

The Value Chain of the Cotton Industry in Tajikistan

by

Inoyatullo Kasimov

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Certification page

I, Kasimov Inoyatullo, hereby proclaim that this Thesis my own work with the supervision of Professor Natsuda Kaoru and up to now it has not been presented at any other Universities for the award of degrees. I have acknowledged the used information and literature from other sources by using appropriate referencing way.

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List of Abreviation

ADB - Asian Development Bank

CIS - Commonwealth Independent States

CJSC - Close Joint Stock Company

EDB - Eurasian Development Bank

EU - European Union

EBRD - European Bank for Reconstruction and Development

FIAS - Foreign Investment Advisory Service

FDI - Foreign Direct Investment

FAO - Food and Agriculture Organization

FOB – Freight on board

GDP - Gross Domestic Product

GOT - Government of Tajikistan

GVC - Global Value Chain

GBAO - Gorno-Badakhshan Autonomous Oblast

ICG - International Crises Group

IFI - International Financial Institutions

ICCO - Interchurch Organization for Development Cooperation

ILRF - International Labor Rights Forum

IMF - International Monetary Fund

JSC - Joint Stock Company

JS - Joint Stock

JV - Joint Venture

KG - Kilogram

LLC - Limited Liability Company

MFC - Microfinance Centre

MoEDT - Ministry of Economic Development and Trade

NDS - National Development Strategy

NIE - Newly Industrialized Economies

NBT - National Bank of Tajikistan

OVCD - Organic Value Chain Development

OJSC - Open Joint Stock Company

RT - Republic of Tajikistan

RRS - Regions of Republican Subordination

R&D - Research and Development

SME - Small Middle Enterprise

TSIYC - Tajikistan Social Institute for Youth and Civilization

TJS - Tajik Somoni (currency)

TUGCE -Tajikistan Universal Goods and Commodity Exchange

USSR - Union of Soviet Socialist Republics

UAE - United Arab Emirates

UAE - United Arab Emirates

UNIDO - United Nation Industry Development Organization

US - United States

VC - Value Chain

VAT - Value Added Tax

VCA - Value Chain Analysis

WB - World Bank

WEO - World Economic Outlook

WDI - World Development Indicators

WTO - World Trade Organization

000' - Thousand

Currency unit: 1TJS equals to 100 Diram

Rate 1 US\$ = 4.7637 TJS as of April 16, 2013

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Abstract

Similar to other Central Asian Countries the cotton industry is the most important sector in the Tajikistan economy. To complement the existing production, the Republic has the technical capacity to produce as well as to process cotton within country. Tajikistan's cotton industry has an opportunity for meaningful improvement of the industry, considering the low-cost costs for manufacture, proximity of raw materials and potential for inter-Asian markets for industrial manufacture in China, Turkey, Russia, as well as Europe. Meaningful development of the cotton industry in Tajikistan is possible based on its comparative advantages in cotton production.

Presently, the Republic is creating the policy framework developing the cotton industry by adopted state-sector programs (leadership). Nevertheless, the actions initiated by the Government of Tajikistan (GOT) to foster growth in the cotton sector should be effective in the current fortunate climatic environments; the cotton industry in Tajikistan is still considerably underdeveloped. The Republic of Tajikistan remains an important provider of raw material to other countries as with almost 85 percent of the cotton produced is exported abroad for a minimum price. In addition to exporting raw cotton the industry should make efforts to move into high steps up the value chain.

The growth of the cotton industry would, in turn, support the development of the wider textile and clothing industry, especially, manufacture of consumer goods. In time, this would stimulate foreign trade in general for the RT as a part of a larger effort on integrating the Tajikistan economy into the world economic structure, eventually drawing

the world's trademarks to the manufacture of finished textile commodities. This economic growth could foster socio-economic development by widening employment, sponsoring of modern import substitution. Moreover, modernizing the cotton production sector would encourage export-oriented manufacturing, and develop both the quality and scope of industrial production. This study has the following two research questions: How has the transition in post-Soviet era affected the cotton industry in Tajikistan? And how can the cotton industry value chain be upgraded in Tajikistan? This thesis reviews the qualitative analysis, mainly by using the secondary data to access the factors that cause economic failure to Tajikistan's cotton industry and introduces the policy measures, which can improve the Tajikistan's cotton industry for wider development in her post-independent era. The outcomes of this study would positively assist to sustain the modern development of Tajikistan cotton industry.

Keywords: Republic of Tajikistan, cotton industry, cotton debt, value chain.

Chapter one: Introduction

1.1. Statement of the problem

Cotton is one of the major cultivated-nonfood crops in the world. Globally nearly 20 million tons of cotton fiber are produced annually from over 30 million hectares of cotton producing land. The major cotton producers by rank are China, U.S., Pakistan and Uzbekistan; which combined produce 65 percent (13 million tons) of the total global cotton with the remaining 35 percent produced by different states (Azhimetova, 2011).

Since 1940, world consumption of cotton has been increasingly by 2 percent per year on average. The bulk of the demand for cotton production has come from developing states, which consume most of the world's cotton. Between 1981 and 1998, developing countries accounted for 77 percent of the world demand for cotton and their share is increasing. As of 1999 demand has reached over 80 percent of total demand. A significant part of the cotton is being consumed by cotton producing states as China, U.S., India and Pakistan make up for nearly 56 percent of global demand (Azhimetova, 2011).

Cotton cultivation is a major component in the agricultural development strategies in many developing countries, especially for nations transitioning away from command economies following the collapse of the Soviet Union. In the Central Asian Republic of Tajikistan in particular cotton makes a significant contribution to the country's export growth strategy (Tashrifov, 2005). Cotton has the potential to be an avenue for rural poverty reduction, but the current growing, processing, and marketing

techniques currently being used in the three main Central Asian cotton growing countries, Tajikistan, Turkmenistan, and Uzbekistan, do not maximize the potential gains to be realized by farmers who grow cotton (International Crises Group (ICG), 2005). Instead of being a potential sector for broad-based economic growth, today a huge part of the return from the cotton industry is siphoned into off-shore banks; leaving much money to farmers is apparently to motivate investment and intake within domestic economies (ICG, 2005).

Cotton is the primary crop for Tajikistan's economy, its cultivation accounts for one-third of the total arable area, two-thirds of the cost of production of agricultural crops, and 75 to 90 percent of agricultural exports. In recent years, the growth of productivity and the increase in area occurred beyond by reducing the real producer prices, leading to a slow increase in the cost of production (World Bank, 2005a).

Due to importance of cotton crop to the economy, the government is highly reluctant to relinquish its control of the sector. Although the distribution and processing of products have been transferred to private management, the government continues to regard cotton as strategically important and informal supports production plan, which impose local authorities. Soon after the collapse of the Soviet Union, the cotton industry in Tajikistan has actually started to fall (from 825,000 tons of raw cotton in 1991 to only 310,000 tons in 2010). Production went into decline forcing the government to formulate a reform agenda in order to rebuild the sector as an important component of reviving the economy as a whole.

Given the current prices in the world market, today RT farmers receive at least US\$1.5 thousand per ton of raw cotton. Yet this is not the case. According to the

Customs Service of the RT the average price for exported cotton fiber during January-November 2012 is constituted US\$1.6 thousand/ton. In their report the state that the difference is to the fact that “there are no special markets with market relations function in the [Tajikistan] Republic, where cotton could be sold directly, farmers are forced to supply the harvested cotton to ginning company (these ginning companies are now owned by former futures) in advance, under the signed contracts”.

Currently the cotton industry in Tajikistan has facing constraints, which require urgent solutions. Tajik farmers export 85 percent of the total production of raw unprocessed cotton. However, in doing so, profit margins are slim. Adding value to domestically grown raw cotton could generate larger profits and raise unemployment for the countries citizens contributes for income generation of poor population. Given these potential benefits RT should pursue policies, which would encourage movement up value chain of the cotton industry. This study identifies the specific policies that can be enacted to sponsor the movement up the value chain in the cotton industry most likely to contribute to rapid economic and social growth, and by doing so make Tajikistan a more the competitive participant in the world cotton market.

1.2. Significance of the Research

Development of the cotton industry is a priority task of the RT that regards the sector to have considerable capability for expansion and creating an endowment for export diversification. The current manufacturing output capacity of the RT is still far away from being operated at maximum efficiency. In the textile industry of the production capabilities are utilized solely by 45 percent. Upgrading the current cotton production system could have important positive political, economic and social impacts:

In rural areas cotton cultivation employs the most people by sector and provides for significant share of GDP. As noted in Alikulov (2010) in the case of Uzbekistan cotton industry, there are several positions of cotton importance to the cotton-producing states. From a political perspective, a more robust cotton industry would ensure the Republic with substantial international status (position) and prestige. From social point of view, upgrading the economical performance in the cotton industry could ensure occupations and earnings to major part of rural people. Economically, substantial movement up the cotton value chain would boost the country's overall economy growth. Furthermore, according to Alikulov (2010) an increasing the government's role in the sector could also have the important effect of building foreign currency reserves and strengthening the national currency (Alikulov, 2010). The recommendations of this study may be used within management of value chain of the cotton industry, which ultimately should lead to increased production, competition and upgrading cotton industry, creating jobs and replenishing the state budget.

1.3. Research objectives

- 1) The primary objective of the study is to analyze the current performance of development of the cotton industry;
- 2) To find out the major constraints facing the cotton sector in Tajikistan;
- 3) To suggest the specific policy options available to the government for to upgrade the countries position in cotton industry value chain.

1.4. Research questions

Based on aforementioned objectives the research has following two questions:

- 1) How has the transition in post-Soviet era affected the cotton industry in Tajikistan?
- 2) How can the cotton industry value chain be upgraded in Tajikistan?

1.5. Methodology

This section briefly describes the procedure on how this thesis was conducted and the methodologies and data types used and how they were processed. For this research, we used the qualitative data and analysis techniques using the secondary data sources from the various publications, reviews, books, journals, various academically published papers, working documents, handbooks, presentation, and articles as well as the material studies, IMF and World Bank data, data from internet websites, data from the Agency on statistics under the President of RT, NBT, Ministry of Agriculture, Ministry of Energy and Industry, Ministry of Economic Development and Trade and the Customs Service of the RT etc., to access the factors that cause economic failure to Tajikistan's cotton industry. Moreover, some data is taken from interviews conducted with policy makers of relevant Ministries that deal with this sector. The quantitative data as well as the qualitative information are utilized in this study in order to get at and create the analytic scope, model development. Using these data sources, this thesis was compiled in three stages: information gathering; analysis of the data in the light of the sector dynamics; and presentation of key findings on effective policy opinions that lead to development.

1.6. Organization of study

This thesis consists of six chapters. Chapter one describes the statement of the problem and significance of the study followed by the research objectives. In addition, the first chapter deals with the methodology that has been used in order to carry out the research. Chapter two presents both the theoretical framework and literature reviews. The chapter begins with the theory of Global value chain (GVC). It firstly presents the concept and definition of value chain and then outlines the different activities within entire value chain, and lastly, chapter ends with the industrial upgrading in value chain.

Chapter three examines the Tajikistan economy in general and its cotton industry in particular. Firstly we describe the socio-economic context for the country especially with regards to her macroeconomic stability of Tajikistan in order to comprehend the overall strengths and weaknesses in the economy. From this point, we turn to the current state of Tajikistan cotton industry in more detail. In Chapter four, the study analyzes the development of Tajikistan cotton industry and is divided into the following four sections: cotton production trends, the importance of cotton industry for developing countries especially with regards to the Tajikistan economy. It should be mentioned, that the study utilizes the qualitative data from the secondary sources. Nevertheless, the secondary data, which we found, are highly bounded to study every significant elements of value chain of the cotton industry. The qualitative data deals with descriptions that can be observed but not measured which also interprets the objects in terms of class or character.

In this study, most of the data are gathered from the various publications, reviews, books, journals, various academically published papers, working documents,

handbooks, presentation, and articles as well as the material studies, IMF and World Bank data, data from internet websites, data from the Agency on statistics under the President of RT, NBT, Ministry of Agriculture, Ministry of Energy and Industry, Ministry of Economic Development and Trade and the Customs Service of the RT etc., which will be used as a secondary sources. This chapter also describes the current RT government's policy regarding the cotton industry and the state of competitiveness Tajikistan cotton industry and Tajikistan cotton export market in relation to the global markets.

Chapter five discusses the main challenges of the cotton industry in Tajikistan. At first, the chapter outlines the debt crises that occurred in the Tajikistan cotton sector and then the chapter ends with analysis of current state and problems of the processing industry in Tajikistan. Lastly, Chapter six concludes the thesis with recommendations and suggestions for further study.

Chapter two: Theoretical Framework and Literature Review

This chapter presents both the theoretical framework and literature reviews. The chapter begins with the theory of Global value chain (GVC). It firstly presents the concept and definition of value chain and then outlines the different activities within entire value chain, and lastly, chapter ends with the industrial upgrading in value chain.

