately, there is no employment numbers provided. However, judging by the reputation of those firms, they can be presumed to

qualify to be rated as SMEs in the majority of cases. Paramount Garments should possibly be categorized as a large enterprise.

Among the Bulawayo firms, there is a serious manifestation of de-industrialization. Among the firms that were surveyed, there are presently up to 7 firms out of 34 that qualify to be classified as micro-enterprises, on account of their current (2014) employment numbers, which are five or below. Officials of the Zimbabwe Clothing Manufacturers Association (ZCMA) assert that the seven firms in question actually came from a background of qualifying to be ranked as SMEs.

Many retrenchees from the Clothing firms that wound down operations took their skills to the micro-enterprise employment segment. The micro-enterprises constitute the informal sector of the economy, and there is no mechanism to regulate it. Upon being interviewed, many would tell you that they would not want to get employed again and thus to become part of the formal sector. A small number of the micro-enterprises were found to be thriving, and the workers there have a full job of work to do and they are happy to the extent that they are not regulated and they do not pay taxes. Over time, a substantial number of them, the micro-enterprises, have grown in size, and are able to employ more than 5 people, but then there does not appear to be any mechanism to upgrade them into the formal sector. Therefore, the biggest loser from de-industrialization could be the state, more than some individuals concerned. The scenario described in this paragraph would tend to apply in the case of those individuals that are better endowed with some tangible amount of resources, backed up by a level of specialized skill and experience.

The foregoing scenario does not however, minimize the consequences of deindustrialisation on the livelihoods of a vast majority of the population, particularly in the cities and urban centres where previously the T&C industries used to thrive. The city of Bulawayo, and the smaller towns of Kadoma and Chegutu used to be home to most of the T&C factories in Zimbabwe. Today these centres manifest very high rates of poverty and lack of opportunities for men, women and the youth.

In the interest of revenue collection for Government, and in the interest of promoting employment opportunities for the population, one would recommend that Government, perhaps acting in partnership with the banking sector, academic institutions and some donors, should devise a scheme of incentives to motivate some of the micro-enterprises to aspire to graduate into SMEs.

Zimbabwe's unemployment levels are variously estimated in the ranges of 80 to 85%, a situation that, without doubt, does not augur well for the social stability of the country. The Finscope survey on SMEs in Zimbabwe in 2013 found that there are 5.7 million people working in what, according to the researchers under Finscope, are the SME sector. Of the 5.7 million, Finscope found that 2.8 million are business owners. Of these businesses, 85% are not registered and therefore they are operating in the informal sector. The overall situation analysis indicates that

there is a great deal that needs to be doto facilitate the development of SMEs including the numerous informal business operators.

A significant segment, in numerical terms, according to the same Finscope Survey, is in manufacturing dominated by clothing and woodwork. It was found that about 500 000 people are occupied in the latter two areas of business operation. By mere observation, there are not that many carpenters around the country, therefore it is reasonable to estimate that more than 80 per cent of the actors are in clothing manufacturing. There are linkage opportunities that extend beyond the borders of Zimbabwe, especially given the fact that there exists in Zimbabwe the tradition and the industrial infrastructure, albeit obsolete for now, for production of cotton fabrics that can be used as raw materials for manufacture of niche TC products for export.

Clustering initiatives and facilitation by business development support institutions (BDSs so-called) and individuals have been initiated in the past and abandoned particularly where they had been conceived in the context of donor funding.

A UNIDO clustering initiative was piloted under the Ministry of Small and Medium Enterprises, in which a successor programme was initiated in 2003 but failed to start because the donors developed fatigue mid-way. Yet the project did not need much finance as such, since the centre piece was that the beneficiaries would pay for services of trainers in financial management, quality upgrade assistance, linkage promotions and other BDS providers. This would have been a win-win situation, with the SMES of all gradations and types benefiting by contracting out some of their needs - such as book keeping services, upgrading the quality of products through training by institutions already dedicated to that, such as technical colleges. Therefore the project would have been affordable for all concerned. Even those not able to leave their survival jobs could have been assisted *in situ.*

There are other important initiatives by Government that have a strong potential to jump-start more meaningful assistance for the SMES, such as adequate capitalization of development finance institutions such as SEDCO. This need not call upon the fiscus to find the money alone. What used to be called Zimbabwe Development Bank, for example, was capitalized through allowing private sector participation, which remained below 50%. Parliament approved a similar approach for the Small Enterprise Development Corporation (SEDCO) in the late 1990s, but for some reason that decision remained unimplemented. Currently SEDCO relies on private sector organisations for resources that it then on-lends at interest rates that turn out to be too high for the SMMEs.

Initiatives of support to SMEs, if promoted through or in partnership with, the local private sector, especially through the business associations and well established organizations such as Empretec and perhaps accountancy firms, should still be able to attract donor funding.
The issues of SMES and support for them, including support for those in the C2C value chain are a major area that could require special attention on its own.

Table 31: Summary of Findings from Questionnaires

Thematic area	Findings
1. Sources of material inputs	The major suppliers of fabrics, lining and trims used by local manufacturers of fashion clothing are foreign. This is as a result of: a. Poor quality of locally manufactured fabrics - 'Weak yarn' and 'bleeding of colour' in dyed fabrics and dyed yarn were the most cited complaints. b. Lack of technical / technological capacity by local fabric manufacturers to develop new fabric types in line with evolving market trends and preferences. c. High cost of locally produced fabrics. A case in point is with the Hartel fabric. This fabric costs between US$3.50/m and US$4.00/m from local fabric manufacturers. The same fabric costs US$1.75/m in China (FOB) and has a landed cost of US$2.04/m. Imports are generally associated with longer lead times. For instance, a company will typically take 1- 2 weeks of collaborative design of a new fabric with a foreign based manufacturer, 1-2 weeks production lead time for the fabrics ordered, 6-8 weeks lead time for shipping the fabrics to Durban and 12 weeks for moving the fabric note: by road , from Durban to Bulawayo. This adds up to a procurement lead time of between 9 - 14 weeks. This importation of finished yarn and fabric also precludes Zimbabwe from exploiting opportunities presented by the SADC FTA trade protocol, as it requires the double transformation process for qualification.
2. Power Infrastructure	a. While the electricity situation had improved (2012 - 2013), power outages were still significant, with some respondents stating that an estimated equivalent of 5 full working days' production had been lost in 2013. b. Power surges and unbalanced phases of power - supply have been reported to cause failure of machine components, especially with motors.
3. Rail Infrastructure	a. While rail transportation is cheaper than road, it is unreliable and is characterised by long cycle times. For instance, transporting a container of fabric from Durban or Beira to Bulawayo by rail takes up to two months. This does not compare favourably to the road transport alternative that only takes up to two weeks. For this reason, the more expensive road transport alternative is used, resulting in higher landed costs of imported fabric.
4. State of Machinery	a. Most of the Machinery that companies have is old. Few companies are able to acquire new machinery. Several clothing companies have had to make do with purchasing machinery from closed clothing companies. Efficiency levels are low, leading to long task completion times and low productivity. Investment in automated machinery with higher efficiencies is necessary. Modern stitching machines consumed 50% less electricity compared to the older machines currently in use. b. Spare parts are not readily available because the machinery is no longer being supported by its manufacturers. This has resulted in the practice of 'cannibalising' one's own machinery i.e. breaking a single unit of machinery to obtain spare parts for the rest.

Thematic area	Findings
5. Competitive advantage of imported products.	a. Lower prices were the strongest source of competitive advantage in imported fabric, ahead of product quality and differentiation.
6. Government support requested by clothing manufacturers.	a. Renewal of Statutory Instrument (SI) 15/2013 for the next 5 years. b. Revision of SI 15/2013 eligibility criteria and several other requirements in order to include all clothing manufacturers that were previously not eligible. Third Schedule (Section 2) of SI 15/2013 listed only 12 beneficiary companies out of a total of 105 companies that are on the records of the NEC for the clothing industry. c. Award of export incentives through Income Tax rebates
7. Trade protocols	a. Request concessions from SACU regarding the double transformation requirements of the SADC - FTA Trade protocol. SACU has previously granted such concession to countries such as Malawi, Mozambique, Tanzania and Zambia. Only a one stage of transformation was required for five years. Zimbabwe needs to request the same concession. b. Reduction of qualification thresholds for certificate of origin
8. Value Addition Factor	A weighted average Value Addition Factor (VAF) of 3.43 was calculated from the results of the survey. VAF refers to the magnitude by which value increases as a result of transforming fabric to garments; and is expressed as a multiple of the fabric value.
9. Cost drivers	• Cost of fabric: 40% • Cost of findings trims 13% • Employment costs: 32% • Overheads: 15% Fabrics and wages/salaries are the biggest cost drivers. This is why garment manufacturers are very sensitive to the price fabric and NEC minimum wages.
9. Industry Skills	The clothing industry employs skilled, semi-skilled and unskilled labour. Skilled labour accounts for about 20% of the workforce while Semi-skilled and unskilled employees each account for 40%. It emerged that several clothing companies no longer train machinists because of the abundance of this skill in the market. About 30,000 workers were laid off in the clothing industry between 2002 and 2013. Companies who need machinists simply need to put up a notice to that effect and will be assured of an overwhelming turnout of aspiring employees by start of the next business day. Skills shortages were reported for sewing machine mechanics and time and motion study experts.

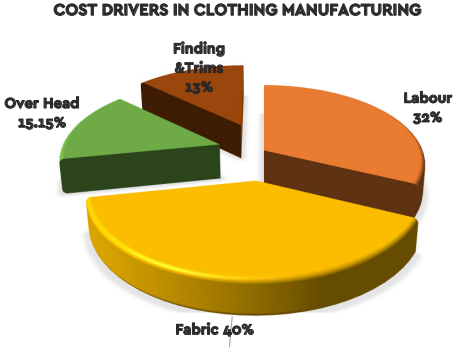
Commentary on findings with respect to the cost drivers for the clothing manufacturing sub-sector

Cost of fabric

Firm-level data obtained by AFRICONSULT, indicated in the table above, (Table 31) showed that the cost of fabric is the number one cost driver for the clothing

sub-sector. It was rated at around 50% for South Africa in the study conducted by Anmol Chaddha et al[106]. Virtually all the industrialists running the clothing industry were categorical in saying that they have come to rely entirely on imported fabric in order to reduce the contribution of fabrics to the total cost. For instance, the Hartel fabric costs between US$3.50/m and US$4.00/m from local fabric manufacturers. The same fabric costs US$1.75/m FOB China and has a landed cost of US$2.04/m. By importing fabric, clothing manufacturing firms are able to achieve an almost 50% reduction in the cost of their single largest cost driver. The landed cost of fabric has the biggest impact on the cost structure of running a clothing factory in Zimbabwe, the average ratio from this study was 40%, refer to Table 31 above and the pie chart below.