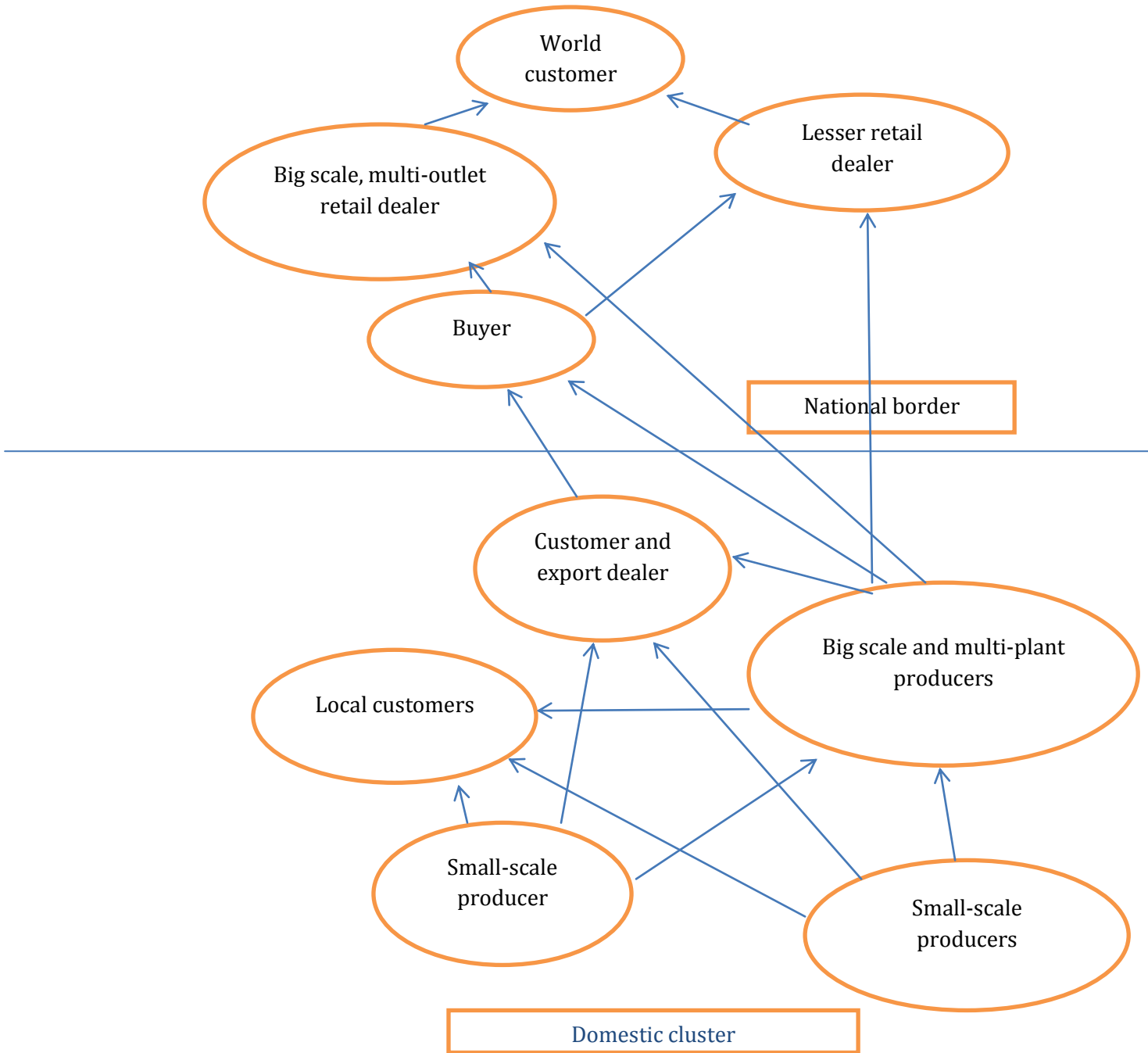
2.1. Theory of Global Value Chain (GVC)

In the last years there has been widespread concept building in the area of value chain (VC) (Lazzarini et al. 2001), imitated in various explanations and analytic methods. Science disciplines, which append to the progress of VC concept, could be categorized into four streams alongside diverse viewpoints on inter-firm relations. According to Trienekens (2011 p. 56-57) analysis of GVC accents on the situation of the top company in VCs and influence relations among emerging state manufacturers and Western marketplaces or multi-national corporations (MNCs). Social chain concept concentrates on the inter-relations among economic and public dealings in (manufacture) linkages comprised of numerous horizontal and upright relations among VC players. Supply chain management analyses governance and regulate of inter-firm processes (movements of goods and services) and finally, new institutional economics analyses the management/formation of dealings amongst businesses.

The literature regarding the theory of Global Value Chains distinguishes between two types of Global Value Chains (GVC), buyer-driven and producer-driven value chains. The dynamics and implications of the two types are significant and distinctive. Typically, “light” technologies can lead to buyer driven chains, while "hard"

technologies with close coordination needs, proprietary technologies, and the like to manufacturer-driven chains (Mamedovic, 2004 p.12). Figure 2.1 describes the main part of global customers and linkages which local manufacturers linked to world buyers.

Figure 2.1: Linking local producers to global customer



Adapted from: Mamedovic (2004)

As part of a wider field of governance, Gereffi (1994) has made a helpful difference concerning two forms of value chains. The primary difference between the two types of supply chains explains the network, where customers at the top of the chain perform the important governing function (Kaplinsky and Morris, 2001 p.32). In the buyer-driven value chains, large customers specializing in branding and marketing are the primary actors creating value addition in a VC. These chains are created in order to arrange, manage and control the manufacture, design and marketing of a product in order to focus on consumer markets of industrialized and developing states and nations with economies in transition. Buyer-driven chains are usually found in labor-intensive industries such as in agro-food production, textiles, footwear, clothing, furniture and toys Mamedovic (2004 p.12). As such they are, important for emerging economies including the transitional economies of Central Asia.

The second type of Value Chain, called producer-driven value chains describes a chain in which the manufacturers in the chain perform the function of managing the diverse links usually through the use of advanced technologies. Here manufacturers are responsible for the care and competence of their purveyors and their customers. These chains are typical for mid-and high-tech industries including automotive, electronics, telecommunications and so forth. Producers in developing countries, as a rule, are not part of these producer driven supply chains with the exception of East Asian newly industrialized economies (NIEs) of Korea, Taiwan, Malaysia, and later China, which have shifted from the buyer to the manufacturer-driven chains (such as automobiles, electronics, and telecommunications) (Mamedovic, 2004 p.12). Gereffi (1999b) noted that the manufacturer driven chains tend to be created by foreign direct investment

(FDI), than buyer driven chains. He also suggests that diverse kinds of value chains linked by diverse kinds of manufacture structures.

2.1.1. Definition of value chain

Looking at VC helps understand the strengths and weaknesses of different firms and states specializing in manufacturing (Kaplinsky and Morris, 2001 p.12). The VCA is a useful tool in understanding the global distribution of wealth in a globalized world. Moreover, value chain analysis (VCA) enables analysts to identify the specific policies and measures that can be improved in the value chain to make firms and national economies more competitive (Kaplinsky and Morris, 2001 p.14). In a similar vein, the main task of VCA is identifying the most limiting bottlenecks in the supply chain VCA can improve planning efforts and help to define productions targets, and outline specific policies to achieve those targets (Joshi and Gurung, 2009 p.40). The VCA approach estimates and reports the value added to the input during either the manufacture or service stage, as raw material inputs are gradually developed into consumer products, consumed by the final consumer. VCA usually comprises the identification and displaying the relations of four kinds of functions: (i) the performances conducted at every phase of handling; (ii), the cost of inputs, handling time, productions, and ultimate value added; (iii) the dimensional relations, as length and logistics, of the performances, and (iv), the pattern of economic dealers, like distributors, the manufacturers, and the merchants (Subramanian, 2007, p. ix-x).

VC is the set of producers, processors, traders and distributors of a product. Enterprises are connecting a number of contracts on the basis of business transactions, in which the product is transferred from producers to consumers. Based on the

definition from the Handbook for Value Chain Research (Kaplinsky and Morris, 2001 p.4), the term Value Chain refers to the full range of activities that need to bring a product or service from extraction, through the various phases of production, to distribution and finally to the end-user consumer and to its disposal after use. Other including Olomola and <<the other guys below>> have also contributed to the concept of VC. In major aspect of the VC research is focused on the margin that customers are willing to pay for at different links along the chain until the complete product (Olomola, 2007 p.27). Even though numerous techniques are undertaken, along a value chain substantially introduces firms, in which diverse manufacturers and retailers operate on their corresponding entrepreneurships to follow single or many end marketplaces (Olomola, 2007 p.27). VC is a classification of actions linked to business, with the providing of certain materials aimed at specific outcome to initial manufacture, processing, marketing and supply to ultimate consumption. From an institutional point of view, a VC can be seen as the arrangement for specific activities and networked organizations of manufacturers, processors, distributors, and suppliers who work with one another in order to carry out these functions (Joshi and Gurung, 2009 p.39).

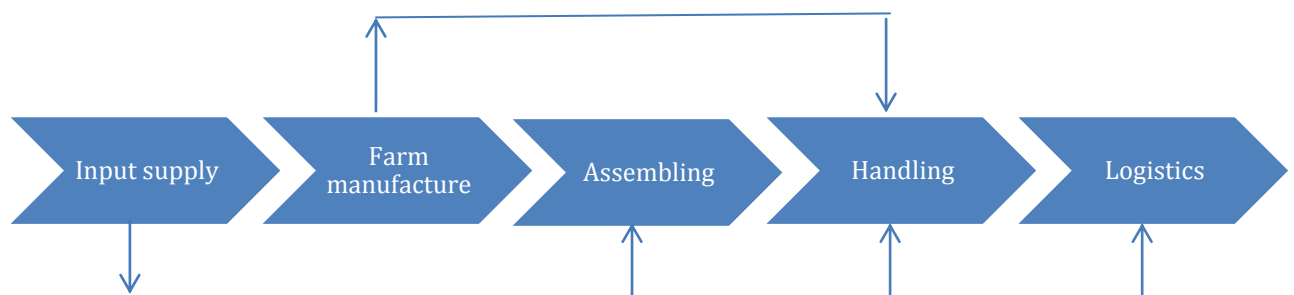
The VC concept encompasses all the stages of production between extraction, and includes as inputs all of the factors of an economy including, comprising land, labour, assets, technology, material, and economic performances as well as input supply, manufacturing, conversion, processing, transportation, trading and allocation needed to build, market and bring output to a specific destination (Olomola, 2007 p.27). Richter (2005) suggest that VC is methodically taking all steps of the production process in the future, it analyze the relationships and information flows, it shows the advantages and disadvantages, even missing due to process, the lines between national

and international network, the requirements of the buyer, international standard, and it also allows international norm and so forth.

2.2. Diverse activities within the entire value chain

Tchale and Keyser (2010 p.8) have defined distinct stages of agricultural VC, (figure 2.2). Here we can see that the flow from the input supply to other subsequent stages. At each stage we can see that there are many other stakeholders in agricultural production most of which are far from the farm where the food itself is grown. However in some cases in agricultural production farmers themselves bring their crops directly to a processing facility or to the consumer themselves. However, even in such cases there remains a value chain in place.

Figure 2.2: Main stages of the value chain

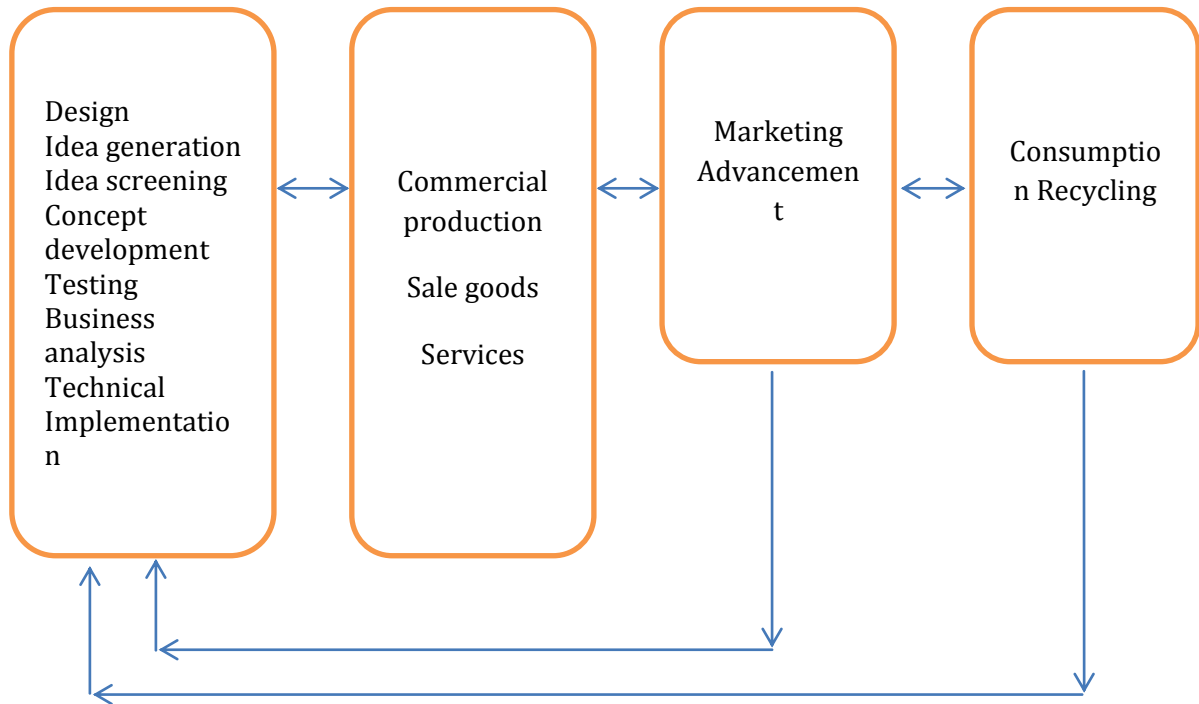


Adapted from: Tchale and Keyser (2010 p.8) and Olomola, (2007 p.28)

Specifically, VC is a tool for building different events in order to increase value in the production phase. Mostly, VC comprises three or more of the subsequent stages: manufacturers, processors, suppliers, dealer, wholesalers, retailers and buyers. The VC theory is considered like an actor-oriented method and is considered very applicable in following movements of goods, displaying the value added steps, finding main participants and the relations among other players in the chain (Schmitz, 2005).

Kaplinsky and Morris (2001 p.4) present the ranges of activities within each link of the value chain (figure 2.3).

Figure 2.3: Different links in a value chain



Adapted from: Kaplinsky and Morris (2001, p.4)

Although the value chains as shown above are quite simple, Kaplinsky and Morris (2001 p.4) argue that in reality the VCs are often far more complicated and there are usually many more links in the chain.

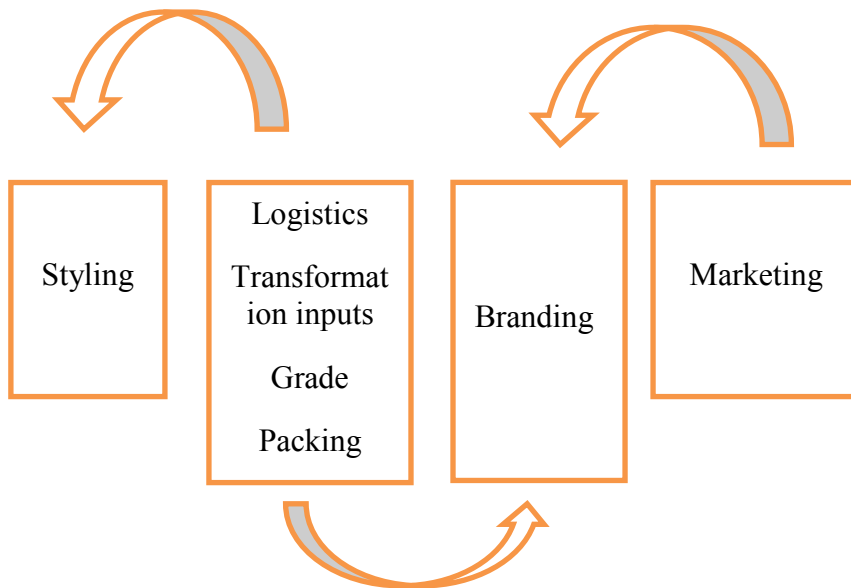
2.3. Industrial upgrading in value chain

The main fact supporting GVC is the ‘industrial upgrading’. The part of the global customers in industrial upgrading is important. Based on Kaplinsky and Morris (2001) argument, the domestic companies could favor via involving themselves towards

the GVC. They assert that companies may upgrade their state via taking part in the GVC accentuating on rising effectiveness in production, increasing their competitive position and concentrating on upward value addition performances. Further, Kaplinsky and Morris (2001, p. 38) present four potential paths that companies may accept in achieving the goal of upgrading, specifically:

- Procedure upgrading: in Procedure upgrading firms raising the effectiveness of domestic processes by introducing modern production system and technology (transforming input to output in the internal process).
- Production upgrading: is the process where new productions are developed or a way to produce faster than competitors is found.
- Dynamical upgrading: growing value added by replacement the combine of performances held in the company (for instance, take accountability for, or outsourcing accountancy, logistics and grade responsibilities) or displacement the trajectory of performances to various links within value chain (for instance, from production to styling) (figure 2.4).
- Network upgrading: shifting to a modern value chain (for instance, companies switched from the production of one types of manufacturing to another more up-to-dated one).

Figure 2.4: Dynamical upgrading within value chain



Dynamical upgrading is changing the combine of performances and among links

Adapted from: Kaplinsky and Morris (2001, p. 38)

If summing up literature reviews on VC, it is suggested that VCA may assist Tajik farmers to find out the connections amongst producers, exporters and global marketplaces, to detect obstacles, which limit the entire chain to contend in the marketplace, and to simplify the interactions in the chain from buyers to the producers. Based on previous researches on VC, analysis of VC may be used to identify the distribution of profits amongst customers, exporters and producers in the chain. The present study attempts to identify the specific policies that can be enacted to sponsor the movement up the value chain in the Tajikistan cotton industry.

Chapter three: Tajikistan economy

This chapter presents Tajikistan economy and outlines its cotton industry. First it presents the political and economic context of Tajikistan in order to highlight the strengths and weaknesses of the economy. The chapter ends with the current situation of the Tajikistan cotton industry.

3.1. Country context

As with any agricultural crop, the physical and human geography of the region where it is grown plays an important part in the success or failure of the industry. Situated in Central Asia (CA), Tajikistan is a landlocked country surrounded by Kyrgyzstan, Afghanistan, Uzbekistan and China (Figure 3.1). Tajikistan has a population of 7.6 million (table 3.1). The ethnic composition of the country consists of 65 percent of Tajiks, Uzbeks 25 percent, 3 percent Russian and 7 percent other including such, Tatars, Kyrgyz and Koreans. Reflecting its ethnic diversity there is also religious and linguistic diversity. The official language is Tajik, which Persian based. About 80 percent of the population is Sunni Muslim, and the rest are Ismailia, Orthodox and Christians. 73 percent of the population is situated in rural area, with majority involved in the agricultural sector (GOT, 2007).

The geography of the RT is mountainous with heights varying between 300 and 7,495 meters above sea level. Mountains belonging to the highest ranges of Central Asia make up 93 percent of the total area of the country. The RT has an abundance of lake and rivers. There are about 947 rivers longer than 10 kilometers with a total length of more than 28,500 kilometers. The rivers account for 60 percent of all hydro-resources of

central Asia. Country is predominantly mountainous, about 50 percent of the country at an altitude of 3,000 meters above sea level and higher. Out of the total area of 14.3 million hectares (ha), only 4.3 million hectares is agricultural land and only 0.8 million hectares is arable land. Administratively, Republic is divided into four main regions (provinces): Sughd, Khatlon, Gorno-Badakhshan (GBO) and Regions of Republican Subordination (RRS) (including Dushanbe, the capital city) (GOT, 2007).

Figure 3.1: Map of Tajikistan



Source: <http://www.nationsonline.org/>

As such the agriculture accounts for 75 percent of total employment and 23 percent of total Gross Domestic Product (GDP). However, only about 7 percent of the

land surface is arable in Tajikistan due to its mountainous terrain, lack of water and poor irrigation system. 46 percent of Tajiks live below the poverty line and 40-60 percentiles of the population need access to safe drinking water. Chronic under nutrition, or stunting, affects about one in three children under age five.

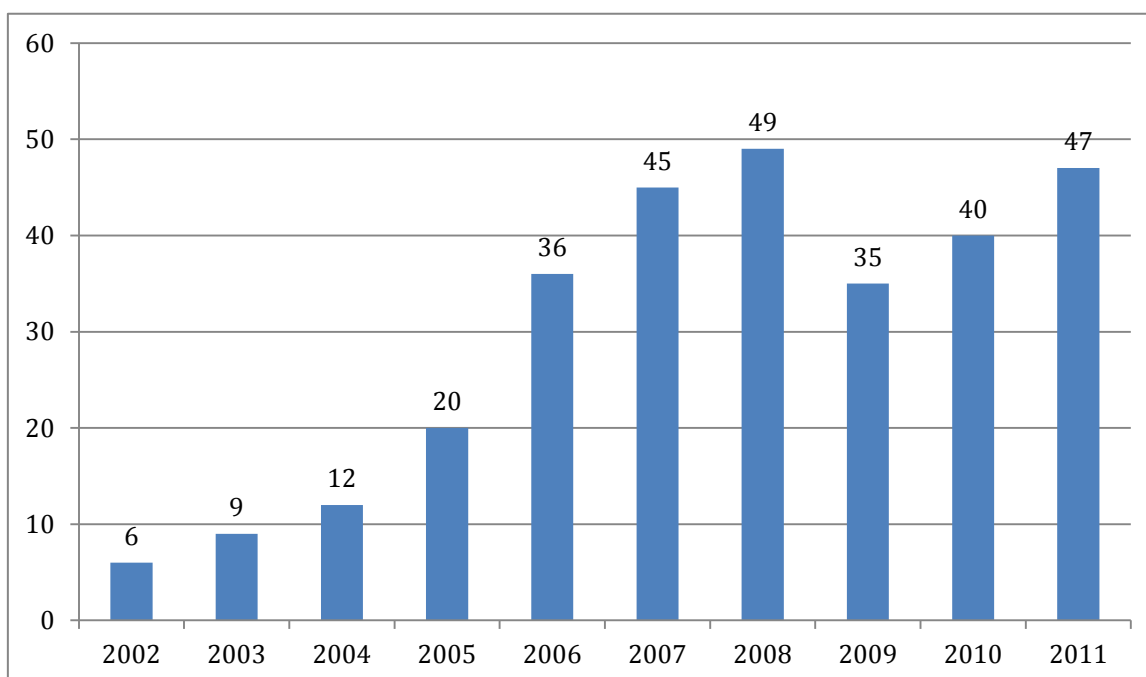
Table 3.1: Trends of selected Development indicators of Tajikistan (2000-2011)

Indicators	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Population (million)	6.2	6.2	6.3	6.3	6.4	6.5	6.5	6.6	6.7	6.8	6.9	7.6
Life expectancy (years)	64	64	64	65	65	66	66	66	67	67	67	68
GDP (current mln/US\$)	861	1,080	1,221	1,554	2,076	2,312	2,830	3,719	5,161	4,978	5,641	6,522
GDP growth (annual %)	8.3	10.2	9.1	10.2	10.6	10.5	-15.6	21.7	21.2	3.9	6.5	7.4
GDP per capita (current US\$)	139.4	173.4	194.3	245.3	324.8	358.3	433.8	563.2	771.3	733.9	820.2	934.8
GDP per capita, PPP (constant 2005 US\$)	969	1,057	1,144	1,250	1,371	1,500	1,251	1,505	1,801	1,846	1,938	2,052

Adapted from: World Bank, World Development Indicator Database (Accessed 12 May, 2013).

Due to limited economic prospects at home, around a million Tajik people working abroad. The high amount of emigration and weakness in the economy have made RT the world's most remittance reliant economy in the world in terms of percentage of the economy based on remittances according to World Bank (figure 3.2). In 2011 the remittance inflow in republic made up more than US\$3 billion, which is 47 percent of GDP. Claiming steadily since 2002 with a brief lull in 2009 and 2010.

Figure 3.2: Tajikistan migrant remittances (as % of GDP)



Adapted from: World Bank, World Development Indicators Database (Accessed 21 December 2012)

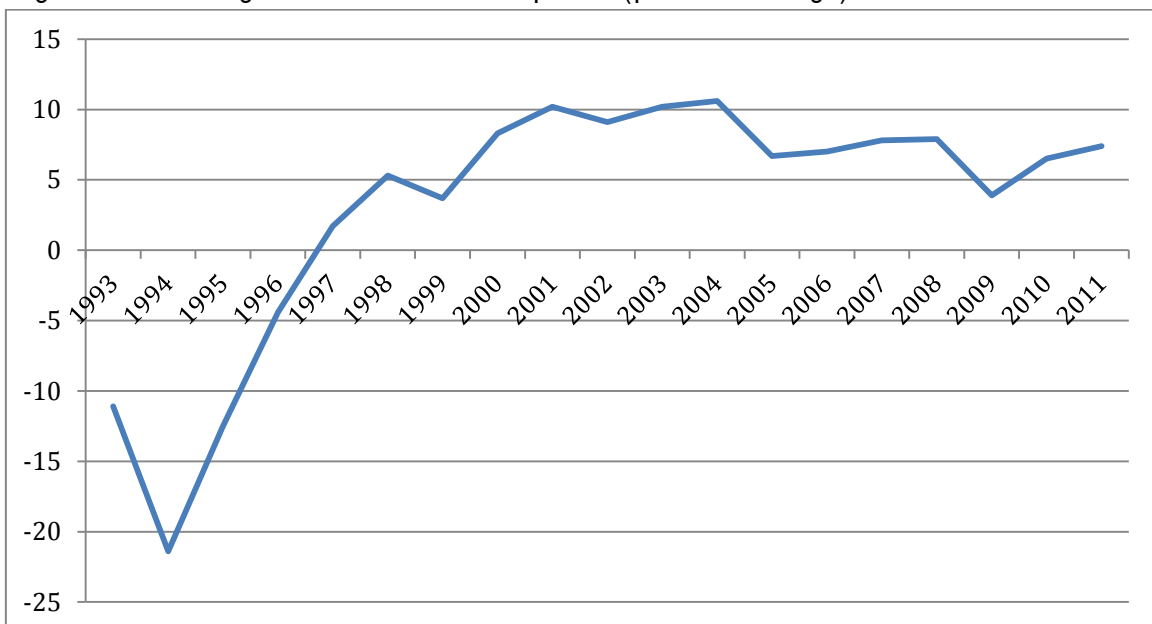
This reliance on remittances reflects the continuing transitional nature of the country itself. Tajikistan is a post-Soviet country, which has significant food security needs in which 46.7 percent of the population lives under poverty line. Independence from the Soviet Union in 1991 led to a subsequent loss of funds transfers from the central government of the USSR and led to social and economic disruption caused by

the Civil war (1992-1997) led to a sharp decline in living standards, matched by weak exports and an erosion of institutional capacity. These factors also delayed the start of a meaningful transition from the command and control economy of the previous era to a modern market economy. Only when political stability was finally achieved in 1997 was a meaningful economic restructuring possible

3.2. Macroeconomic stability

According to the World Economic Outlook (WEO) GDP growth rate (in constant prices) in 1993 had a negative 11.1 percent annual shrinkage of the economy. By 1994 the economy was shrinking at -21.4 percent annually. Much of this economic loss was due to the civil war following which, Tajikistan's economy began to recover with a modest 1.7 positive GDP growth rate becoming in 1997 GDP From which the economy has not reversed, seeing positive growth rates since that the time as show in figure 3.3.

Figure 3.3: GDP growth rate/constant prices (percent change) 1993-2011



Adapted from: World Economic Outlook (WEO) Database, IMF

The sustained economic recovery beginning in 1998 was related to improved political stability, which in turn strengthened the macroeconomic environment and allowed for substantial support from external institutions. These factors have led to much higher annual economic growth rates of 8-10 percent per year since 2000. Prudent fiscal management has maintained lower budget deficit and currency stability as inflation fell from 38 percent in 2001 to 6.4 in 2012. The exchange rate with the US dollar had stable tendency of variation from 4.7585 TJS at the beginning year to 4.7644 TJS in the end of the year a scant 0.1 percent loss against the US dollar (National Bank of Tajikistan website: <http://www.nbt.tj>). External debt fell from 35.8 percent in 2009 to 32.5 percent of GDP in 2011 (GOT, 2012). The Republic has taken steps towards open trade policies by establishing tariffs rates near 7.5 percent. This combination of political and macroeconomic stability has provided a solid foundation for future economic growth, which was confirmed by the IMF forecasts growth of 7-8 percent per year during 2007-2008 (GOT, 2007).