Figure 19: composition of cost garment construction drivers, refer to thematic 9 of table 30.



Remediation measures proposed on the quality of fabric front

While it is accepted that the textile–to-clothing value chain has suffered total disintegration, in other words, the vertical integration of the industry of the pre-ESAP period has been lost, there is considerable scope for horizontal integration between the clothing sub-sector and the textile sub-sector. The clothing sub-sector should seek to convince the remaining members of the textile sub-sector that it is in their best interest to improve on the quality of their fabric so as to be in a position to capture the local market. The local textilers can improve their quality by importing polyester materials to mix with their cotton fibre and by upgrading technology at their plants. Above all, management in Zimbabwe firms across the board ought to adopt and entrench such systems like Total Quality Management (TQM), Quality Circles, etc. in order to promote the culture of quality in production and service delivery.

Cost of labour

The second cost driver turned out to be the cost of labour, which in this survey averaged at 32 per cent. The latter compares very unfavourably with the competition presented at the market place by countries of the Far East, where the labour standards are relatively poorer. In recent years, there have been calls by representative business associations in Zimbabwe, notably the Confederation of Zimbabwe Industries (CZI) and the Zimbabwe National Chamber of Commerce

[106] Anmol Chaddha, Qahir Dhanani, Ryutaro Murotani, Fode Ndiaye, Ruth Kamukama: Textiles & Apparel Cluster in South Africa(20090 pp.20

(ZNCC) for Government to review the Labour Act with the view to making it more responsive to the times and more flexible. Another problem, which contributes towards the high labour costs in the country is simply that the cost of living structure in Zimbabwe is higher than that which is found in many countries that are in the less developed country category – like Zimbabwe is - as determined by the size of GDP per capita. The high cost of living renders it arguable for workers to demand high wages, which then leaves the country in an uncompetitive business situation.

Zim clothing firms no longer eligible for cut make and trim (CTM) contracts
Zimbabwean clothing manufacturers, for example Carousels in Bulawayo, Archer Clothing, also of Bulawayo, and a few others, used to be sub-contracted by some big South African clothing firms, like Mr Price, to undertake CTM jobs. The high cost structure, particularly the labour rates, of Zimbabwean firms after the onset of the multi-currency regime, has managed to shut the door to those previous arrangements.
The foregoing themes and findings reinforce findings of a competitiveness study by the Competition and Tariff Commission in 2003, ten years ago. The findings and recommendations of that study were very sympathetic to the concerns of the sector and some have been implemented in support of industry.

On import duty tariffs the conclusion was that lowering import duty on inputs into clothing manufacturing products not manufactured locally would have a positive effect on production costs thus increasing competiveness.

On the perennial theme of protection, the conclusion had been that there was high protection in the sector at 60% plus a specific duty of $100 per kg. The overprotection encouraged enjoyment of the local market and lack of initiatives to promote international competitiveness.

It was observed that there was a big opportunity to develop strong regional textile and clothing industries through the SADC and COMESA Free Trade Area. Zimbabwean made apparel has established markets in the United States and Europe, especially German and Austria. The products enjoy duty free access in Comesa.

A recommendation on import tariffs was that duty be removed on machinery and spare parts and a tariff phase down program for finished articles of apparel be drawn up to enable apparel manufacturers to gear up for international competition.

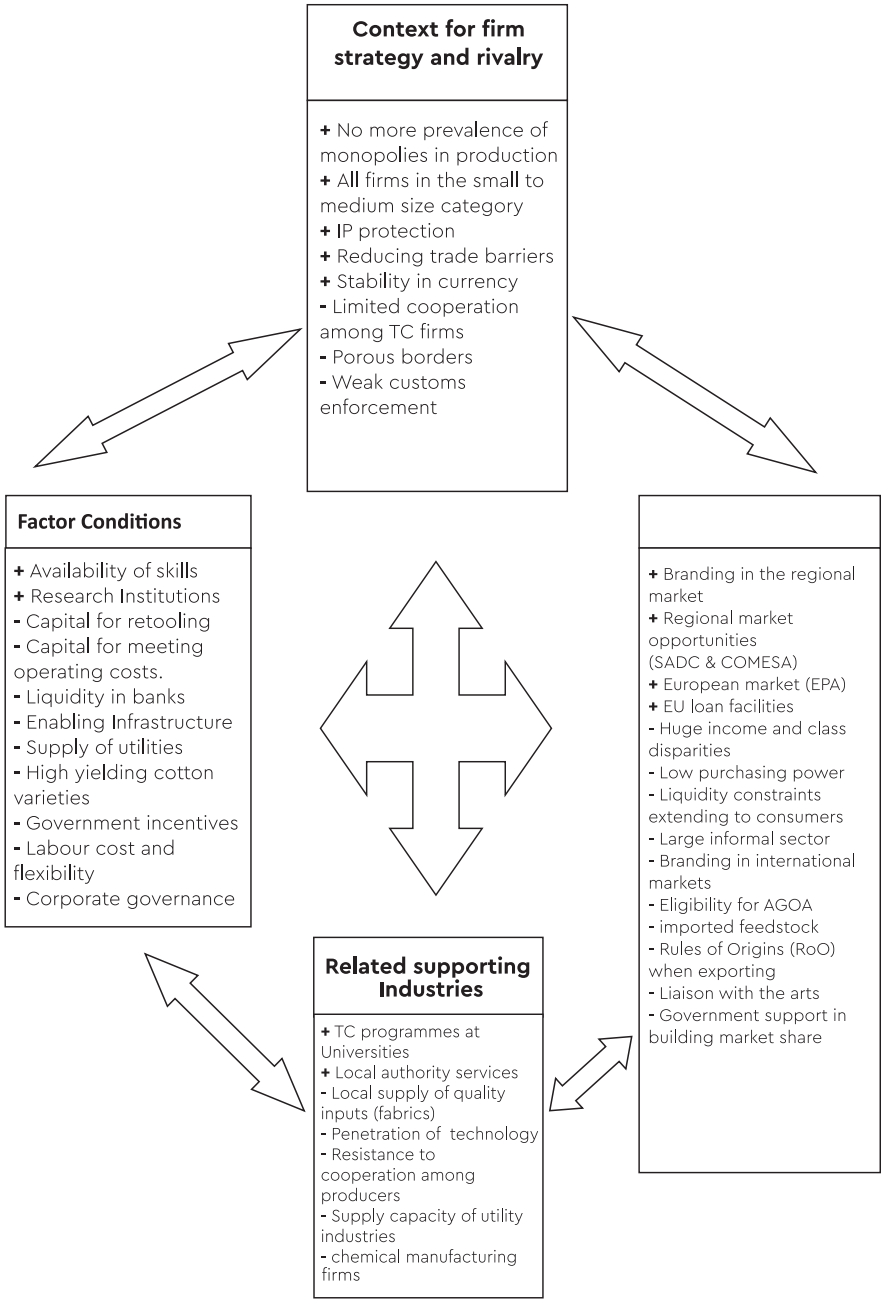
The consultants are highlighting this Commission study to draw attention to the fact that decisions that could have assisted this important sector have not been implemented fully and timely. Equally, it is important for industry to be aware that it has recourse through dedicated institutions. The mandate of the Competition and Tariff Commission on the Tariff side is to offer assistance and protection to industry.

Remedial proposals
The industry should uphold principles of fair remuneration, while at the same time engaging its work-force in the spirit of what in Malaysia is called "smart partnership". In such a context it will be possible for the labour force to appreciate that remuneration should be based on productivity in order to build a basis for industrial viability.

Corporate governance
Lack of sound corporate governance contributes to dis-proportionality in overheads either through wastage of resources or as a result of lack of integrity and lack of accountability on the part of senior management. Events of January –February 2014, widely reported in the local press, are a clear revelation that boards of companies, standing shoulder to shoulder with executive managers in a significant number of Zimbabwean private and public corporations, have fallen far short of the standards of integrity and accountability that are desirable for the success of businesses in the country.

According to Porter (1990) there are four broad attributes that individually and interactively determine national competitive advantage. These are: factor conditions; demand conditions; related and supporting industries and; firm strategy, structure and rivalry.
Porter argues that nations will tend to succeed in industries or industrial segments where the national diamond is the most favourable. Porter found that the role of Government is pivotal, since Government creates the foundation for industrial development through policy formulation, implementation and regulation.

Figure 20: Porter's Diamond Framework: Competitiveness of The TC Cluster In Zimbabwe



Porter's diamond framework in Figure 20 has been customized for the T&C sector in Zimbabwe and the four attributes interactively determining the performance of the Zimbabwe T&C sector are as shown in the diagram and are briefly commented upon as follows:

- **Factor Conditions** - These conditions largely pertain to the supply side for the industry. Labour in Zimbabwe is available in abundant supply. It is good quality labour that it is educaed; the country has significant numbers of trained personnel at university level and at artisan levels. There are textile degree programmes at university and polytechnics, and there is the SIRDC, a scientific and research institution in Harare with a high staff complement of post graduate degree holders, whose brief is to conduct research based on problems emanating from industry. So much for the positive attributes. Unfortunately the negative attributes greatly outnumber the positive ones as shown in Figure 22: firms are facing scarce and expensive capital for retooling and for meeting operating costs; the banking sector is illiquid and any loans disbursed by it are short term (six months to one year) and come with high interest charges (normally up to, or above 25 per cent); costly and unreliable flow of utilities, especially electricity; a labour legislation that is overdue for review in order to make it flexible; a weak corporate governance culture, and last but not least the slow uptake of new technology in the area of high yielding cotton varieties.