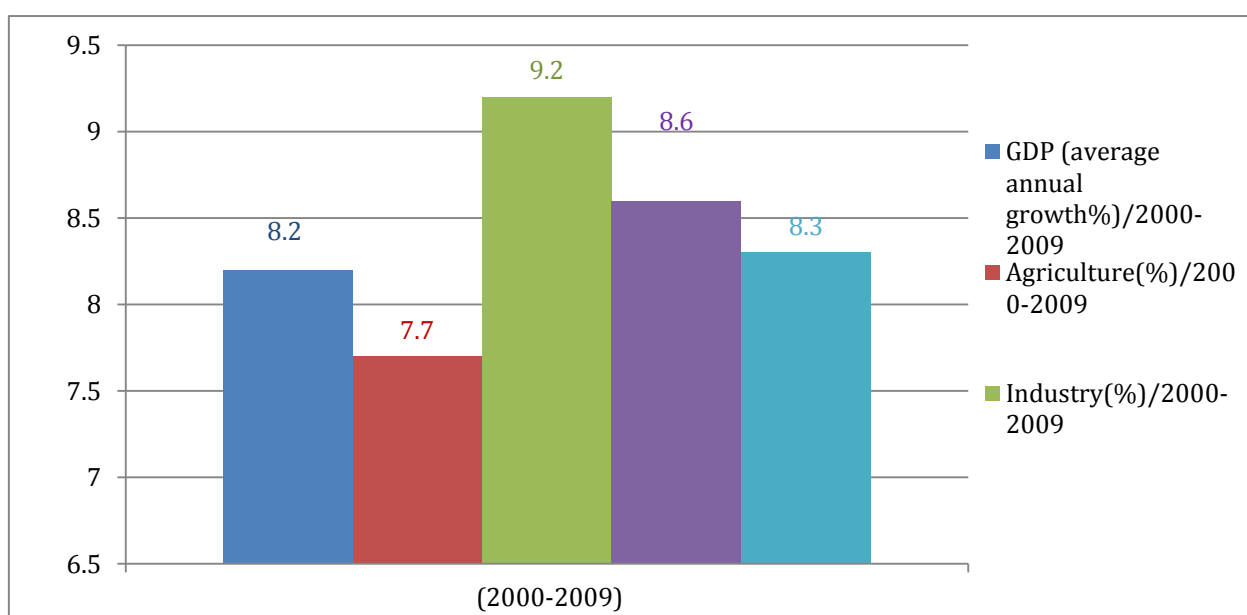
According to the World Bank recent economic performance in Tajikistan can be divided into two distinct time periods, between 1990-2000 and the period between 2000-2009 based on overall GDP growth figures, the average annual growth of GDP from 1990 to 2000 in Tajikistan was estimated -10.4 percent. From 2000 to 2009 GDP growth rate increased to 8.2 percent. For the same period of time from 1990 to 2000 economic performance of Tajikistan's agriculture sector declined by -6.8 percent (during 2000-2009 7.7 percent), Industry -11.4 percent (9.2 percent), Manufacturing -12.6 percent (8.6 percent) and services -10.8 percent (8.3). In order to put this into the wider context of the region, Table 3.2 shows the economic performance of Tajikistan, Uzbekistan, Kyrgyz Republic and Turkmenistan during 1990-2000 and 2000-2009,

while the Figure 3.4 presents the average annual growth of the Structure of Tajikistan Economy in percentage of GDP for 2000-2009.

Table 3.2: Economic Structure of the four Central Asian countries (average annual growth in percentage of GDP for the period of times 1990-2000 and 2000-2009)

	GDP (average annual growth %)		Agriculture (%)		Industry (%)		Manufacturing (%)		Services (%)	
	1990-2000	2000-2009	1990-2000	2000-2009	1990-2000	2000-2009	1990-2000	2000-2009	1990-2000	2000-2009
Tajikistan	-10.4	8.2	-6.8	7.7	-11.4	9.2	-12.6	8.6	-10.8	8.3
Uzbekistan	-0.2	6.9	0.5	6.5	-3.4	4.7	0.7	2.3	0.4	8.5
Kyrgyz Republic	-4.1	4.6	1.5	1.8	-10.3	0.8	-7.5	-1.2	-5.2	7.9
Turkmenistan	-4.9	13.9	-4.7	14.3	-2.7	30.3	-	-	-5.8	16

Figure 3.4: Structure of Tajikistan Economy (average annual growth in percentage of GDP for the period of times 2000-2009)



Adapted from: World Bank, World Development Indicators Database

According to the World Development Indicators GDP composition by sectors in 2011 is agriculture made up 20 percent of the total economy, industry 20 and services contribution to GDP is 60 percent. Between 2000-2011 the share of agriculture and industry slightly decreased while the share of services grew largely due to remittances (see table 3.3).

Table 3.3: Structure of Tajikistan economy 2000-2011 (value added percent of GDP)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Agriculture	27	26	25	27	22	24	25	22	25	22	21	20
Industry	39	40	39	37	32	31	27	27	27	24	22	20
Manufacture	34	34	34	31	24	24	19	15	12	11	10	8
Services	34	34	36	35	47	45	48	50	48	54	57	60

Adapted from: World Bank, World Development Indicators (Accessed 26 December, 2012).

According to the analysis of the economic situation in the country in 2012, despite the negative impact of external factors the stable macroeconomic growth was maintained. According to the National Bank of Tajikistan the amount of GDP in 2012 made up 36.2 billion TJS, and its real growth reached 7.5 percent (7.4 percent in 2011). The economic growth was observed almost in all sectors of the economy, including an increase in the service sector at 15.3 percent, trade and retail sales of 16.9 percent, the production of agricultural products 10.4 percent and the industrial production by 10.4

percent. The volume of industrial production has made 9.8 billion TJS. The increase of its volume mainly has contributed by rising mining industry at 24 percent, manufacturing industry by 9.5 percent and electricity generation by 5.7 percent. Total agricultural output made up 16.5 billion TJS. Of the total agricultural production the 71.8 percent made up crop production and 28.2 percent the livestock sector. At the same time, the total volume of investment in the country's construction sector has invested 4.3 billion TJS, decreasing by 24.4 percent compared to the year 2011.

The total sum of paid services made up 8.9 billion TJS, 15.1 percent of which made up the public sector and 84.9 percent enterprises of private sector. The largest share of services belong to household services by 40.4 percent, passenger transportation services 22.7 percent, communication services 13.8 percent, education and health services 8.1 percent and 2.7 percent respectively. The share of the GDP per capita, which is an important indicator of human wellbeing, at the end of 2012, has made TJS 4.6 thousand that in comparison with 2011 is more on 18.6 percent.

In 2012, the long-term impact on the price level increase in the world market and increase customs duties on exports of petroleum products from the exporting countries as an external factor, affecting the prices of imported goods, and this contributed to higher inflation in the country. The situation has caused an increase in production costs and contributed to the rise in consumer prices in the country. In 2012, the inflation rate was 6.4 percent by comparison with year 2011 it decreased by 2.9 percentage points. The current inflation has been caused by the rise in prices for foodstuffs of 5.6 percent, non-food goods and services 6.7 percent and 9.6 percent respectively.

Table 3.4: Change of inflation rate (%) 2001-2011

Indicator	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Inflation, consumer prices (annual %)	39	12	16	7	7	10	13	20	6	6	12

Adapted from: World Development Indicators (online) Accessed May 12, 2013

From the political and macroeconomic stability more assured, now government is emphasizing more on the reform of policies, institutions and products and factor markets, all of which are substantial for sustainable growth. These measures have a high priority in the government's National Development Strategy (NDS) and in the Living Standards Improvement Strategy of Tajikistan for 2013-2015. All these reforms actively supported by the donor community. The WB supports agrarian reform based on the strategy of agricultural sector, which has been prepared in recent years with the government, which detects the completion of land privatization and the reform of the cotton sector as a basis for sustainable agricultural growth. To support this strategy, the WB has provided ongoing support for the privatization of land and preparation of a project to strengthen the cotton sector (GOT, 2007).

3.3. Tajikistan cotton industry

Cotton is a substantial cash culture in most developing countries both at the firm and country level. It is particularly important in regards to its contribution to family income (Baffes, 2005). In a number of countries, cotton supports as much as 40 percent of commodity exports and around 5 percent of GDP. For instance, in 1998-99 in five

West African cotton-manufacturing states (Benin, Burkina Faso, Chad, Mali, and Togo) its contribution was between 30 and 44 percent of the total commodity exports. The similar figures for Uzbekistan, Tajikistan and Turkmenistan were 32, 15 and 12 percent, respectively (Baffes, 2005). Cotton's contribution to GDP was 3.6 and 8.2 percent for Turkmenistan and Tajikistan respectively (Olomola, 2007).

Two thirds of the Tajikistan's population is involved in the agrarian sector and the cotton industry is the largest employer in it. Cotton accounts for a significant portion of Tajikistan's GDP and its export ensures significant currency proceeds (ILRF and TSIYC, 2007). In the mid 1970s Tajik cotton growers had the top productivity in the world - 33 MT/ha - and at the peak in 1980 produced 1 million tons of cottonseed at a record yield – 34.5 MT/ha (Bazarov, 2010 p.2).

It is known that the climate of Tajikistan is appropriate for the cultivation and development of cotton crop. On this basis, according to the "Program for development of cotton-growing for 2010-2014", using advanced farming techniques; such as quality seeds and high yielding varieties of cotton with high quality fiber, mineral and organic fertilizers and green manure (green fertilizer plants), biological control methods, modern irrigation and irrigation systems, a technical and service base, full provision of fuels and lubricants, as well as the development of infrastructure of social life of the villages; by 2014 the cotton crop area will be maintained in the range of 200 thousand hectares and cotton yield will be increased up to 30 tons per hectare, and performance points of the "Program of complete processing of cotton fiber to be produced in the Republic of Tajikistan for the period up to 2015" will be attained.

Before the republic's independence, the Soviet Union entirely funded the republic's cotton industry. The Soviet Central Planning Authority established production quotas intended for the republic every year. Tajikistan's Ministry of Agriculture was given inputs comprising infrastructure facilities to propose production used for the year. Agro Prom and the Ministry of Agriculture were accountable for allocating the fund required to meet target quotas set by the government to local governors known as Hukumats (Local governments) (ILRF and TSIYC, 2007).

The targets set to the Hukumats were established on the given quality and production capabilities decided by the Ministry, however the Hukumats paid little attention to these recommendations and simply passed unrealistic quotas on to farm managers. The farm managers were nominated by Hukumats and elected by their workers, who received salaries. Together the farm leaders and employees received the necessary products by subsidized prices. The raw cotton was sent to chosen ginneries for handling and then to the applicable Soviet authorities (ILRF and TSIYC, 2007). After the interior conflict (1992-97), the GOT lacked the required the funds needed to maintain cotton industry. This factor caused a decline in cotton production within the country. As a result, independent financiers emerged to provide an alternative means of financing for the country's industry (ILRF and TSIYC, 2007).

To recompense for the failure in cotton manufacture due to the civil war, the GOT started to look for support prospects from international foundations. In 1996, Paul Reinhart, the second largest cotton trader in the world, provided the first loan of US\$1 million. The money was sent to a private mediator through the Agroinvest Bank. According to the production plan established for certain agricultural farms by the Hukumats, head of the farms receives seed, fertilizer and fuel, as well as a certain

amount of cash for the repair of vehicles and payment of staff salaries from investor. The contract for the series production of sets and return cash advances through the delivery of a certain amount of cotton (World Bank, 2004). The program has been greatly expanded since, and Paul Reinhart has invested more than US\$200 million in the cotton sector in Tajikistan (ADB, 2004b). Other cotton traders from the US and Russia have entered into similar agreements for financing with domestic investors. Initially, the National Bank of Tajikistan (NBT) provided the guarantee of the foreign debt of the cotton, as most of the funding went to collective and state farms.

Given the significance of the cotton industry, the present pattern of low yield, low farm revenue and undue debt is a severe problem to the growth of the farming sector and rural poverty elimination in Tajikistan. Unpaid debt is the most evident aspect of this crisis, paralyzing private sector ginneries and export-promoting managers who offer the most regular investment and it constrains the entry for cotton growers into alternate marketplaces. Furthermore, the denationalization of cooperative farms has been decelerated, since the growth of other foundations of countryside investment has been inhibited, marketplaces aimed at farming inputs are distorted, and the majority of Tajik farmers are living in severe poverty (Bazarov, 2010 p.4). In order to support the cotton sector, the World Bank Board of Executive Directors on May 30, 2007 approved a US\$15 million loan for the Cotton Sector Recovery Project in Tajikistan. The project is funded by the International Development Association, is dedicated to improving the livelihood of cotton growers and supporting cotton production in chosen low-income regions of Tajikistan. The project was aimed at assisting the GOT in solving the debt

crisis amongst cotton farmers, improving the policy environment and increasing cotton production and profitability.¹

In order to develop the cotton industry, the GOT did not promote increasing the size of harvested land, rather it chose to use tax and business incentives to stimulate domestic industries. This is to stimulate a shift from a purely “raw-material” industry to a more integrated approach including the manufacture and export of cotton fiber and textiles (EDB, 2009). According to the development targets of the Trade Promotion Program in Tajikistan, the increase in volumes of cotton fiber processed locally should reach 40 percent by 2015. For comparison, Uzbekistan is planning by 2015 to increase the volume of internal cotton-fiber processing by 70 percent (Prime Minister of Uzbekistan, at the opening the Eighth International Uzbek Cotton and Textile Fair, Tashkent, October 2012). In realizing this task, the GOT found a reliable partner in the Eurasian Development Bank (EDB). Over the last ten years, the partner states of the Bank, principally Russia, have been demonstrating increased demand for cotton fiber. In recent years there has been good demand for high-grade yarn from Russian textile manufacturers. The traditional purveyors of yarn are the CIS republics, predominantly Uzbekistan, Turkey and India. Tajikistan aims to join this group. In 2009, the EDB financed the construction in Tajikistan of a facility capable of producing 5,000 tons per year of high-quality cotton yarn (the total project cost was US\$29.75 million with the EDB’s commitment of US\$22.57 million) (EDB, 2009). Also the GOT and the ADB collaborated on a project where a number of self-regulating warehouse facilities would

¹ Source: <http://web.worldbank.org>

be built and run by the private sector (GOT, 2007). Table 3.5 briefly describes the donor programs related to the development of the cotton industry in Tajikistan.

Table 3.5: The brief description of donor programs whose activities may be applicable to the cotton industry.

ADB	Cotton Processing and Market Development Project	Cotton (SME)	To provide a commercial solution to improved value chain efficiency in the largest agricultural sub-sector, with the aim of enhancing processing quality and capacity; finance is covered by grants to micro-finance institutions	2009 -
ADB	Sustainable Cotton Subsector Project	Cotton (Finance)	To improve financial viability of debt restructured cotton farms of Yovon, Vose, Mastchoh, and Zafarabad rayons	2007 – 2010
World Bank	Cotton Sector Recovery	Cotton (Private Sector Development)	To improve the livelihood of cotton farmers and create the conditions for sustainable growth of cotton production in selected, low income areas of Tajikistan, through debt resolution, an improved policy environment, and increased cotton output and profitability	2007 – 2013

Adapted from: Trade Promotion Program in Tajikistan, Textiles & Clothing Sector Export Development Strategy Tajikistan November 25, 2010

The GOT is trying to liven up the sector through upgrading and efficient development. Discussion regarding the development of the cotton industry in Tajikistan is presented in chapter four.

Chapter four: Analysis of the development of Tajikistan's cotton industry

This chapter analyzes the development of Tajikistan's cotton industry and consists of five sections. First, it describes cotton production trends and importance of the cotton industry for developing countries and for Tajikistan in particular. Then the chapter reviews the existing government policy in the cotton industry. Further, it presents the competitiveness of Tajikistan's cotton industry by comparing it to some neighboring countries. The chapter ends with the export market for Tajikistan cotton industry.

4.1. Cotton Production trends

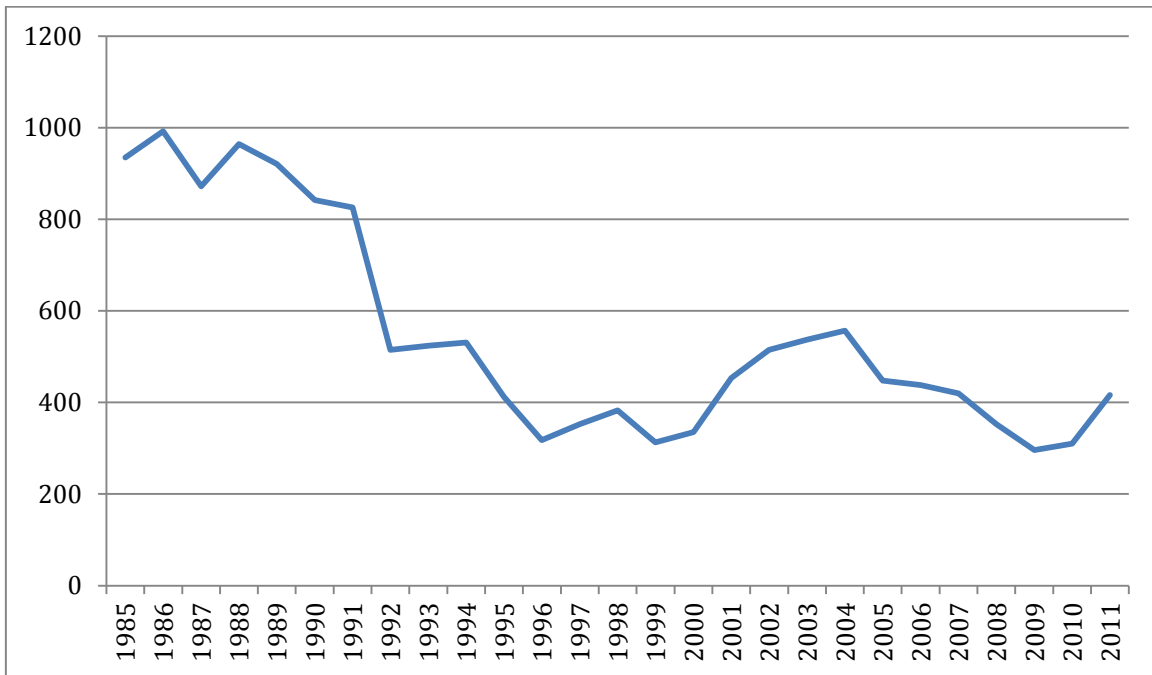
Cotton is the most important crop in Tajikistan's rural economy and there is great potential to expand its importance through the expansion of the cotton sector. (Bazarov, 2010 p.2). The collapse of the Soviet Union in 1991 and the 1992-97 Civil War created serious difficulties in the early years of the RT. Cotton production declined in the early 1990s. Bazarov (2010) notes that the cause of a decline in volume of cotton production is a decrease in arable land and low yield, a fall of prices in the global cotton marketplace and an increase of the prices of main inputs. In 1993, Tajikistan produced approximately 750,000 tons, a decline of 30 percent from the 1991 level. Though cotton is important to Tajikistan's economy, the state's rewards for cotton production in the Soviet structure were frustrating. The GOT endeavored to develop the production of the country's key cash yield. For instance, in 1995 it required growth of 10,000 hectares in acreage allotted to cotton compared the previous year.

Following the breakdown of the Soviet Union, cotton producers of the RT faced many difficulties. The material and technical base disruption and failure to take measures to protect the agricultural industry caused a decline of the cotton industry. In 1991, the RT harvested 825,000 tons of raw cotton but in 2010, the figure was only 310,000 tons (according to the Cotton Fact Sheet Uzbekistan in 2010/11 harvest season, Uzbekistan produced 1 million tons of cotton). Sown area of cotton in this period fell from 350,000 hectares to around 200,000 (with a view to the development of horticulture, the lands were allocated for fruit plants) (for comparison, in Uzbekistan about 1.3 million hectares were planted with cotton, yielding an estimated 752 kilograms/hectare of lint in 2010/11).² Due to poor quality of cotton seed and failure to improve agro techniques, the average cotton yields also went declined, from 27-28 to 14-15 quintals /1ha.³ Figures 4.1 and 4.2 below describe the dynamic of production and yield of raw cotton between 1985 and 2011.

² Source: Cotton Fact Sheet Uzbekistan, 2011, <http://www.icac.org>, Accessed 29 December 2012

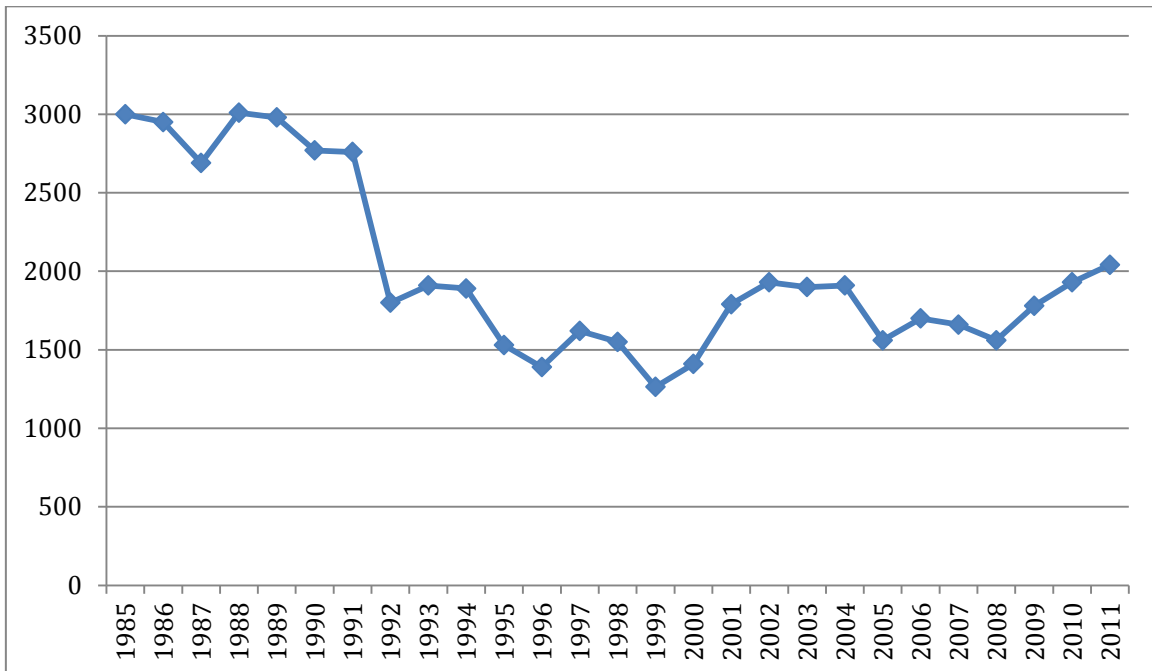
³ Source: "Program for development of cotton-growing for 2010-2014"

Figure 4.1: Production of raw cotton 1985-2011 (thousand of tons)



Adapted from: Agency on statistics under the President of RT

Figure 4.2: Yield of raw cotton 1985-2011 (kg/hectare)



Adapted from: Agency on statistics under the President of RT

The main cause of the deterioration of the cotton industry in the aggregate is due to destruction of the material and technical base, including the VC of the cotton industry. Farmers faced problems procuring necessary but expensive equipment, mineral and organic fertilizers, and seeds of sufficient quality. This was exacerbated by a lack of credit, irregular functioning of drainage and irrigation systems, and uncertainty relations between cotton producers and ginners. Along with this market chain distortion caused a situation where there was a lack of concessional loans to cotton producers and uncertainty of market prices and the instability of the world cotton market caused the RT's cotton industry to lag behind.⁴

According to the Agency on statistics under the President of RT, in the 2012 harvest season Tajikistan produced 417 thousand tons of cottonseed, which is 104 percent of the forecasted plan. Recall that the forecast plan for raw cotton in 2012 was drawn up early in the previous November. In 2012, cottonseed was planted over about 200 thousand hectares of land in Tajikistan, from which it was planned to collect 401 tons of crops. The table 4.1 presents the production of cottonseed by regions of RT in 2012.

⁴ Source: "Program for development of cotton-growing for 2010-2014"

Table 4.1: Production of cottonseed by regions of the RT in 2012

Regions	Forecast (tons)	Actual (tons)	Growth (%)
RT – All	401,115	416,977	104.0
Sugd region	112,500	112,869	100.3
Khatlon	263,500	282,569	107.2
Tursunzoda	8,000	6,022	75.2
Shahrinav	3,300	2,965	89.8
Khisor	6,615	6,121	92.5
Rudaki	3,200	3,202	100.0
Vahdat	4,000	3,229	80.7

Adapted from: Agency on Statistics under the President of RT

4.2. Importance of cotton industry for developing countries

It is known that cotton is one of the most substantial and broadly produced crops in the world. According to Fortucci (2002), in 2000, about 130 countries produced cotton, and it is believed that cotton crops are sown on 2.5 percent of arable land in the world, making it one of the most significant in terms of land use after food grains and soybeans. Within developing countries, it makes up for about 3 percent of the total cultivated area (Fortucci, 2002, p.1).

Fortucci (2002) also mentioned different purposes of why cotton is produced: to meet the basic consumption needs of the farm families; it can be exported to earn foreign currency; or it could provide raw material for textile products for domestic

markets as well as for export (Fortucci, 2002, p.1). Fortucci (2002) notes that from the household level point of view, cotton is an important cash crop to millions of farmers around the world, and the gained income makes an important contribution to the food security of rural households, particularly in developing countries.

4.2.1. Importance of cotton for Tajikistan economy

In Tajikistan cotton is regarded to be a “strategic” crop (Bazarov, 2010 p.7). Cotton makes an important contribution to both the agricultural sector and the national economy. In Tajikistan crop production is dominated by two major cash crops: cotton and wheat, which constitute nearly 70 percent of the sown area. Cotton’s importance is second to export commodities (aluminum is ranked first), and constitutes a large share of foreign exchange flowing in to the RT. Cotton trading constitutes 8 percent of GDP and around 15 percent of overall export earnings for the RT. The Cotton industry makes direct contribution to taxes as well as indirect taxes, which constitutes 27 percent of the government’s tax revenues (PlaNet Guarantee, 2011, p. 1). In the agricultural sector, cotton accounts for 60 percent of agricultural output, supports 75 percent of the rural population, and uses 45 percent of the irrigated arable land.

Development of the cotton industry in the country will contribute to the development of the textile and clothing industry, in particular, the production of finished products, an increase in foreign trade of the RT, increased involvement of Tajikistan's economy with the world economy, attracting world’s brands for the production of finished textile products, investment in social and economic development, job creation, the creation of high-tech, import-substitution and export-oriented production, improve the quality and range of textile products.

4.3. Government policy within cotton industry

Land privatization and reform of the cotton industry is fundamental to a viable strategy for the development of the agricultural and industrial sector. In 1994 the government started the practice of de-monopolization of the agricultural sector, numerous previous collective farms having been restructured into farming activities. The government also cancelled the government setting of procurement prices for seed cotton and the control of raw cotton trade for internal as well as for export marketplaces. However, a majority of farmers currently have little knowledge and experience selling cotton. Awareness of marketing and credit schemes is absent and the farmers are not independent. As a consequence, the farmers sell most of their production to a financier under prescribed contracts. The financier provides the farmer with basic inputs; for example, manure and other material. This becomes the mechanism for which profit is made in cotton (ADB, 2005).

Today, there are many problems within the cotton sector, which hinder the development of the cotton industry. Therefore, improved seed production and the use of modern agro techniques, strengthening the material-technical base, improvement of infrastructure of the social life of cotton growers and ginneries, providing operational and financial funds and services, and finally the development of a mechanism to provide loans, are areas for further development of the cotton industry in the RT. The solutions of the existing problems will reduce the export of raw cotton and increase processing within the country (GOT, 2009).

It should be noted that due to failure of the RT's ginning industry the republic continues to be a provider of raw material for ginning plants of different states.

Therefore, along with the development of the cotton industry, the ginning industry also needs support. Given the importance of the development of the cotton sector, the GOT as of August 3, 2007 approved the "Program of complete processing of cotton fiber to be produced in the RT for the period up to 2015" and by the Decree of the GOT on May 28, 2009 №297 was approved "Program of development of the seed industry in the RT for 2010-2014", which are essential for the development of the cotton industry.

Lerman and Sedik (2008 p.62) note that if the strategic ambition of the government is to sustain the production of cotton as a basis for export returns, a more applicable strategy is to end governmental interference in cotton planted regions, eradicate the monopolistic situation of investors in cotton funding, ginning and selling and build competitive marketplaces aimed at investing, ginning and marketing cotton in Tajikistan. This initiative in aggregate allows increasing efficiency of the cotton industry and contributes to the development of the economy, employment, poverty reduction and food security of the country.

4.3.1. Supporting the value chain in the cotton industry

Analysis of the value chain and the ideas of GVC comprise the analysis of each action that happens to a product from the raw material stage to the instance it gets to the ultimate buyer. These events comprise planning, acquisition of raw materials, inputs, manufacture, and supply. At every phase of the VC, analysis comprises: i) recognition of chain actors or shareholders, their task, responsibility and relations; ii) definition of chain control or management to assist chain forming and consolidation; and iii) authentication of value performances within the chain. Expenses and added value are subsequently given to every of the events (Johnson and Scholes, 1993).

In this study analysis in a VC context helps Tajikistan to evaluate the potential of the cotton industry and, accordingly draft a development policy aimed at its development. The aim is for the analysis to focus in on how value is added throughout diverse segments of the chain. Participants in a particular chain can encounter considerable control from other participants, and these participant(s), by leading the chain, manage the largest proportion of the incomes made within the chain. The various chains are typically led by global companies, joint venture, or output consumers (Gerefi, 1994; McCormick et al., 2001). Certain Tajik textile companies for example could be in the global chains, which are ruled by external consumers, who regulate the styling, class, capacity, and price of the fabrics. The essence and control of the VC wherein a company or manufacturing is in involved are thus correspondingly vital basics of its functioning setting (Ikiara, & Ndirangu, 2003 p.7).