- **Demand conditions** – On the positive side, there are benefits of a regional market: SADC is nominally a Free Trade Area, although Zimbabwe has rules of Origin problems with this particular trading bloc. The COMESA market is available on a single transformation basis –the only barrier in this regard is the transport infrastructure which makes it difficult and expensive to access most of the COMESA market. There is also the European Union (EU) market for textile products under the EPAs framework, with effect from 2013, which does present new opportunities for Zimbabwe. With regard to the EU market the Zimbabwe manufacturers will again face the challenge of how to meet the need of timely delivery. On the negative side, there is the factor of the Zimbabwe domestic market, which just happens to be too small (12 million people), making for low domestic demand. To make bad matters worse, the same small population suffers from high levels of unemployment and high income and class disparities. Zimbabwe textile products cannot benefit from AGOA, hence there is scarce assistance for local firms to build market share. The foundation for innovation driven market demand therefore tends to be rather shallow.

- **Related and Supporting Industries (spatial links)** – With respect to the clothing manufacturing factories, the backward linkages with the textile sub-sector has almost been totally broken. The output of the remaining textile firms in the country consists of wholly cotton fabric, while the clothing sub-sector has since moved on to the use of a mix of approximately 25 per cent cotton and roughly 75 per cent polyester fabric. The significant let down in this regard is the deficient capacity to supply of the national power utility, ZESA. There are very low inflows of foreign direct investment

(FDI), in consequence there are very low levels of penetration of technology into all the productive sectors, the TC sector included. The clothing sub-sector is disadvantaged by having to import fabric from as far away as Asia. Forward linkages with the retail firms are strong where some of the manufacturers have retail outlets of their own, but otherwise these linkages are haphazard, since there is also the competition of imports. The T&C industries rely entirely on imported chemicals and dyes, which is a significant weakness in the scheme of things.

- **Firm (National) strategy, structure, and rivalry** – The conditions prevailing in Zimbabwe, with respect to the TC industry, are well summarised in the diamond diagram, Figure 20. The most notable and positive thing in the current state of affairs is that the country is now free of monopolies in TC production. It is also noteworthy, positive and critical that the laws on pro tection of intellectual property (IP) rights are up to global standards and are enforceable in the country. The country's Patent Office is part of the Zimbabwe Intellectual Property Office (ZIPO), housed under the Ministry of Justice.

Stakeholders and players in the C2C value chain have to operate within the Porter "Diamond" framework to achieve global competitiveness. But it is not just about exports and more exports as the requirements of the local market have also to be met. For the TC firms they have to address the criticisms of domestic customers against expensive but poor quality products made under "ISI conditions" of export-led growth strategies. For the textile industry Table 19 on Zimbabwe's textile industry's competitiveness analysis in 2013 identifies the targets that the industry ought to meet in order to be competitive.

SWOT Analysis of the Garment Assembly Sub-Sector

a. The Strengths
   i Garment Assembly is a labour intensive activity in a country where unemployment is rife, and roughly 30 000 retrenchees came out of the clothing industry in the period between 2002 and 2013.
   ii Garment Assembly can utilize upwards of 80 per cent of unskilled and semi-skilled labour, and such labour exists in abundance in Zimbabwe . This assertion is in line with Anmol Chaddha et al.'s findings with respect to the garment assembly sub-sector in the Western Cape, South Africa. It is further confirmed by informants to this study in the existing Zimbabwe clothing sub-sector, see Table 31.
   iii As at 2012, the literacy rate in Zimbabwe was in the region of 91 per cent. This indicates the possibility of ease of training of the general workforce, and hence the attaining competitive labour productivity levels. The operating firms that were interviewed revealed that they are not facing any need to train machinists, for instance. The competences and the experience are readily available.
   iv The inherent advantage, which counts as a strength, for the garment assembly sub-sector is that it has low start-up investment costs. Garment assembly equipment (e.g. sewing machines) is relatively inexpensive, more so with the advent Asian machine manufacturers.

v It can safely be said that the labour force in Zimbabwe is not at all prone to labour unrest and by all standards, it has a strong work ethic.

b) The weaknesses

i The low purchasing power of the populace in the face of very high unemployment levels in the country

ii The influx of cheaply priced and cheap quality items of clothing from the Far East, especially China

iii Competition at the market place attributed to the trade in second-hand clothes, coming in through the country's porous borders and aggravated by loose enforcement of payable duties by customs officials

iv As indicated in the findings of many researchers, fabric represents the highest cost input for the clothing sub-sector, see again Table 31, and yet it is an input that has got to be imported into the country. Questionnaire respondents from the clothing manufacturing firms were unanimous in their assertion that the locally manufactured fabrics are poor quality: *weak yarn and bleeding colour* in *dyed fabrics or yarn* were the most cited complaints, please refer once again to Table 31.

c) The Opportunities

i The availability of competent labour in practically all requisite categories–bearing in mind the element of large numbers of retrenched workers during the past decade - in great abundance, is both a strength and an opportunity for the garments assembly sub-sector in Zimbabwe. There are no training costs that need to be incurred upfront.

ii Imported garments command a competitive advantage due to lower pricing. However, the imports lag behind locally manufactured garments on the front of quality and differentiation.

iii The local garment assembly industry envisages Government support to come through in three ways. First, would be renewal of Statutory Instrument (SI) 15 / 2013 for the following 5 years or longer, until the time when the local Clothing and Textile firms have recovered. Second, is reinstatement of export incentives. Third, there is need for Zimbabwe to engage South Africa with respect to two issues: first, seek the rein statement of the 1964 bilateral trade agreement, albeit with some modifications; second, SACU made trade concessions to the so-called least developed member states of SADC , namely Malawi, Mozambique, Tanzania and Zambia, allowing their goods to enter the SACU market after going through only a single transformation process, while Zimbabwe is required to abide by the two-stage transformation rule [17].

iv Experience has demonstrated that the certificate of origin thresholds enshrined in both SADC and COMESA trade protocols are in urgent need of review downwards. A paper entitled "Rules of Origin and SADC - World Bank"[107] by Paul Breton, Frank Flatters and Paul Kalenga (2005), the writers assert that *A double transformation rule ensures that producers using imported inputs cannot compete on a regional basis in SADC. Thus such a rule will constrain intra-SADC trade*

[107] Paul Breton, Frank Flatters Paul Kalenga (2005) – World Bank , "Rules of Origin and SADC."

in this sector (T & C sector) and, in addition, will do nothing to promote the global competitiveness of SADC textile and garment producers.

Firms in Zimbabwe could mitigate the disadvantage caused by their diseconomies of scale situation by adopting the cluster initiative such as that used by clothing firms in the Western Cape, South Africa. Through the cluster approach the firms concerned *inter alia* achieved the following:

1. They were able to foster joint action between clothing firms to achieve economies of scale not possible individually
2. They were able to facilitate knowledge enhancement through the exchange of firm level expertise.

Recently we read a story in the Herald and Chronicle newspapers (September/ October 2013) wherein it was reported that Paramount Garments in Harare and Archer Clothing companies were moving towards joint initiatives in production and marketing. That is exactly as it should be.

Government, acting in concert with the clothing industry could, cultivate and promote the viability and vibrancy of the fashion and design artists in the country. The clothing industry would indulge in the latter initiative as part of its strategy to acquire partners with the skills and talents to enable it to move up the value chain and manufacture high-end products for export. Meenu Tewari[108] found that though there are few barriers to entry in apparel production (other than demands for scale and quality under the new competition), entry barriers rise as one moves up the value chain toward higher value functions such as design and marketing. The most lucrative portions of the value chain consist in design, distribution, branding and marketing. These latter activities by and large continue to remain in the hands of the buyers in industrialized countries despite the extensive global dispersal of apparel production.

d) The Threats

i Without doubt, the illiquidity crisis that is currently prevailing in the country is a threat to national economic recovery across the board. The borrowing conditions imposed by the banks are stifling to business; only short term borrowed funds can be availed, subject to provision of collateral. The funds come at interest rates that could be upwards of 15 percent. These financial lending terms are inimical to competitiveness. Therefore the conditions for raising finance, both for meeting operating capital requirements and for factory capitalization are highly constraining.

ii One of the bywords of the Harvard Business Review publications is that *uncertainty is one of the biggest enemies of business.* Anybody that has had cause to interview business personalities in this country would have inevitably found that the Government policy or talk of "indigenization" evokes such strong emotions amongst those citizens who are not black. People desist from investing because their sixth sense tells them that they may not be classified as "indigenous". Even if they are third generation Zimbabweans, they

[108] Meenu Tewari (2005), 'The Role of Price and Cost Competitiveness in Apparel Exports, Post – MFA': A Review.

are not sure that they could still be regarded as indigenous. Suffice to say however that in business, just like in international relations, perception is as important as reality. There appears to be a trade-off between the political need for indigenisation and the need to create jobs for the unemployed in society.

iii The existing and continuing condition of high unemployment does not augur well for the clothing sub-sector. For the impoverished segment of the population, the textile and clothing value chain lies outside the value chain of basic commodities for such families.

iv The rampant trade in second-hand clothing is indeed a menace for the national clothing sub-sector. The trade is an off-shoot of poverty and unemployment. As it happens, the consumption of second-hand clothing is in fact not confined to the lower social strata in society. The consumption of second-hand clothes was found to involve all social groups. Sally Baden and Catherine Barber[109] in 2005 investigated the impact of the second-hand clothing in West Africa and conducted an especially more detailed inquiry in Senegal. They established that the quality of the second-hand clothes can actually be very good and considerably differentiated. Further, they established that the consumers of the second-hand clothing cut across income groups and social categories.

v Long input procurement cycle times. Carousel factory, the manufacturing arm of Edgars Stores, typically experiences 1-2 weeks of collaborative design of a new fabric with a foreign based manufacturer, 1-2 weeks production lead time for the fabric ordered, 6-8 weeks lead time for shiping the fabrics from China to Durban and 1-2 weeks for moving the fabric by road (rail transport which would be 1/3 the freightcharge, could take up to two months) from Durban to Bulawayo in Zimbabwe This amounts to input procurement lead time of 9-14 wee[110]

vi The clothing industry, like every energy consumer in Zimbabwe, is not spared from the hazard of power outages. Table 20 above, has tried to capture the sentiments of industry with respect to this critical cost item. It is noteworthy that Bulawayo City Council maintains that although the City of Bulawayo suffers from almost a perennial problem of water shortage, Council has for many years scrupulously ensured that the water problem does not extend to industry.

vii As a result of the fact that key inputs of the industry are imported in the face of such considerable lead times, the corollary to this situation is that the fir ms are compelled to incur high inventory costs in order to try and ensure continuity of production

viii In the global scheme of things, firms in the garments assembly sub-sector inevitably suffer from diseconomies of scale, and therefore they are in many respects at a competitive disadvantage by comparison with firms in big countries like China, India, Bangladesh. According to Richard Koch, all competitive advantage can be ob served in the simple micro-economic formula[111]:

[109] Baden, Sally and Catherine Barber (2005), The Impact of the second-hand clothing trade on developing countries, Oxfam.
[110] Waverley Blankets P/L 2013.
[111] Koch R 1999. Smart Strategy. p81

Profit = [(Price) – (cost)] x (Volume).....Equation 1

On the basis of Equation 1, it is evident that profitability can derive only from one or more of the following influences: higher prices and /or lower costs and/or bigger volumes. A firm that operates with bigger volumes should, all things being equal, experience lower costs. This is because all fixed costs (rent, rates, and plant and equipment maintenance costs, management salaries) are spread over a much wider dollar volume of business. Therefore bigger volumes are an economic benefit which effectively translates to wider margins. In the absence of economies of scale, firms in Zimbabwe deserve to be assisted to operate in as low cost environment as possible in order for them to survive. In the absence of the latter, firms in the Zimbabwe setting resort to higher prices for their products, and by so doing become uncompetitive in both the domestic and external markets.