Consistently poor management of entire phases of the cotton industry in the post-Soviet regime has culminated in a huge debt, which influences all factors of the value chain from the rural farmers via the ginneries to the cotton traders. The situation has created a debt crisis for domestic banks, ginneries and producer groups, causing a lack of investment in agriculture technology and agriculture innovation. This in turn has led to a decrease in grade of cotton grown, staple length and agriculture yields.⁵

With regards to this study, VC is applied to examine the current agro-industrial chains in order to detect areas in which new players can find an advantage in the existing cotton industry VC. Some of the key actions that appear at every phase of the VC influence the subsequent phases.

⁵ Source: <http://www2.icco.nl/nl/projecten/project/azie/tajikistan/772/organic-value-chain-development-project>

The input supply phase is engaged alongside the procurement of raw materials necessary for farming manufacture, handling, and trade. Inputs can be bought within the country or imported. The absolute value of an input at its location of usage comprises entirely industrial costs, carriage costs, customs payment and tax, and any informal fees experienced pending to that instance. The effectiveness of a republic's input allocation scheme thus has a large effect on the functioning of the entire VC.

The farm manufacture step is from initial farming manufacture to the selling of a raw product at the farm gate. These dealings might happen physically at the farm gate or in a specific place wherever the grower ends proprietorship of the output toward the subsequent VC actor. The collection phase comprises the gathering of the farming crop, in this case collection of cotton from various growers, and supply of the raw material to a plant aimed at industrial processing. Modest sorting of cotton may similarly follow at this point contingent on schedules prepared at the initial place of selling. The processing or handling phase includes the conversion of raw cotton into specific as well as into more consummate globally exported commodities. In this case the worksheet models will be considered to adjust the manufacture of various commodities from raw cotton.

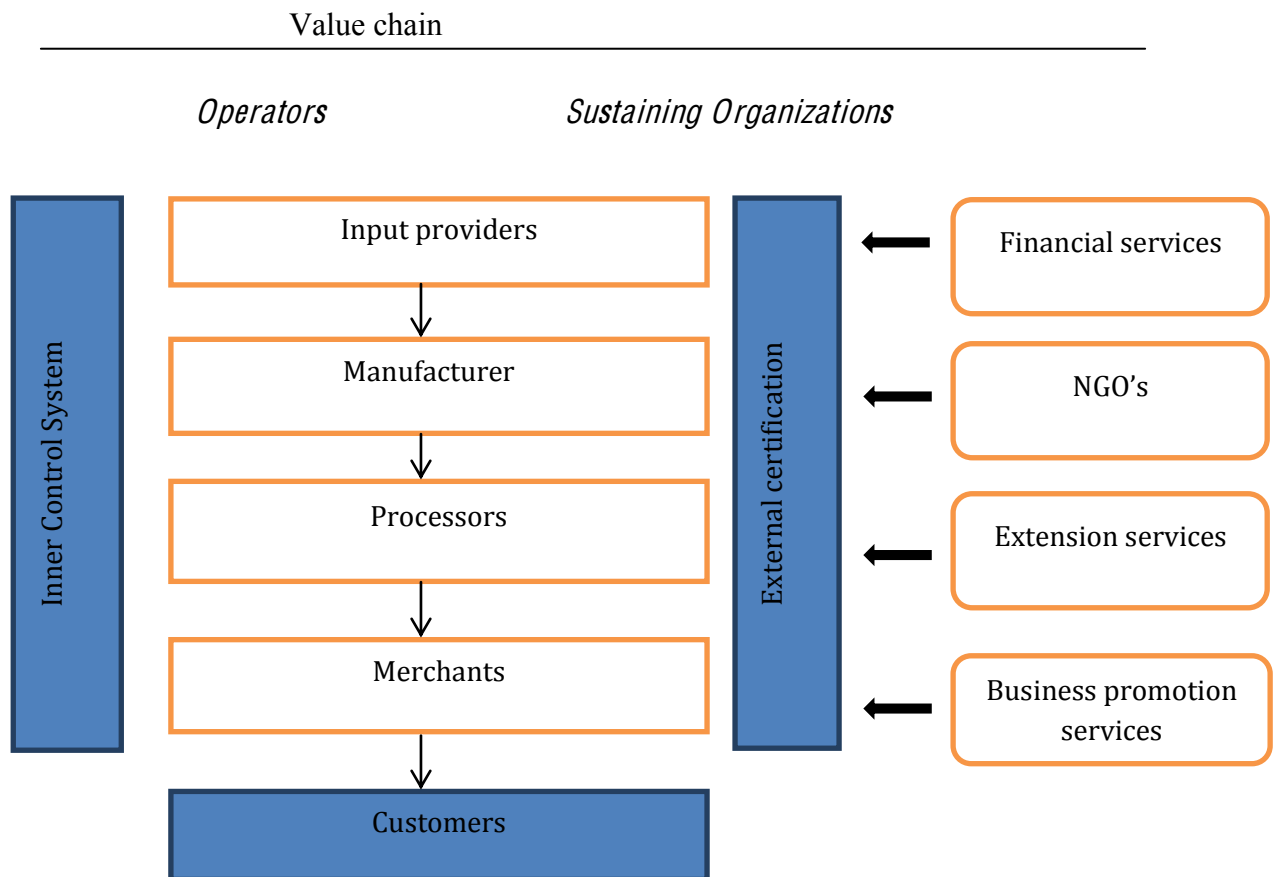
The local and worldwide logistics phase is associated with the supply of exported products to their ultimate marketplace. This might also be an external marketplace in the instance of exports, or a domestic marketplace aimed at import replacements. For import replacements, the logistics phase finishes at the national scope, however the stage is bounded by the fee of introducing an analogous output from the bordering most competitive state (Olomola, 2007), which in the case of the Tajikistan cotton industry might be China or Uzbekistan.

In 2008 Helvetas Swiss Intercooperation agreed to implement a project with the view to support the development of certified organic and fair-trade value chains concentrated on cotton by establishment of biogenic farming methods and service providers and connecting them with domestic and international markets. A further planned project stage (2013-2015) will contribute organic farming and the deal of organic cotton and different biogenic commodities in international and local markets, enabling engaged farmers to make a living (Helvetas , 2008). In order to develop value chains of the cotton industry in Tajikistan there is an Organic value chain development (OVCD) project aiming to connect small-size manufacturers towards marketplaces whilst supporting commodities. It will make use of comparative advantage and will invest in R&D, especially in manufacturing, handling and marketplace study. It operates via domestic associates (value chain supporters) in cooperation taking advantage of individual and structural capabilities, and is aimed at a linkage between equal tasks and experts in organic agribusiness, handling and business. It does not disburse subsidizations: when natural marketplaces are opened, contributing agents acquire a price aimed at their licensed natural output. Mainly the OVCD supports advanced growers to produce cotton and alternate yields naturally and input certification. Furthermore, it prudently chooses global consumers and arranges for agreed-upon dealings.

Through NGO's, widening services and research organizations the OVCD activities are aimed at on-farm-study. This finds and validates (economic) consequences of biological fertilizing or yield parameter processes, educates growers and succeeding VC players in natural manufacture and business, creates a need for domestic regulator coordination and associates the Tajik VC actors with a global recognized certifying

association. Figure 4.3 describes OVCD Project in Sughd Oblast of the RT.

Figure 4.3: OVCD Project



Adapted from: Helvetas, Tajikistan website, <http://www.helvetas.tj>

4.3.2. State sector support programs

In addition to dozens of projects being implemented in the cotton sector, the GOT supports its cotton industry by adopting state sector programs. Table 4.2 outlines existing resources for development of the Tajikistan cotton industry.

Table 4.2: Existing programs contributing to development of cotton industry

Name	Reference	Description	Considered stage(s)	Amount (US\$/TJS per year) and duration	Responsible structure/unit & ministry
Program of Development of the Light Industry of the RT for 2005-2015	Decree of the GOT №422 dated 31.10.05	The growth of the productive capacity of light industry.	All stages	The amount of investments is 1.595 million TJS or 159.5 million TJS per year. Duration is 10 years	Ministry of Energy and Industry Local Executive Bodies of cities/towns and districts of the RT
Program of complete processing of cotton fiber up to 2015 of the RT	Decree of the GOT №392 dated 03.08.07	To ensure complete processing of ginned cotton to ready-made items.	All stages	The amount of investments is 6978.5 million TJS or 872.3 million TJS per year. Duration 8 years	Ministry of Energy and Industry Local Executive Bodies of cities/towns and districts of the RT
Program of production of children' items up to 2015 of the RT	Decree of the GOT №683 dated 30.12.09	By 2015, the production of the main categories of the children's clothing items has to reach 467.3 million TJS, the domestic production has to reach 91.3 percent.	All stages	The amount of investments is USD 19.3 million or 3.86 million per year. Duration 5 years	Ministry of Energy and Industry Local Executive Bodies of cities/towns and districts of the RT
Program for development of cotton-growing for 2010-2014	Decree of the GOT №586 dated 31.10.09	Development of cotton growing to support industry of the RT	Internal Procurements	5 years	Ministry of Agriculture

Adapted from: Trade Promotion Program in Tajikistan, Textiles and Clothing Sector Export Development Strategy Tajikistan 25 November 2010.

However, despite the measures taken by the government to support the cotton industry in Tajikistan, it remains undeveloped. Existing policy within the sector reduces incentives for cotton production and inhibits production.

4.3.3. State control over the cotton production

State control over the production and sale of cotton remains the predominant focus of sectoral strategies, based on production targets similar to centrally planned economies and forcing local authorities to implement them. The consequence of such policy is low productivity and stagnation of production and the accumulation of outstanding debt of agricultural producers, which according to the government of Tajikistan is more than US\$500 million.

Local authorities forced farmers to divert 70 percent of the sown area under cotton cultivation, using the threat of expropriation of their land for inefficient use if they do not obey orders. This prevents the efficient allocation and use of agricultural resources, reduces the incentives for farmers to increase production and productivity, and undermines the ability of the much-needed restoration of crop rotation (World Bank, 2012, p. viii). Investors have even more power over cotton producers and have an even greater impact on industry output. Supplying material resources at prices higher than market prices and paying producers lower than market prices, investors reduce farm earnings, which put them at the dependence of supply of material and technical resources and seasonal financing, and provide investors with access to cheap raw cotton (World Bank, 2012, p. viii).

According to the World Bank (2012 pp. viii-ix) the current regulatory environment will limit further incentives to increase productivity and output and reduces the cotton sector's income. The Soviet system of classification of fiber restricts farmer's incentives to improve quality and limits access to more valuable and profitable varieties used in international classification systems. Growers have little approach to high-yielding varietal seed cotton due to the dissolution of the state seed farms, on the one hand, and excessive limitations on the usage of imported seeds, on the other hand. Such policy undermines the development of the industry as a whole, causing an imbalance in the allotment of land and allocation of labor resources, distorting credit markets and logistical resources, reducing public and private revenues from cotton production, and inhibiting the development of a more diversified industrial base. The actual problem is the necessity for rationalization of the corresponding functions of the government and private sector, and to ensure that each of them are fully able to fulfill their role in an atmosphere of openness and transparency. Until these large-scale issues have been resolved, cotton industry growth will remain at a low level, and the debt crisis could happen again. According to Sinzogan et al. (2007), when producers gain greater control over their own organization, when they get control of their production through a transition to alternative pest management regimes that frees them from dependence on credit and appointed ginneries, they would be more likely to achieve sustainable improvements in their welfare.

According to the World Bank (2012 p. x) further analysis shows that existing policy in the cotton sector is the main reason for the high level of poverty in rural areas and lower expected rates of contraction. While poverty is reduced by 3 percent in response to a 10 percent increase of salary in the agricultural production sector it is

reduced by only 1 percent in response to a 10 percent increase in cotton output. This is due to the fact that farmers are gaining an extremely small share of the revenue from the increase in production resulting from inefficient processing, marketing and operation of producers. Low income from cotton production also explains the high rates of poverty in the Khatlon and Sughd provinces, the two main cotton-growing regions. Revenue from cotton production will not grow as long as there is no reform of policies that enable low competition and exploitation of farmers.

4.4. Competitiveness of Tajikistan cotton industry

Among the economic challenges of the transition period is the increasing importance of the problem of competitiveness. The competitiveness of the cotton industry is important for rural as well as for the whole economy. In centrally the planned economy period, the cotton crop in Tajikistan was developed as part of the Union specialization. Therefore cotton produced by the RT's gins mainly supplied the needs of textile enterprises of the former USSR. As a result, at that time there were no problems in terms of competition and in view of this, research on this issue has not taken place. With the collapse of the USSR, the RT's attaining independence and transition to a market economy, Tajikistan was directly confronted with export and import issues. At the same time, the cotton share in the export potential of the country constituted about 20 percent (now 10 to 15 percent), which is quite a high figure (Khojaeva, 2007).

Despite cotton being a major source of inflow of foreign exchange to the country, there is a decrease in its production, deterioration and loss of its competitiveness. Among the many reasons of the decline in the competitiveness of

cotton the main one is a lack of competition between cotton producers. Having a considerable weight in the Tajik economy, cotton plays an important role in the development of the country, contributing to its output in the world market. The problem of competitiveness in the cotton industry is a complex and multidimensional. At the same time the current existing model validation and control mechanism of cotton competitiveness, factors identified to create competitive advantages of cotton fiber, ways to increase competitiveness, etc., are in fact imperfect and scarcely explored (Khojaeva, 2007).

In the 1990s, Gereffi and others elaborated a framework, named ‘global commodity chains’ that linked the conception of value-added chain to the world structure of production. This effort emphasized the significance of organization within company frontiers, as well as the increasing significance of modern world consumers like main handlers in the development of worldwide dissipated and structurally divided manufacture and supply chains (Gereffi et al. 2005 p.82).

The necessity for integration of the RT in the global market determines the competitiveness of RT goods and services sold in the world market. This means that companies, especially those that participate in the world market must function at a competitive level. Gins should strive to achieve a certain level of competitiveness of their cotton production in the world market (Khojaeva, 2007).

At the moment the cotton sector in Tajikistan is impacted by negative trends diminishing the capacity of production. The competitive environment in the sector is not developed and the problems of financial market weaknesses, high level of taxes and the percentage of commercial loans, lack of material logistics in the industry,

monopolization, imperfect competition policy and economic management mechanism and weak microeconomic policies adversely affect its condition.

The transition of the cotton sector to a market model calls for the introduction of a competitive market mechanism, involving the successful functioning of competitive production, to adapt to rapidly changing market conditions and to offer competitive cotton to buyers. The competitive environment and the competition to a certain extent depends on de-monopolization of enterprises, the level of government regulation of the production, marketing, pricing, and improved structure of business entities, market infrastructure and utilization of market management mechanism (Khojaeva, 2007).

To create a favorable competitive environment for the cotton market is necessary to change the functions of enterprises, organizations, and the mechanism of their functioning. Currently, companies are using the established methods of administrative relationships. The path of improvement of these relationships is the introduction of market pricing mechanisms, lending, infrastructure, government support, the non-interference of the state in economic (business) matters, to ensure freedom choice, etc. This competition should be extended and strengthened by encouraging market entry of other agents. The introduction of an auction system under the Tajik Universal Goods and Commodity Exchange (TUGCE) could provide an important new direction of the market in this context, by attracting more international buyers to Tajikistan and enabling producers to sell their products themselves.

To evaluate the level of trade concentration of a state, Balassa (1965) offered the subsequent of index of revealed comparative advantage (RCA):
 $RCA_{ij} = (x_{ij}/X_i)/(x_{aj}/X_a)$, where:

x_{ij} : exports of product j from country I ;

X_i : total exports from country I ;

x_{aj} : total exports of product j from the reference area (e.g. the world);

X_a : total exports from reference area.

Based on this index, a state has an advantage in exports of a certain product if its marketplace portion in that merchandise is greater than the average or if the bulk of the merchandise of the state's exports is greater than its bulk of the exports of the reference area. A state shows comparative advantages in commodities for which this indicator is greater than 1, viewing that its exports of those commodities are above than estimated on the base of its significance in overall exports of the reference area.

Ismoilov (2012) has recently conducted research on “Modernizing textile and clothing industry for economic development in Tajikistan”. In order to comprehend competitiveness of the cotton industry based on the region’s exports he employed the Balassa index to calculate comparative advantages of the cotton industry for four Central Asian countries, including Tajikistan (see table 4.3). According to this Tajikistan (2010 is an exception) and Uzbekistan (Uzbekistan slightly stronger than Tajikistan) have a comparative advantage⁶ over the Kyrgyz Republic and Turkmenistan.

⁶ RCA index: $RCA_{ij}=(X_{ij}/X_i)/(X_{wj}/X_w)$; The country (i) has a comparative advantage in producing and exporting commodity of group (j) if its RCA index >1.

Table 4.3: Revealed comparative advantage index for cotton industry

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Tajikistan	1.41	1.25	1.38	1.59	1.37	1.27	1.11	2.02	1.09	0.80
Kyrgyz Rep.	0.21	0.51	0.34	0.28	0.39	0.33	0.22	0.24	0.22	0.12
Turkmenistan	0.28	0.23	0.22	0.27	0.26	0.30	0.39	0.42	0.95	1.01
Uzbekistan	1.91	2.38	2.03	1.92	1.97	1.76	1.73	1.76	1.18	1.22

The main competitive advantage of the RT is the existence of high quality local raw materials at lower costs (Tajikistan is the biggest producer of fine (long)-staple cotton in the CIS). Other competitive advantages are the lower price of energy and labor in Tajikistan as compared to different cotton-exporting states, and tax preferences (in conformity with the governmental decree, the enterprise is exempt from income tax, VAT and customs duties on imported facilities and spare parts, VAT on internal sales of complete goods, as well as VAT on exports for 12 years) (EDB, 2009).

Additionally, because of the natural environment condition, pests are less a problem in the RT than elsewhere. While cotton justifies 20 percent of the overall number of pesticides utilized around the world, Tajikistan only uses a minimal amount (for instance, while in tropic Africa, at least usage of 6 insecticides are required, in Tajikistan at most one is required) (PlaNet Guarantee, 2011, p. 7) Prospects for the Tajikistan cotton industry substantially depend on the degree of its successful integration into the global economy.

4.5. Tajikistan cotton export market

Tajikistan consumes about 10-12 percent of its overall cotton production for its limited textile industry (internal cotton processing still extremely low – from 10-12 percent in Tajikistan and Turkmenistan to 20-22 percent in Uzbekistan and Kazakhstan). The remaining quantity of cotton lint is processed in Tajik gins into yarn for export or exported as fiber. Russia used to be Tajikistan’s main export marketplace and continues to hold approximately 30 percent of the market proportion. Tajik cotton fiber is additionally traded on the Liverpool Cotton Exchange, and to dealers in Latvia and Switzerland. Other CIS republics such as Uzbekistan and Kazakhstan are amongst the top importers of Tajik cotton (ILRF and TSIYC, 2007). Yearly lint production is in the region of 160,000 to 170,000 tons, demonstrating an average ginning outturn of nearly 30.5 percent (ADB, 2005). Table 4.4 presents the gross production value for cotton lint in millions of US\$ for Tajikistan, Kyrgyzstan, Turkmenistan and Kazakhstan for 1999-2010. Pursuant to table 4.4 the cotton lint Gross Production Value in Tajikistan is much lower compared to neighboring cotton producing Turkmenistan and Kazakhstan.

Table 4.4: Cotton lint gross production value during 1999-2010 (million/US\$)

Country	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Tajikistan	112	64	111	133	160	167	142	126	107	85	127	145
Kyrgyzstan	24	30	35	40	45	55	58	60	58	67	30	45
Turkmenistan	1114	1186	1334	1162	1276	1939	2092	1549	2154	1086	n/a	n/a
Kazakhstan	99	149	185	139	275	365	462	495	451	562	426	406

Adapted from: FAOSTAT, February 2013

Most raw cotton is exported, creating an essential contribution to the republic's economy.⁷ Tajikistan is one of the top ten largest world cotton exporters. Table 4.5 presents major categories of Export statistics for 1999 to 2011. Together, cotton and aluminum had, averaged approximately more than 80 percent of the export revenue for the RT (Kassam, 2011). Pursuant to table 4.5 the cotton fiber exports have, in terms of percentage, contributed less to total export earnings, from 2006 to 2009 due to the world financial crisis of 2007-2008).

⁷ According to the data obtained from Customs Service of the RT the export of cotton fiber from January 1, till November 30, 2012 made up 122.1 thousand ton worth US\$193.1 million.

Table 4.5: Export (FOB) statistics for the RT (1999-2011)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Exports (\$mln)	688.7	838.9	651.6	697.1	797.9	914.9	908.7	1399	1468.2	1406.3	1001	1194.7	1256.9
Aluminum	308.1	433.6	398.4	398.6	429.5	563.4	563	1049.5	1083	1013	589.5	735.6	664.6
Cotton Fibre	91.2	91.8	71.5	128	192.7	161.6	143.9	128.7	137.8	108.2	99.7	200.1	197.2
Electricity	174.7	181.6	78.5	67.4	55.1	57.6	52.6	49	59.6	59.7	63.2	34.4	42.7
Others	114.7	131.9	103.1	103.1	120.5	132.4	149.2	171.8	187.7	225.4	257.6	255.6	390.8
Aluminum (%)	45	52	61	57	54	62	62	75	74	72	58	62	53
Cotton Fibre (%)	13	11	11	18	24	18	16	9	9	8	10	17	16
Exports													
Aluminum (000/t)	224.3	229.2	253.7	253.6	273.5	275.9	278.4	279.9	287.0	289.7	295.8	337.9	277.6
Cotton Fibre (000/t)	92.2	78.8	75.2	137.1	149.4	133.1	132.9	120.4	119.9	83.5	86.6	95.3	72.4
Electricity (mln/kwh)	383.1	397.3	403.7	383.1	390.9	392.7	384.9	398.5	404.7	406.6	396.6	179.8	179.8

Adapted from: National Bank of Tajikistan website: www.nbt.tj

According to the NBT, the export of raw cotton was 92.2 thousand tons in 1999 representing a value of US\$91.2 million and this increased in 2003 to 149.4 thousand tons (US\$192.7 million) and in the years 2008-2009, the years of financial crisis, exports of cotton from Tajikistan slightly decreased to 83.5 (US\$108.2 million) and 86.6 (US\$99.8 million) thousand tons respectively (see figure 4.4 and figure 4.5).

Figure 4.4: Export of cotton during 1999-2012 (US\$/million)

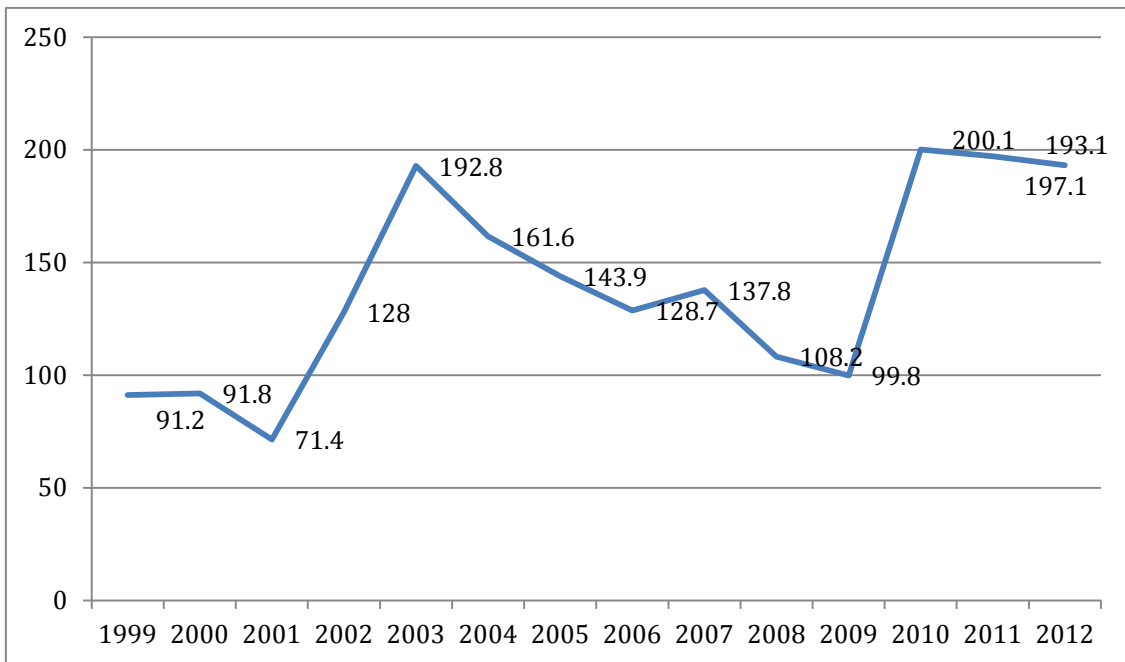
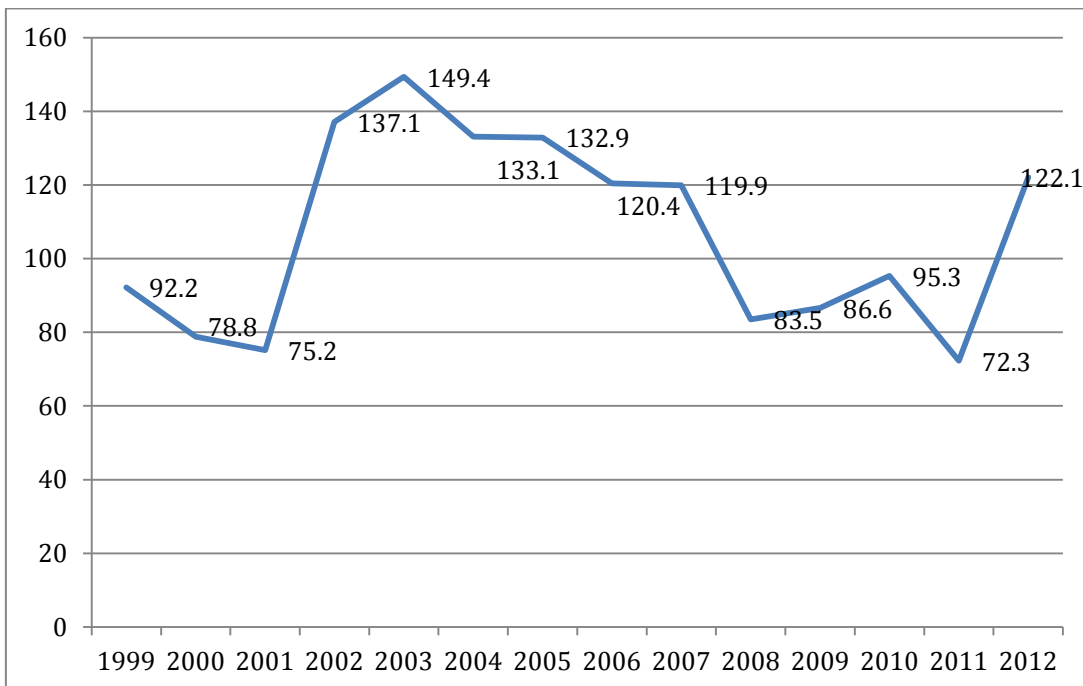


Figure 4.5: Export of cotton during 1999-2012 (thousand of tons)



*Note: the year 2012 includes 11month

Adapted from: www.nbt.tj, www.tajstat.tj (Accessed December 2012)

According to the data obtained from the Customs Service of the RT the export of cotton fiber from January 1, till November 30, 2012 made up 122.1 thousand tons worth US\$193.1 million. The average price for exported cotton fiber during this period was US\$ 1,581/ton. The cotton fiber was mainly exported to markets such as: Turkey, Iran, Pakistan, Latvia, UAE, Bangladesh, China, Lithuania, Vietnam, Russia, Kazakhstan, Moldova, Belorussia and Ukraine (table 4.6).

Table 4.6: The export of cotton fiber from Tajikistan (January-November 2012)

	Foreign currency (US\$)	Cotton fiber (Thousand/kg)	Average price/ton (US\$)	Share to total export of cotton (%)
Turkey	66,981,016	42.0	1,594	34.7
Iran	34,072,710	20.9	1,631	17.6
Pakistan	21,990,401	15.5	1,417	11.4
Latvia	14,792,874	8.1	1,820	7.7
UAE	12,372,280	7.6	1,637	6.4
Bangladesh	794,545	4	1,937	0.4
China	252,928	1.1	1,431	0.1
Lithuania	258,140	1.1	1,711	0.1
Vietnam	147,936	0.7	2,095	0.1
Russia	22,666,619	16	1,423	11.7
Kazakhstan	7,607,809	4.6	1,637	3.9
Moldova	5,816,404	3.3	1,768	3.0
Belorussia	4,054,270	2.5	1,643	2.1
Ukraine	1,272,989	0.8	1,490	0.7
Total	193,080,922	122.1	1,581	100.0

Adapted from: Customs Service of the RT

Figures 4.4 and 4.5 above demonstrate the diminishing dynamics of cotton fibre export for last years (during 11 month of 2012 the export of cotton from RT slightly increased). This is due to severe crises that occurred in the cotton industry during recent decades. Chapter 5 discusses the main challenges that the Tajikistan cotton industry is facing.