Value Added (VA) in the Clothing Stage of the C to C Value Chain

Table 32: Computation of value addition factor from a sample of 4 clothing companies in Zimbabwe (2013)

Company	Total Fabric Cost in 2012 (Input Value)	Turnover in 2012 (Output Value)	Value Added in 2012 (Output Value Input Value)	VA factor in 2012 (VA/IV)
Company 1	$1,090,000.00	$3,300,000.00	$2,210,000.00	**3.03**
Company 2	$2,112,000.00	$7,000,000.00	$4,888,000.00	**3.31**
Company 3	$243,000.00	$ 2,030,580.00	$1,787,580.00	**8.36**
Company 4	$ 620,000.00	$1,600,000.00	$980,000.00	**2.58**
Total	**$4,065,000.00**	**$13,930,580.00**	**$9,865,580.00**	**3.43**

Comment on value added.

Value added (VA) refers to the difference between the input value (IV) and the output value (OV) of a value chain activity. The value added at the clothing stage of the C to C value chain could not be established through this research, which was going to require either a census, or availability of requisite secondary data in the public domain. The survey that was carried out was however sufficient to determine the value added at the firm level for various clothing companies. At firm level, the input value IV is represented by the cost at which clothing companies purchase their fabrics. The output value OV is represented by the turnover generated by the purchased fabric. The VA can then be computed by subtracting the turnover from the cost of fabrics over a comparable period.

Hence VA = OV – IV .....Equation 2

However, the absolute value added VA figures are of little importance for the purposes of this study. What is more important is to determine the 'factor' by which IV increases as a result of transforming fabrics to garments. This factor, when multiplied by input value gives us the OV. This 'factor' is hereinafter referred to as the Value Addition Factor (VAF); and is calculated by the following equation:

VAF = (OV – IV) / IV = VA / IV .....Equation 3

Table 32 above, shows the computation of VAFs for 4 companies that were sampled as part of the study. Please note that the identity of these companies has been withheld in order to protect their privacy, in keeping with the conditions under which information was supplied.

The VAF for the clothing stage of the C to C value chain is estimated at 3.43 as shown in the table above. It is however important to note that the VAF varies greatly for different clothing companies. The table above, for instance, shows that company 3 had a VAF of 8.36. This is typical with manufacturers of up market designer clothing characterized by high brand equity. Such companies do not use the simple 'cost plus' pricing method but use 'value pricing' in order to reflect their powerful brands. Company 4 does not manufacture to stock. Instead, production is made per order and typical products include custom designed corporate wear for companies, groups, schools, churches and various other organizations. These orders tend to be small to medium size and result in large set up costs during construction. These set up costs contribute significantly to increase in the cost of production.

Company 1 and Company 4 have some level of vertical integration as they own and operate their retail outlets. Consequently, these companies tend to manufacture long runs of garments intended for distribution to their nationwide retail outlets. These result in some level of 'standardization' through high volume production, hence enabling the lowering of production costs. Company 2 is a manufacturer of protective clothing and has a growing export market.

The value added at this clothing stage of the C to C value chain is distributed to the cost drivers indicated in Thematic 9 of Table 30, with the balance going to Taxes, Interest and Profits. Owing to the shortage of capital, some companies are heavily borrowed to the extent where loan repayments were gobbling up 15% of revenues (as the case was with Company 1).

Key success factors and way forward for the clothing sub-sector

The recovery of the clothing sub-sector is highly dependent on several underlying fundamentals, most of which are captured in Porter's Diamond framework. In summary, the key success factors are in the domain of enabling infrastructure: firm, affordable and reliable electricity supply; assured supplies of potable water; a functional rail transportation system; a functional airline. Further, availability of capital both for procurement of the latest technology and meeting operating capital requirements of the firm is a second category of key success factors. Availability of requisite skills in the labour market constitutes a requirement of paramount importance. The latter is a factor condition that Zimbabwe qualifies on but cannot be complacent about especially in the area of specialist skills and middle management skills.

Local supply of fabric and garment construction accessories to obviate the hurdles of importation and costs of inventory associated with bringing inputs from distant sources is another one of the key success factors. The foregoing requirement is achievable in Zimbabwe, subject to adoption of determined

measures to revive the fledging textile sub-sector. To buttress the aforementioned programme, the Government of Zimbabwe shall need to work towards rectifying perceptions about the country - which entails rehabilitating the country's image.

The market prospects for the Zimbabwean clothing manufacturing sector are in fact bright, subject to the textile and clothing sector being able to exploit the opportunities provided by the regional economic integration processes represented by the SADC Free Trade Area and COMESA. The sector needs to pay attention to moving up the value chain by doing product development and product differentiation. These programmes are achievable by doing research, done through Textile Technology and Business Departments in the country's universities and polytechnics. In addition, there is now a new duty free market for Zimbabwean textile and clothing products in the European Union (EU), in the context of the Economic Partnership Agreement (EPA) signed between Zimbabwe and the EU in 2013. The EU market presents the challenge of preparing high quality and specialized T&C products.

The Government of Zimbabwe needs to follow up the EPA agreement by commissioning a cargo airliner that can transport niche Zimbabwean products to the EU market , and thus ensure timely delivery to customers in that market.

Chapter 6

STRATEGIES TOWARDS REVIVAL OF THE COTTON TO CLOTHING VALUE CHAIN

According to Richard Koch (1999)[112], strategy = long term decision and direction. Michael de Kare-Silver[113], a British economist and strategist observed that the two elements of strategy are future intent and sources of advantage. Future intent is the development of a long-term, far-reaching view and the establishment of a commitment to achieving it, choosing particular markets, as the focus of the company's energies. Future intent and advantage must go hand-in-hand. Future intentions should only be established where advantage can be achieved.

At the Inception Workshop of this study, AFRICONSULT proposed four strategic options that could be followed in Zimbabwe in the quest to revive the fortunes of the cotton to clothing value chain.

The Dinosaur Model
The first strategy envisaged was that of living with the *status quo*, which strategy was symbolized by the dinosaur, pointing to the future of extinction.

Picture 1: The Dinosaur

The *status quo* is characterized by a disintegrated supply chain, whose remaining components face the threat of extinction since there is no existing purposeful strategy to support them.

The Rhinoceros Model
The second strategy envisaged the course of reconstituting the full cotton to clothing value chain. In other words, reviving the previously vertically integrated cotton to clothing value chain, as used to be the case in the Rhodesian and pre-ESAP periods. That strategic direction was symbolized by the Rhinoceros, Picture 2.

[112] Koch R 1999 Smart Strategy p 2 & 88.
[113] De Kare-Silver, M 1997 Strategy and Crisis: Why Business Urgently Needs A Completely New Approach.

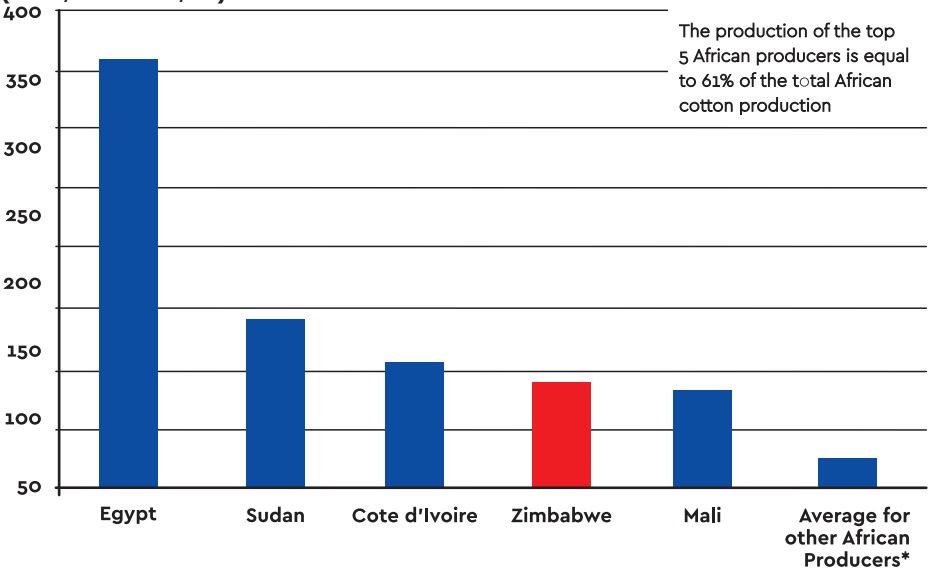
Picture 2: Rhinoceros

Figure 21: Process Flow Schema Associated with the Rhinoceros Model

The Rhinoceros model of the vertically integrated industrial units disintegrated during the ESAP period (1991 to 1995). The period was characterized by a *laissez-faire* business outlook. The ginners began to export lint, as and when they could earn higher prices and at the same time earn some foreign currency for themselves. Similarly the spinners adopted the practice of exporting yarn for similar reasons as the ginners exporting lint.

Table 3 demonstrates how Zimbabwe recorded significant foreign currency earnings from exports of cotton lint up to as recently as 2010. In addition, in the years 1985 – 1990, Zimbabwe was in the top 5 African nations that exported cotton lint to the world market, see Fig 22 and Fig. 23 below.

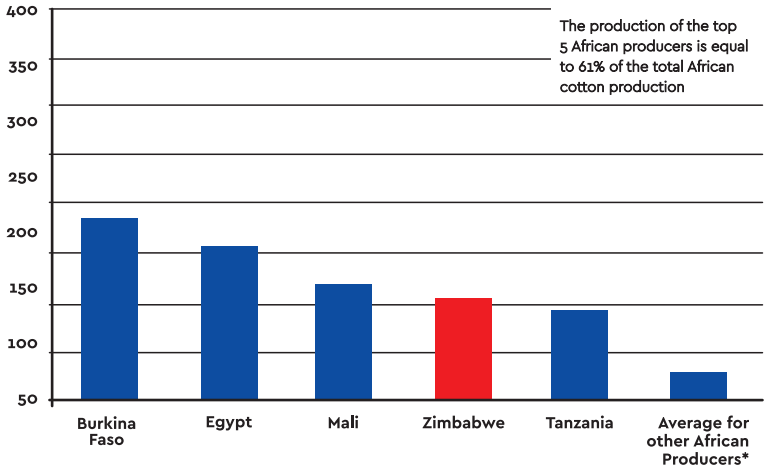
Figure 22: Average Annual Lint Production for Africa's Top 5 Producers (1985/86 - 1989/90)



Source: UNCTAD computations from ICAC statistics

Changes in the ranking of the top 5 producers were due to: (i) the onset of civil strife disrupting trade flows in Sudan and Cote d'Ivoire; (ii) the introduction of GM cotton in Burkina Faso; and (iii) supportive sectorial and institutional reforms in Tanzania during the mid-1990s.

Figure 23: Average Annual Cotton Lint Production For Africa's Top 5 Producers (2006/07 - 2010/11)



Source: UNCTAD computations from ICAC statistics

Note:* countries

Table 33 below shows that Zimbabwe comes from a background of above average performance, in the context of the African continent, with respect to productivity in cotton growing. In the ratio of average cottonyields, Zimbabwe (0.68) used to be ahead of South Africa (0.67) in the period indicated. By the year 2011, South Africa (1.25) had leapt way ahead of Zimbabwe (0.37) because first, cotton growing in South Africa is grown commercially and mostly under irrigation, and second, South Africa has embraced biotechnology (Bt) seed cotton (while Zimbabwe has not) which inherently is higher yielding and is more pest resistant.

Table 33: Ratio Of Average Cotton Yields Of Selected African Countries To The World Average (1985/86 - 1989/90)

Rank	Country	Ratio compared to the world
1	South Africa	1.25
2	Egypt	1.11
	World	1.00
3	Benin	0.50
4	Niger	0.57
5	Cameroon	0.56
6	Sudan	0.53
7	Ghana	0.53
8	Mali	0.51
9	Senegal	0.51
10	Burkina Faso	0.50
11	Cote d'Ivoire	0.48
12	Ethiopia	0.44
13	Madagascar	0.44
14	Burundi	0.44
	Africa	0.43
15	Malawi	0.39
16	Angola	0.38
17	Zimbabwe	0.37
18	DRC	0.35
19	Togo	0.35
20	Guinea	0.34
21	Central Afr. Rep.	0.32
22	Nigeria	0.29
23	Tanzania	0.28
24	Uganda	0.26
25	Kenya	0.26
26	Zambia	0.24
27	Chad	0.23
28	Mozambique	0.18

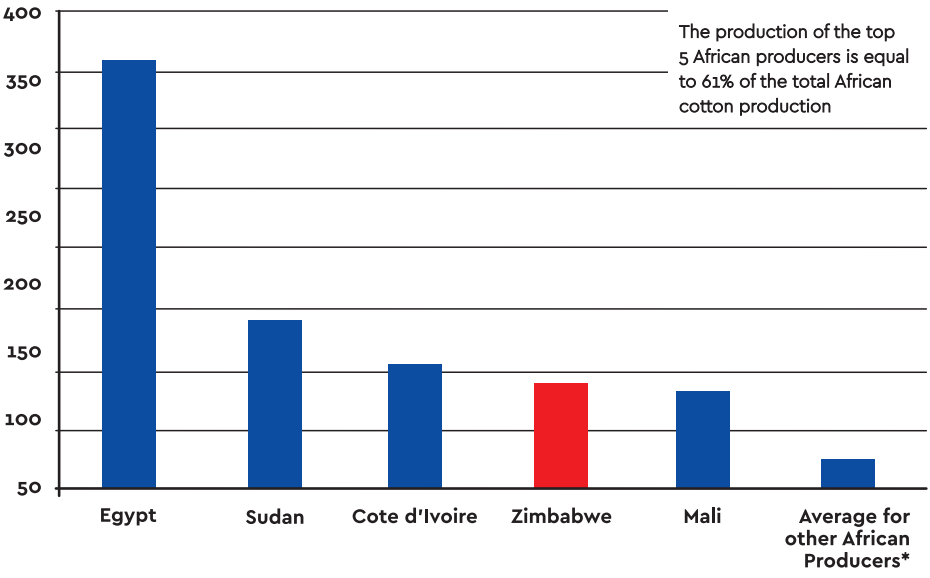
Source: UNCTAD computations from ICAC statistics

Table 34 is showing that in the first decade of the 21st century, the African average (0.43) in cotton growing productivity is less than 50 percent of the world average (1.0) and Zimbabwe (0.37) is shown to be among the poorest performing African countries. The Bt-cotton growing African countries are scoring highest: South Africa (1.25), Egypt (1.1); most if not all of West Africa is using Bt-cotton seed and their yields are mostly above the 50 percent mark.

Table 34: Ratio Of Average Cotton Yields Of Selected African Countries To The World Average (2006/07 - 2010/11)

Rank	Country	Ratio compared to the world
1	Egypt	1.48
2	Morocco	1.08
3	Cote d'Ivoire	1.04
	World	1.00
4	Cameroon	0.93
5	Mali	0.90
6	Tunisia	0.87
7	Madagascar	0.84
8	Ethiopia	0.80
9	Sudan	0.80
10	Togo	0.79
11	Senegal	0.76
12	Burkina Faso	0.76
13	Benin	0.75
14	Burundi	0.73
15	Zimbabwe	0.68
16	South Africa	0.67
	Africa	0.66
17	Niger	0.54
18	Chad	0.51
19	Ghana	0.51
20	Zambia	0.36
21	Central Afr. Rep.	0.35
22	Angola	0.35
23	Kenya	0.31
24	Tanzania	0.27
25	DRC	0.21
26	Nigeria	0.17
27	Mozambique	0.15
28	Uganda	0.05

Figure 24: Average Annual Cotton Lint Exports for Africa's Top 5 Producers (1985/86 - 1989/90)

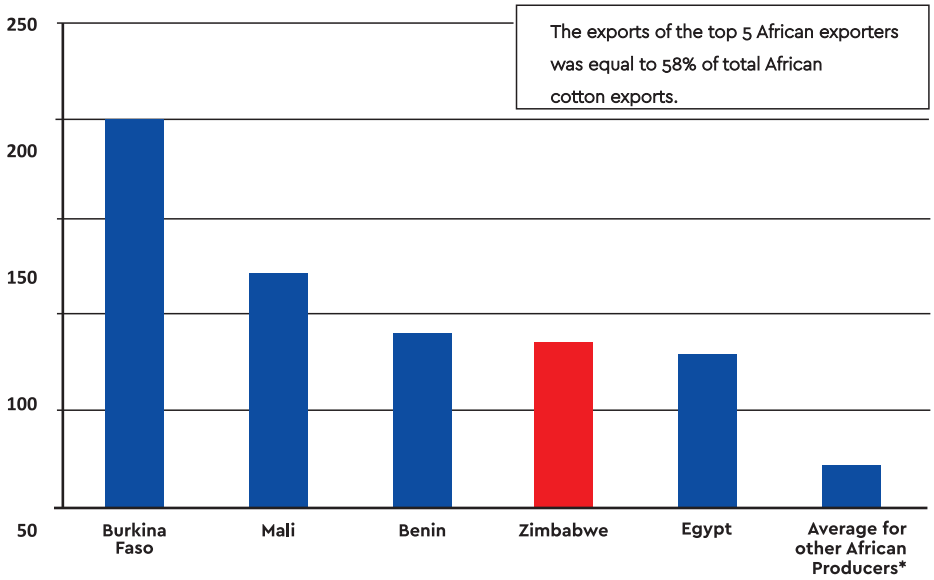


Source: UNCTAD computations from ICAC statistic

In Fig 25 below, Zimbabwe is ranking 4th in Africa in the export of cotton lint.

Figure 25: Average Annual Cotton Lint Exports For Africa's Top 5 Producers (2006/7 – 2010/11)

Changes in the ranking of the top 5 exporters were due to: (i) the onset of civil strife disrupting trade flows in Sudan and Cote d'Ivoire, and (ii) the introduction of GM cotton in Burkina Faso.



Source: UNCTAD computations from ICAC statistics

Note: * 19 countries

Some discrepancies may appear in this document, especially between production and trade statistics due to the way information is reported by countries.

The problem with this strategy is that it perpetuates the production and export of raw materials which are not processed into finished goods locally. It exports jobs instead of creating employment domestically. Farmers are exposed to the vagaries of fluctuating international commodity prices without relief in sight.

The Elephant Model

The third strategy envisaged developing the industries that are found at the upper end of the value chain, which is where the garment assembly sub-sector lies. The garment assembly sub-sector consists of a wide range of players, encompassing individuals, co-operatives, plus the small and medium size firms. Most of the large firms have since gone into liquidation, because they were the hardest hit by the adverse economic conditions that in this country began with the opening up of the economy under ESAP. Big enterprises were saddled with a higher proportion of permanent employees, their conditions of service for staff included cost elements like medical aid, insurance, leave and pension. In addition, most of

the large firms in the garment assembly sub-sector were heavily borrowed from a financial sector whose finance charges became progressively inflationary. Government levies, not less than five in number, and escalating utility charges also weighed heavily on companies' balance sheets.

The garment assembly sub-sector in Zimbabwe, during its prosperous past, was an active participant in what G. Gereffi calls buyer-driven global commodity chains[114]. The designers and retailers that placed orders with Zimbabwean garment assembly firms were mostly located in South Africa and Europe, particularly the United Kingdom. That setup was influenced in the main by the ownership structure of the clothing industry that existed in Zimbabwe. Those networks continue to exist to the present day, albeit on a diminished and tenuous scale. According to B. M. Chiripanhura's research, the capital ownership structure of firms in Zimbabwe in the clothing sub-sector in 1999 was as follows[115]:

British	31.3 per cent
Indian:	22.9 per cent
Israeli:	14.2 per cent
Zimbabwean:	20.3 per cent
South African:	6.3 per cent
Palestinian:	4 per cent.

Buyer-driven commodity chains are further influenced by association with some well known brands, and brands that have a long-standing history in certain domains. In the case of the clothing sub-sector in Zimbabwe the long-established brands are Edgars, Woolworths, Truworths, and Van Heusen. The named brands have a long-standing footprint in Zimbabwe and the territories that were once upon a time part of the Federation of Rhodesia and Nyasaland and other English speaking SADC member countries.

In the light of these considerations and the evidence of an industry showing signs of life compared with the defunct textile sub-sector, AFRICONSULT was initially persuaded to identify the garment assembly, i.e. the clothing sub-sector, as the low hanging fruit that could provide a platform to rebuild the TC industry. A simplistic observation is that since the textilers no longer supply any finished cloth or the correct types of fabric to the garment manufacturers the later should continue in business using imported materials. The historical strong raw material base of seed cotton supply is now not benefitting the clothing industry at all, or the C2C value chain. Countries like Lesotho, Swaziland and Mauritius without any raw cotton material base have out-competed Zimbabwe in the manufacture and trade of clothing in the SADC region.

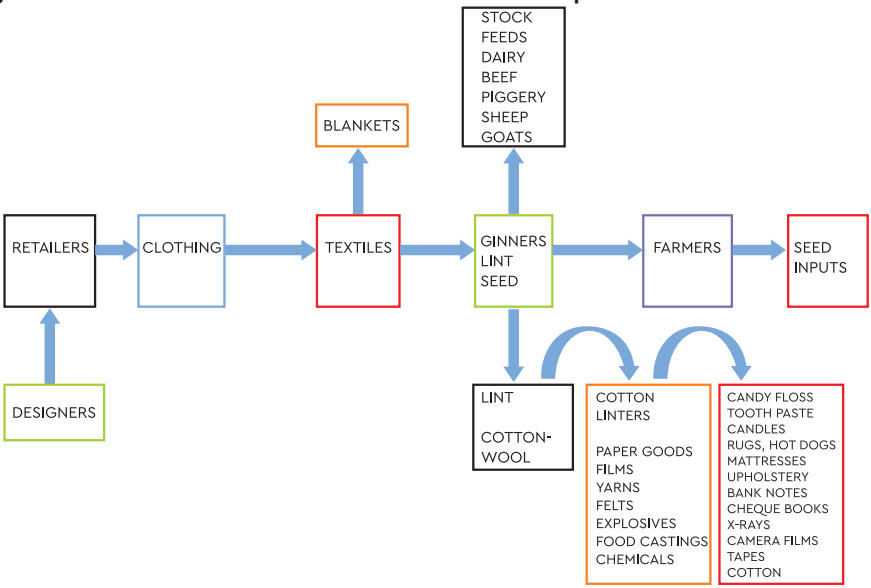
Consequently, the strategy herein advocated is one that involves working from the upper end of the cotton to clothing value chain and cultivating strategies that create competitive advantage for the sub-sector. However, the strategy being proposed here should not prevent the consideration and development of others of relevance to textiles. The strategy that is the subject for description at this juncture is symbolized by the elephant, and was called the Elephant Model, Picture 3.

[114]Gereffi G & Korzeniewicz M (eds.) 1994, The organization of buyer-driven global commodity chains; how US retailers shape overseas production networks, Commodity Chains & Global Capitalism

[115]Chiripanhura B.M. (2010) Sneaking up and stumbling back; Textile sector performance under crisis conditions in Zimbabwe, Journal of International Development (22).

Picture 3: The Elephant

Fig 26 : Process flow schema associated with the Elephant Model



It was envisaged that a thriving garment assembly industry would create demand for textile industrial products and the presently mothballed textile industrial sub-sector would in time become attractive to capital investors and embark on the route of recovery. This is *de facto* a market driven strategy for revival of the textile sub-sector in the country. When the time came, the textile sub-sector could reposition itself to become the feedstock supplier to the vibrant garment

assembly industry. Provided the quality of inputs, fabrics in the main, meets the quality requirements of the industry, without doubt the garment assembly industry would develop to become a captive for the textile sub-sector's products. Low inventories are a desirable thing for every business that is geared to make profit. Therefore the garment assembly sub-sector could only benefit in terms of enhanced profitability should such a business environment materialize.
At present, informants in the existing garment assembly firms were unanimous in saying that what is left of the local textile industry produces fabrics that are not suitable for their requirements, the quality is rated as poor, unsophisticated and lacking in major characteristics that are a requirement of the modern garment assembly industry. These are the findings from the questionnaires administered to industry practitioners documented in Table 31 above.

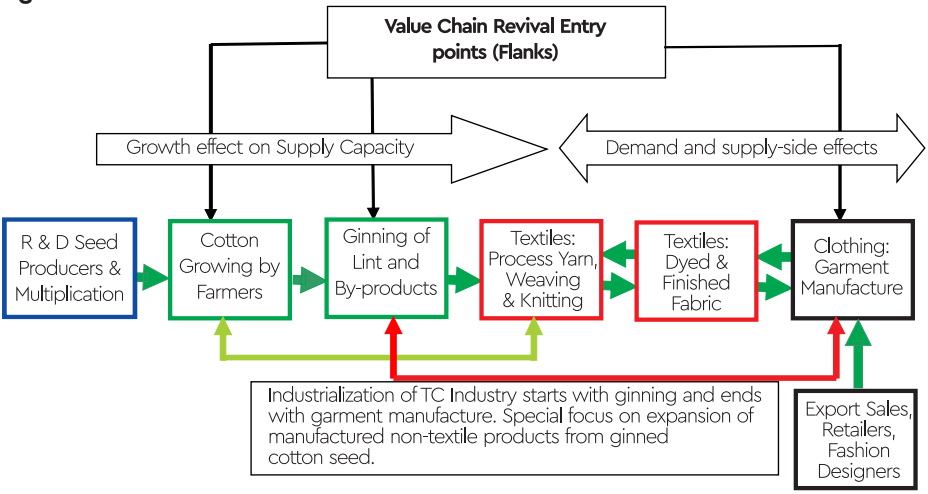
Going into the future, there should be no reason why the local textile industrial sub-sector should not rehabilitate and raise the bar by importing requisite raw materials to enable it to manufacture fabrics characterized by the most competitive requirements of the domestic, regional and international markets. The domestic apparel assembly sub-sector would, for all practical reasons, be the foremost consumer of such fabrics.

The African Lion Model
AFRICONSULT having considered the challenges of the whole C2C value chain and the results of the investigation that was undertaken realized that there was possibly a fourth alternative to the first three strategies. With the Elephant model and its market driven approach to revitalize the TC industry, it was not clear what the fate of the cotton farmers and the installed capacity of the ginning industry would be. In particular, the spectre of rural poverty in the country was seen as worsening as cotton growing continued to decline. The result of that consideration was that the cotton to clothing value chain should continue to provide for cotton growing by the Zimbabwean farmer who has over many years acquired the expertise to grow this cashcropCotton growing in the country dictates that the ginneries must also continue to operate, their primary function being to separate the cotton lint from the cotton seed. The cotton seed is feedstock for the existing cooking oil and soap processing factories in the country. The issues were six-fold;

- Ensuring viability of cotton growing by paying the farmer more than the depressed international producer prices.
- Increasing local value addition of cotton seed and take local beneficiation of lint to the limit.
- Improving the capacity utilization of the ginning industry to reduce ginning unit costs and ultimately the local price of lint.
- Promote greater production of seed cotton in the country.
- Develop new non-textile value chains and related cotton clusters.
- The C2C value chain taking advantage of the opportunities emerging in the regional and global markets for TC products.

The strategy in question is symbolized by the African Lion.
It is the African Lion Model – Picture 4.

Fig 27: Process flow schema associated with the African Lion Model



The African Lion Model strategy applies the best from the Rhino and Elephant strategies to establish a transformative process that results in the birth of an African Lion. It uses elements of both market and supply driven strategies for re-industrializing Zimbabwe under-pinned by cotton. The Lion Model however found that there were in fact three low hanging fruit flanks that could be used to jump-start the C2C value chain, rather than only one. One is the cotton growing activity, while the second is the garment assembly industry. The third is the

ginning industry, which already has excess capacity possesses some modern equipment. These afore-mentioned activities were identified as presenting the least difficult and fastest responding opportunities for turning around the cotton chain. The strategy entails starting with the low hanging fruit and then progressively working towards the high up tree hanging fruit. Balancing the value chain is not a primary objective, as would have been the case with the Rhinoceros Model above. Surpluses and shortfalls along the value chain can always be transferred in and out of the global value chain as the situation dictates.

The model is transformative as it attempts to change the way business is carried out in the value chain. It recognizes that a *laissez-faire* state of affairs is inimical to a competitive C2C value chain in Zimbabwe. Government has a role to play, which is what Porter's hypothesis says, in driving the competitiveness of the value chain by instituting policies, legislation and programmes which create the necessary enabling environment for business to thrive. The state must provide peace, unity, stability and security of the nation for develoment to take place. Specifically, Government is required to attend to the following issues:

- Craft a long term strategy for the C2C value chain which among other important issues takes into account global competition and the liberalization of trade in TC products.
- Enact legislation through Parliament to govern every aspect of the cotton sector, including orderly marketing and the regulation of the TC industry.
- Correct the current deficit in the provision of critical physical infrastructure in the areas of transport (rail, road and air), ICTs, power supplies, water and irrigation facilities.
- Engage a diligent and competent bureaucracy; eliminating or reducing the silo mentality and policy inconsistencies.
- Through programmes in agriculture and rural development declare cotton as a poverty alleviation crop for the country.

For the stakeholders and the players in the chain, each party needs to accept to function as a team player in the value chain, observing the regulations set out by the Regulator to the full for the benefit of the player and all others. Competition amongst firms would be accepted so long as it is not destructive. The transformation process will be a transition marked by high points along its path. From the beginning, clothing manufacturing firms will be on an Elephant model trajectory, importing their full requirements of fabric from abroad. This window will provide an opportunity for the textile industry to re-organize, re-tool and prepare itself to play its rightful role in the value chain. The right flank, i.e. the market driven strategy puts pressure on the textile industry to produce locally those fabrics which the garment manufacturers will be importing.

Meanwhile, on the left flank a number of important developments will be taking place. In the first phase of the transition, it is possible to establish direct links between the spinners and weavers on one hand and the farmers through financial support measures for cotton growing. As long as the textile industry provides "high input" support measures to farmers along the SinoZim

Cotton P/L lines, it will attract more farmers than it can handle to produce seed cotton. High input support schemes will introduce technological innovations such as production under irrigation on a wider scale thanbefore, mechanization of farming operations, chemicalization of weed control and possibly aerial spraying of pests by aircraft. Yields will increase to around 2 500-3 500kgs/h from the present 500-800kg/ha, providing the value chain with a critical mass leading to cost reductions along the whole chain. With ARDA's 19 000ha of irrigable land lying idle, plans can be made and agreed with the private sector to resuscitate the ARDA estates to produce both food crops and cotton on the basis of crop rotation. Just like the Chisumbanje Ethanol Project, these ARDA Estates as cotton farms can be set up as agro-processing complexes to gin lint and value add cotton seed on the premises. Just as before, the core estates will have out growers with a symbiotic relationship to them.

The ginning industry will act as the "chest" of this flanked strategy to push industrialization from the middle of this movement. Emphasis will be on transforming the non-textile intermediate products, e.g. linters from cotton seed to various finished products, a small range of which is shown under the Elephant model. Firms like Olivine Industries P/L developed and marketed popular brands such as "Buttercup Margarine", "Jade Bath Soap" and "Perfection Laundry" soap in the region all manufactured from cotton seed. Production of these brands can be geared for the continent and beyond as no one else produces margarine from cotton seed. Olivine industries has a fantastic competitive advantage in Buttercup Margarine and not in cooking oil. Extensive investment in local economic development initiatives can also take place from clusters that produce stock feed for dairy and beef cattle in rural communities creating employment opportunities and wealth in the process.

The transformation of the value chain can take place with little, or no direct, Government subsidies.
Zimbabwean firms now need to plan to establish COMESA/SADC regional lint supply chains into their spinning industries while at the same time investigating possible links for fabric production from the region into the clothing manufacture sub-sector. The firms in the value chain also need to enhance their levels of COMESA/SADC regional business and export contacts through promotional programmes, joint venture collaboration and licensing arrangements. These markets have the advantage of proximity, and in addition they present better opportunities for upgrading in the value chain. They have potential for growth and product upgrading than the markets in the USA and the EU because there are less impediments in moving up the value chain. The buyer-driven commodity chains of the West deliberately retain for themselves the upper portions of the value chain, namely designing, styling, logistics, distribution and so on.

As already experienced in the value chain, export led growth industrialization requires that the firms in the TC industry increase their levels of investment in domestic spinning and fabric manufacture, including diversification of processes and improved quality through acquisition of new equipment and technology. The firms may acquire upgrades of plants and machinery to increase productivity levels

of labour and efficiencies of production processes. This should lead to the raising of levels of quality control and an awareness of international marketing trends amongst clothing manufacturers.

Within the African Lion Model, Zimbabwean TC firms are expected to co-operate more energetically and more purposefully amongst themselves in the future to be able to address regional and global challenges. The strategy envisages them operating like a horizontally integrated cluster, and being able to tackle quality and market issues in the framework of that structure. Then they can go a step further to integrate vertically, towards the retail sector.

Financing the African Lion Model

The model recognizes that initially investment resources will always be a stumbling block to the success of any turnaround strategy. The scarcity of liquidity in the economy is stifling revitalization efforts of the TC industry which is for both working capital and long term capital inflows. Under the multi-currency regime the ability of banks to lend to enterprises is a function of the different sources of liquidity.

The main sources of the scarce liquidity are export earnings, diaspora inflows, offshore credit lines, (the Cairo based AFREXIMBANK) foreign direct investment inflows and capital transfers including grants. Internally, debt and lease financing are not readily available. Where these possibilities exist the terms and conditions are burdensome.

These sources of financing continue to dwindle while at the same time the expectations from all sectors of the economy continue to grow. The Zimbabwe Stock Exchange cannot raise the required resources either because of the liquidity problems.

For most of these firms debt financing is out of question as they probably would be over-borrowed already. Offshore lines of credit would be more preferable but because of country risk issues the interest rates are not competitive. FDI has not been overly attracted because of issues to do with indigenization. Diaspora bonds have not been tried as yet. This leaves the only realistic option of financing with local capital which the Government has to persuade Deng Xiaoping's "cats that can catch mice" to invest as the entrepreneurs have the necessary financial resources.

Assuming local capital comes forward to invest in the TC industry in a substantial way, the next problem will be how to achieve optimum results from the installed plants and the labour employed. The Chinese work management systems can be a good reference point suitably amended to take care of our own realities and methods. Chinese FDI working side by side with local firms should be able to produce an equilibrium or compromise in labour relations and management systems as these systems are diametrically opposed to each other.

For infrastructure development, there is the possibility of funding from the African Development Bank in the context of its support for Southern Africa regional integration as indicated in its strategy paper 2011-2015.

CHAPTER 6

SPECIFIC RECOMMENDATIONS TO THE REPORT

The recommendations below are based on the study's research findings and the conclusions arrived at for each segment or link of the C2C value chain.

Government Involvement and Initiatives
The Government has a significant role to play to support this industry. Critically three areas need to be addressed and they are namely:

1. Strategy
Government has to come up with an overall long term strategy for the entire C2C value chain with clear transition mechanisms, precise goals, practical objectives, realistic deliverables and time lines. A blunt and honest opinion is that the entire value chain has been characterized by policy, institutional, regulatory and marketing failures at various points of history. ESAP came in a policy void. There was no fall back position in case ESAP did harm to the TC industry. The policy response to the new WTO liberalized trade rules were muted; neither did Zimbabwe take concrete steps to prepare the TC industry for life after the Uruguay Round of trade negotiations (1986 -1994). While the Indigenization and Empowerment Act is generally clear in legal terms, there is a crying need to explain how it will be executed in practice in the TC industry. The silence of Government leads to speculation, hearsay and falsehoods to dominate the "silent" debate which discourages further investment in the industry by both locals and foreigners. The return of CMB; what will its role be vis-a-vis existing players in the public and private sectors? How do you strengthen theregulatory body (AMA) and farmer producer associations to play their proper roles in the value chain? How can farmers be cushioned against declining world cotton prices and still remain competitive against their more heavily subsidized counterparts across the globe? This brief study may not be able to do justice to all aspects of the overall strategy.

The role of the State in promoting the competitiveness of the C2C value chain could be the subject of a separate exercise all together. The Government has a duty and obligation to create a conducive and enabling economic and business climate, as this in turn will improve competitiveness. In particular, there is need for certainty and predictability, besides the provision of an enabling policy framework that encourages andfacilitates trade, investment, entrepreneurship, technology uptake in the C2C value chain which is rooted in regional and continental integration initiatives of COMESA, SADC and the AU. Experience during the period of the inclusive Government or GNU (2009-2013) showed that policy inconsistency, instability, incoherence and reversals did not promote the competitiveness of the C2C value chain.

2. INNOVATION
Government support is needed to support innovation at the firm and national

levels. This can be leveraged through deliberate incorporation of colleges/ universities and SIRDC into various initiatives of industrial R&D. Of particular importance are innovations from SME clothing clusters which can be the driving force of new competitive value chains in the export led growth industrialization. They need institutional support which normally is absent in their growth.

3. PROMOTE COTTON PRODUCTION AS A NATIONAL POVERTY ELIMINATION STRATEGY

Government should declare cotton as a national crop to eliminate poverty throughout the country through both agricultural and rural development programmes. The State has to move with haste to address the failures in the cotton market to attract new growers and persuade the departed cotton growers to return to the fields. In the same breath Government must demand immediate action from the regulator to put order in the chaotic affairs of the CGA. The desirability of announcing pre-planting prices for cotton each season should be given serious consideration by Government based on a formula to be agreed between farmers' representatives, ginners, ZITMA, ZCMA and Government.) Zimbabwe should return to the policy of high quality hand picked cotton with immediate effect as this costs the farmers and the country a premium of 20% on lint exports to global markets. The changes should see production of cotton rebounding to previous levels of around 300 000mt per year by the 2014-15season and increasing consistently thereafter. The production volumes of the crop should be increased to match ginning capacity by bringing in new cotton areas and farmers, and increasing yields from irrigated cotton. This is what will eradicate side marketing of cotton for good.

Government should encourage as much as possible the type of FDI with an integrated approach to the C2C value chain. This is the type of investor who finances cotton growing to the TC firm taking advantage of the synergies of the links but which also enhances competitiveness at the company level.

A NEW MODEL OF PUBLIC, PRIVATE PARTNERSHIPS (PPP)

ARDA has partnered a private sector firm in one of the most successful agro-processing projects of the century, the Chisumbanje Ethanol project, which has resulted in the establishment of an industrial complex – Green Fuels – in a remote part of the country. The PPP should now set an example of how to raise the level of competitiveness of the C2C value chain under globalization. This type of PPP is able to persuade players in both the public and private sectors to view solutions to national economic problems out of self imposed silos where they have so far been very happy to remain. ARDA with its recent experiences in operating with value chains that meet global competitiveness criteria and IDC's experiences as a joint venture partner in the TC industry should be combined and used together with private sector companies in greenfield TC projects of this new model of the sector in either the Lowveld or Middleveld. Besides industrializing

the country-side, the approach helps in spreading industrial establishments from the big cities and towns and taming the rural-urban migration phenomenon.

CONTRACT FARMING AGREEMENTS

Agreements between ginners/merchants/contractors and farmers are weak and opaque because of lack of transparency on the part of the stronger party – the ginner. This calls for the strengthening of the farmer representative bodies to assist the farmers in the negotiations. The regulator, whether it is AMA or the proposed CIMB, must enforce compliance by both parties.

Individual Vs Group Loans Under The Cotton Trust Fund
Both the lender, i.e. Agribank, and its clients, the cotton farmers should weigh the choices between disbursing loans to individuals or to farmer groups. Experience in the country seems to suggest that group lending has less risks than lending to individuals. Peer or group pressure on laggards and others who may want to cheat, or dodge loan repayment is more effective than policing by the credit control unit of a bank.

Tariff Instruments
Government has to enforce existing tariff measures whose lack of enforcement has led to the demise of the industry as a result of smuggling of imports, and corruption. Legislation is in place already but needs to be enforced to curb smuggling and abuse of the Rules of Origin (RoO) provisions contained in Trade Protocols.

Market protection
Government should use WTO provisions to strategically protect the domestic TC market and local industry from unfair competition and de-industrialization. The WTO Agreement has safeguard clauses that allow Zimbabwe to protect infant industries and ensure rural development in the event of market disturbances by imports. The WTO allows a member country to take the following action where trade practices are deemed to be unfair through:

- Anti dumping actions: where imported goods are sold at prices below the exporter's domestic market prices.
- Safeguard measures: emergency measures taken to limit injury caused by imports on the domestic market.
- Countervailing duties: action taken to counter the injury caused to the domestic industry by subsidized imports.

Within SADC, other member states have used these WTO provisions to great effect whilst Zimbabwe has remained a "gentleman" after its neighbours and friends have literally destroyed its TC industry.

Government Procurement from the Local Industry
Within its new export-led growth strategy for the TC industry, Government needs to ensure that it also promotes a domestic market for the local manufacturers subject to price and quality considerations. This is a domestic market access and

niche creation strategy. Government should make it compulsory for the public sector to source their raw materials (fabrics for uniforms for police, army, prisons, hospitals) and finished goods from local textile and clothing manufacturers. Government through its agencies should champion domestic consumption by instituting a '100% Zimbabwean Textiles' for its textile, clothing and related requirements. Government should market and lead the cause to 'Buy Zimbabwean Textiles', with senior Government officials being the 'Brand Champions'.

FIRM LEVEL RECOMMENDATIONS FOR TC INDUSTRY

a. Establish COMESA/SADC regional lint supply into the spinning/weaving/knitting industry and investigate links for fabric production from the region into the clothing manufacture sub-sector. The two trade blocs have a combined population of roughly 600 million and boast a Gross Domestic Product (GDP) of not less than US$ 1 trillion. In 2008 SADC graduated itself to a Free Trade Area (FTA). The two trade blocs have an expressed objective of eliminating hostile customs tariff barriers and non-tariff barriers in trade among countries that are members of these trading blocs. Zimbabwe should use its presence in the councils of these two blocs to lobby for the upholding of the expressed objectives of these organizations.
b. Enhance levels of COMESA/SADC regional business and export contacts through promotional programmes, joint venture collaboration and licensing arrangements. These markets have the advantage of proximity, and in addition they present better opportunities for upgrading in the value chain,along the lines envisaged by Tewari potential for growth and product upgrading than the markets in the USA and the EU because there are less mpediments in moving up the value chain. The buyer-driven commodity chains of the West deliberately retain for themselves the upper portions of the value chain, namely designing, styling, logistics, distribution, etc. Should a firm be desirous to penetrate the USA market on favourable terms, in spite of the AGOA barrier, there are firms in other non-preferential countries that have gone round the barrier by importing polyester fabrics from USA suppliers for use in the manufacture of garments that are later on destined for the USA on free-of-duty terms.
c. Increase levels of investment in domestic spinning and fabric manufacture including diversification of processes and improved quality through acquisition of new equipment and technology.
d. Improve levels of design and diversity availability of fabric produced.
e. Up grade levels of plant modernization and increase productivity levels of labour and efficiencies of machinery.
f. Raise levels of quality control and awareness of international marketing trends amongst clothing manufacturers. There is need to do research in the areas of marketing and strategies of participating in international trade.
g. Zimbabwean TC firms should co-operate more energetically and more purposefully amongst themselves in the future. They should seek to operate

like a horizontally integrated cluster, and tackle quality and market issues in the framework of that structure. Then they can go a step further to integrate vertically, towards the retail sector.

h. Firms need to address corporate governance issues in their board and management circles. A number of TC firms in recent years have failed and witnessed closures largely as a result of defective corporate governance practices: dishonesty, theft, lack of accountability, etc

i. Firms should undertake product development. Staff training should be one of the cornerstones of corprate governance. Firms should develop linkages with Universities and Polytechnics and sponsor research, which could and would assist them to upgrade their products.

BIBLIOGRAPHY

1) Anmol Chaddha, Qahir Dhanani, Ryutaro Murotani, Fode Ndiaye, Ruth Kamukama: Textiles & Apparel Cluster in South Africa(2009) pp.20
2) Baden, Sally and Barber, Catherine (2005), The Impact of the second-hand clothing trade on developing countries, Oxfam.
3) Bennett, Mark. et al. in the Technical Report: Southern Africa's Cotton, Textile and Apparel Sector: A Value Chain Analysis, December, 2011.
4) Blessing M. Chiripanhura, Sneaking up and stumbling back: Textiles Sector Performance Under Crisis Conditions in Zimbabwe, Journal of international Development, J. Int. Dev. 22, 2010.
5) COMESA: 'Regional Strategy for Cotton to Clothing Value Chain', June, 2009
6) Chiripanhura B (2010), *Sneaking up and stumbling back: Textiles Sector Performance Under Crisis Conditions in Zimbabwe*, Journal of international Development (22).
7) Daniel Ndlela and Peter Robinson, Part II, Country Study, United Nations University, 1992
8) de Kare-Silver M (1997), Strategy in Crisis: why Business urgently needs a completely new approach. Palgrave Macmillan.
9) Financial Gazette Friday,14th September, 2012: 'Cotton Moving the Value Chain'Beyond, Afrasia Kingdom Market Report
10) Gereffi,g & Olga Memedovic: 'The Global Apparel Value Chain: What Prospects For Upgrading by Developing Countries' United Nations Industrial Development Organization, Vienna, 2003
11) Gereffi G., 1994, "The Organization of Buyer–Driven Global Commodity Chains: How U.S . Retailers Shape Overseas Production Networks" , in G. Gereff ' Commodity Chains and Global Capitalism', London : Praeger
12) Gilles Joomun: 'The Textile and Clothing Industry In Mauritius' In Herbert Jauch/ Rudolf-Mrtz(ds)
13) Godfrey Kanyenze, The Textile and Clothing Industry in Zimbabwe, Bonn: Friedrich – Ebert Stiftung, 2006.
14) Hurungo J (2010), *An inquiry into how Rhodesia survived under economic sanctions: Lessons for the Zimbabwe Government.*
15) Imani Development, The RATES Center, Nairobi, Kenya, 2003 Chaddha, Qahir Dhanani, Ryutaro Murotani, Fode Ndiaye, Ruth Kamukama (2009),
16) Jackson P (2004), What is the enabling state? The views of textiles and garments entrepreneurs in Zimbabwe. *Journal of International Development, Vol 16 (6)* pp 769- 783.
17) Julio Maldonado 'Cotton Loses its Attraction', GAIN Report on Egypt-Cotton and Products Annual, dated 4/2/2012
18) Kanyenze G (2006), The Textile and Clothing Industry in Zimbabwe, Bonn: Friedrich – Ebert Stiftung
19) Keyser, John C: 'Description of Methodology And Presentation of Templates for Value Chain Analysis', July,2006, a Background paper
20) Koch R (1999). Smart Strategy, Capstone, pp 2 & pp 81.
21) Kondo L, Kanyenze G, Chitambara P, Martens J, 2011. Beyond the enclave, Weaver Press.

22) Ludwig Chizarura: Seatin Cotton Campaign: 'Why the Global Cotton Price is Falling'
23) Mark Benett: 'South Africa's Textile and Apparel Sector: A Value Chain Analysis', 31 December, 2011
24) Masiiwa R, Chihuri C and Muzorori T (2006), The Zeparu Working Paper Series
25) Meenu Tewari (2005), 'The Role of Price and Cost Competitiveness in Apparel Exports, Post – MFA': A Review.
26) Mpofu Tongesai , Mpofu T (2013), Challenges faced by the clothing sector in Zimbabwe, IOSR *Journal of Business and Management,* (IOSR- JBM). Vol 13 (5) PP 83-84
27) Mtetwa E. , Report entitled " Expansion by Cheap Power," 1990 (not published) , filed as a Company document, but no longer confidential, at Sable Chemical Industries Ltd., KweKwe
28) Mugwagwa, Innocent, DBA intake 2: a Value Chain analysis – Cottco & BATz as contributions to the Roundtable Workshops held in Maastricht, May 2008.
29) Muradzikwa S (2001), DPRU Working Papers, No. 01/58, ISBN: 0 – 7992 – 2099- X, University of Cape Town.
30) Ndlela D and Robinson P (1992), Part II, Country Study, United Nations University
31) Ndlela D and Robinson P (1995), Country case studies: Zimbabwe. In Exporting Africa:Technology,TradeandIndustrialisationinSub-NkalaSandMlambo(2012), Textiles and Clothing Sector Brief, ZimTrade.
32) Paul Breton, Frank Flatters, Paul Kalenga (2005): Africa Region Working Paper Series No. 83, Rules of Origin and SADC – World Bank. The case for Change in the Mid-Term review of the Trade Protocol.
33) Porter M (1998), The Competitive Advantage of Nations. Free Press.
34) Poulton.Colin and Hunyani- Mlambo, Benjamin:' The Cotton Sector of Zimbabwe', Prepared for the World Bank.
35) Tewari M (2005), The Role of Price and Cost Competitiveness in Apparel Exports, Post – MFA: A Review.
36) The Israel Cotton Board: 'Cotton In Israel 2010/11 towards a brighter 2011/12', Internet doc info@osta-bremen.de.
37) Vlok,Etienne 'The Textile and Cllothing Industry In South Africa ' in Herbert Jauch/ Rudolf-Merz (Eds) . Bonn: FES, 2006