The key concern to developing state manufacturers is to approaches' leading businesses in the global market. To increase exports Tajikistan must create considerable transformation of the processing industry, namely manufacture goods in capacities which are successive and sustainable, correspond to standard quality and steadiness principles required by the marketplace, get nearer to the marketplace to reduce expenses and thus increase effectiveness, gain experience in provincial marketplaces in preparation to enter big global marketplaces governed by big firms (GVC), design and energetically practice trademark acknowledgment methods that distinguishes Tajik merchandises in the marketplace, and produce more improved cottonseed selections aimed at further processing into fabrics.

Chapter five: Main challenges of Tajikistan cotton industry

In this chapter, the main challenges of Tajikistan's cotton industry will be discussed. At first, the chapter outlines the debt crises that occurred in the Tajikistan cotton sector. Then the chapter concludes with the current state and problems of the processing industry.

5.1. Cotton industry crises in Tajikistan

Specialists believe that one of the causes of the cotton crisis is the intervention of government and another is the financing scheme and poor operation of VC linkage. The funding structure ran by financiers or so-called “futurists” in the post conflict situation in which republic found itself, while it resolved the immediate problem of provision farmers with the necessary inputs for production, was not productive for the competitive, high acting and contemporary cotton industry (Bazarov, 2010).

5.1.1. Debt crises of cotton industry

Cotton growers have not met their harvest targets for many years, and their debts continued to grow. In 1996, government initiated a futures scheme for raw cotton, essentially providing loans to growers for next year's harvest. But over the ensuing ten years, the debt of cotton farmers to futures companies has grown to US\$480 million. The government drafted numerous documents aimed at freezing the farm debt on futures as it sought a solution to the problem, but futures investors are in no hurry to write off the debts, because they obtained their funds from foreign banks (Asia plus, 2010).

Lerman and Sedik (2009b), cited in Kassam (2011 p.18) argue that the increase of "debt" in the Tajik cotton industry can be perceptible to widespread state interference in funding and manufacturing. The authors' state: *"The debt crisis in Tajikistan's agriculture has been caused by a combination of two factors typical of such situations in many countries: (a) the inability of the farms to make a profit under current conditions and (b) continued lending by the banks to cotton producers regardless of reduced payment capacity and lack of creditworthiness"*.

In the light of this situation and to support the further development of the cotton industry, the GOT has decided to solve the debts of economic entities of the RT in the cotton sector, that existed as of January 1, 2008 by virtue of investors, by debiting the account, reducing, delaying, postponement of debt payments (debt rescheduling) and securities issuance. Cotton growers in 2008 received US\$103 million in loans (US\$60 million in bank loans, US\$40 million in budget funding and the rest from other sources), but only one-tenth of that was repaid (about US\$10.5 million).

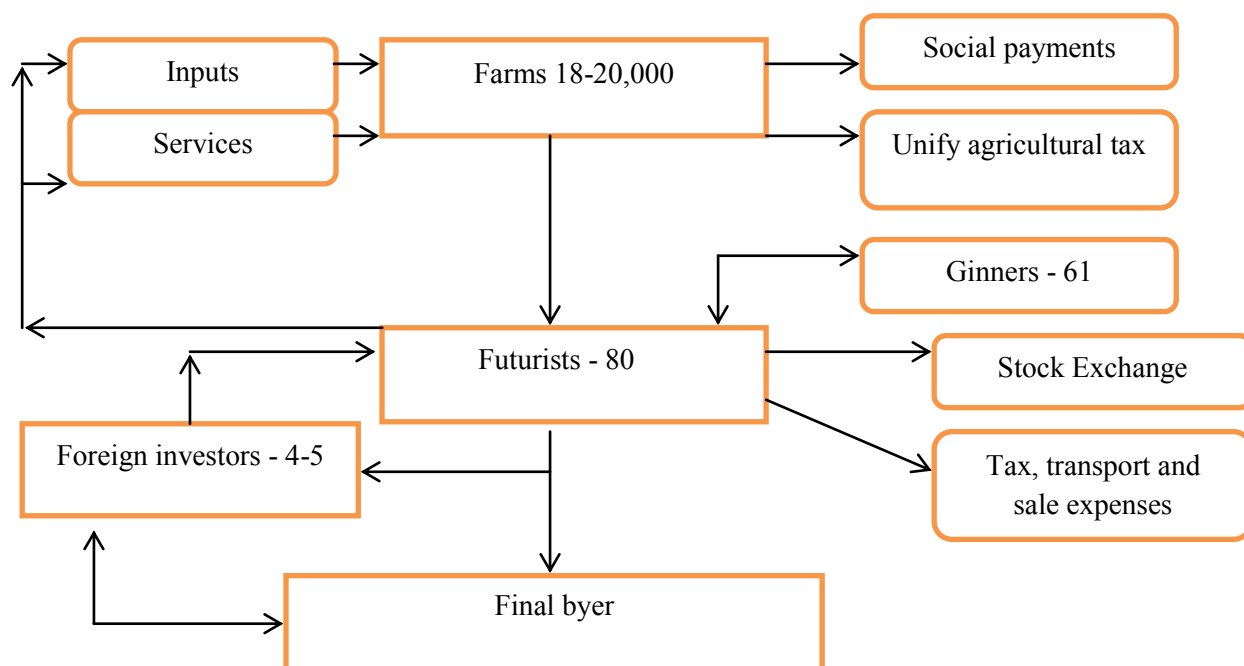
Tajik Economist Dzhabborov stated "the rise in debt points to the fact that Tajik agrarian policy has not been very effective, resulting in the ineffective spending of state funds". Candidate of Agricultural Sciences Partoyev is certain the main reason for the debt and crisis in the cotton industry is that cotton producers do not own their businesses. "They are slaves to investors", Partoyev argues "No programs or restructuring will help until that changes, until farmers themselves can decide what to plant and to whom and at what price to sell their crop".⁸

⁸ Source: <http://centralasiaonline.com>

“In Tajikistan it is necessary to organize selling markets for raw cotton, where farmers would be free to sell the harvested cotton”. Such an opinion was stated by Doctor of Economics Sciences, Professor H. Umarov⁹ to Asia Plus. He said “Such markets should be functioned in all cotton-growing regions of the country and need for rules of market relations. Prices should be determined based on supply and demand”.

Three to four years ago, ginning company were paying no more than US\$400 per ton of raw cotton to farmers. Currently, the situation has somewhat improved and farmers can get US\$800 per ton of raw cotton, though this is still low compared to world prices for raw cotton. Figure 5.1 describes the structure of cotton production during the futurists system.

Figure 5.1: Structure of cotton production on futurist system



Adapted from: Bazarov (2010), <http://repositories.tdl.org>, (Accessed 1 January 2013)

⁹ Source: <http://www.news.tj> November 10, 2012

5.1.2. Cotton debt crises resolution

The GOT has resolved virtually all pre-2008 cotton debts to investors, in the amount of US\$702 million.¹⁰ The debt resolution does not cover the cotton credits lent from the 2008-2009 budgets. According to the "Project Management Unit to refund cotton farms debts and sustainable cotton industry", the total amount of debt is almost entirely written off. These written-off funds total US\$435 million, obtained through CJSC "Credit Invest" guaranteed by the NBT.

It should be noted that on May 2009, the President of Tajikistan signed a Decree that all cotton farmers will be exempted from the payment of their previous debts (Bazarov, 2010). In early July 2010, the GOT approved a resolution on the realization of the decree. So as to realize these documents at the end of July 2010, the GOT set an operating group to monitor the disbursement of debts in cotton industry. In November 2009, the GOT commenced releasing farmers from their debt obligations.¹¹

Cotton is one of the main export-oriented products for Tajikistan and an increase of efficiency of cotton sector contributes to country's economy. Accumulated problems of the cotton industry inhibit the growth of the sector and need to be solved. The reform of cotton industry should be aimed at resolving the debt crisis, giving farmers access to credit and other financial resources and competitive production (GOT, 2008).

The agriculture sector has the perception of being a "high risk" sector. Most of the subsectors are poorly financed with scarce specialized products. Due to diminishing yield and production, unnecessary intermediation, poor storage and processing,

¹⁰ Source: <http://news.tj>, Dushanbe, February 5, 2010

¹¹ Source: <http://news.tj>, Dushanbe, February 5, 2010

inadequacy amongst growers and marketplace uncertainties, access to finance is limited (MFC, 2011, p. 12).

Prior to the debt crisis in the cotton industry, investors could meet the demand for cyclical financing in the amount of US\$75-80 million, but lending to other sectors of agricultural production remains low. Thus, cotton producers have sufficient access to credit, but cannot choose the creditors and are at high risk of exploitation, as evidenced by the current debt crisis. Loans are mainly short-term, often from donor credit lines, and are provided at a higher interest rate (World Bank, 2012, p. ix).

Bank access remains low by international standards. In 2006 there were only 220 bank branches in the RT, just one branch for every 30 thousand citizens (IMF, 2008). Kassam (2011 p.36) argues that wherever credit products are accessible, they might not be appropriate to meet the requirements of small-scale growers. Therefore Kassam (2011 p.37) notes that production of cotton offers an opportunity for cooperative growers to approach credit. The failure to meet the needs of agricultural financing is mainly due to the small size and weak capability of Tajikistan's financial sector (World Bank, 2012, p. ix).

Kassam (2011 p.30) defines three periods that the RT has experienced in turn to invest its cotton industry. Phase one occurred from 1996 to 2003, a time of an independent agreement among global cotton buyers and the GOT and where the trade surplus amongst cotton fiber exports and wheat imports remained comparatively steady. In phase two (2003-2007), the funding system changed to private agreements amongst Tajik mediators and global suppliers of cotton fiber providing greatly desired investment to local manufacturers without an independent debt contract, but where the

NBT performed an important part in supporting cotton industry. Phase three, the most recent (beginning 2007), is where the GOT itself supports a share of internal manufacturing, through the Ministry of Finance, whereas private contracts amongst mediators and external suppliers of cotton remain but inside a recently adjusted structure intended to prevent investment flight.

The debt crisis does not only demonstrate the difficulty of cotton financing, but also has limited financial and institutional opportunity of different organizations, which are engaged in lending to agriculture. The steady growth of agricultural finance would require not only to solve the debt crisis in cotton industry, but also to pay special attention to the improvement of other sources of funding towards agriculture as a whole. It is also necessary to consolidate capabilities in the field of credit assessment and management, introduction of new mortgage instruments and elaborate new lending products for agriculture as well as for small farmers (World Bank, 2012, p. 21).

5.2. Processing industry in Tajikistan

In 1960, 116 cotton mills were operating in the former USSR. 110 of these cotton-processing mills are now inside the borders of the newly independent countries Tajikistan, Uzbekistan, Turkmenistan, Azerbaijan and Kyrgyzstan with the remaining 6 in Kazakhstan (Azhimetova, 2011). In the Soviet system, Tajik ginners were considered to be basically the top of the pyramid of the domestic cotton industry. Numerous reports on cotton industry state that ginning is a main issue in the republic. If the cotton has been finest and the sparse parts (ginning saws) are of a equitable operative class, a gin in Central Asia would get a regular ginning outturn of 31-33 percent. In Kazakhstan, the similar kinds of equipment attain steady outturns of 36-38 percent. If one assumes

ginning outturn in Tajikistan from the seed cotton as well as for baled cotton, then this becomes 26-28 percent. In Tajikistan ginners run in regional dominations and consequently their motivation to finance to get outturns of 36-38 percent are significantly diminished.

Nevertheless, if we deliberate the probable loss of income to the sector by comparing with present ginning outturns (32 percent) and those actually attained in Kazakhstan (36 percent), it is clear that there is a prospective for expansion in baled cotton fabrication of about 20,000 MT (US\$14 million) at an ex-gin base. The sector is currently denationalized and consequently there are no straight interferences that could be assumed by GOT to develop this position. The action accessible to GOT to develop the ginning sector is to initiate and support competition (World Bank, 2012, pp. 15-16).

Bazarov (2010) notes that despite the relatively low profitability of cotton gins, which amount to 3-5 percent of all cotton gins in the RT in the period after obtaining independence, the number of cotton mills increased from 22 to 61, almost by threefold. Given that cotton production declined by almost 3 times, and the total designed capacity of all cotton processing plants has increased by 2 times, obvious distortions in cotton sector are clearly evident, where processing capacities are nearly 5 times higher than the developed real bulk of cotton output (Bazarov, 2010).

5.2.1. Current state and problems of processing industry

According to Bazarov (2010) initially, there were about 20 gins in the post-independent period of Tajikistan. Currently, there are more than 60 gins acting in this sector. These gins are mainly redirected and focused on the processing of local raw

materials and have production capacity to increase their output, but over the past several years, the supply situation of local raw materials to processors remains extremely difficult. As previously noted, cotton produced by farmers in Tajikistan is mainly exported as a raw material instead of adding value to each stage of the production process. Nowadays VC stages in which value could be added by strengthening the functions of the players amongst the manufacturer and buyer caused by several factors that hinders the existing linkages of VC. These are lack of participation of MFOs in cotton manufacturing, at the same time although the VC is under the patronage of government and international financiers, there is a lack of finance to process cotton and little attention is paid to unjust income allocation throughout the manufacture and handling of cotton, and the price instabilities of cotton in the global marketplace (MFC, 2011).

The government must encourage a situation to boost exporters in the VC to afford encouragement to growers by offering stimulus for example, tax exemptions or deductions and economic stimulus for spending associated to educating growers. Several definite interferences by authorities and supporters might comprise co-financing of grant structures aimed at the private sector to involve in events for example teaching and capacity building for small growers. This may assist to take exporters nearer to small growers and improve prescribed schedules in the marketplace (Rogath, 2010 p.90).

A main constraint of Tajikistan's cotton VC (like in the Kenyan cotton industry) is that there is substantially no functioning chain. After the civil war a common institutional breakdown set in and diverse players within the industry function

independently from each other, without management or oversight. These are the main elements essential for the proper functioning of the industry in terms of efficiency and allocation of earnings. Institutional breakdown is similarly demonstrated in absence of powerful manufacturer associations; feeble or ineffectual tools to control serious problems. These problems include class seed production and supply, providing of inputs to manufacturers by credit, class of such main inputs like pesticides; and practical failure of extension services.

The cotton industry in the RT now, after independence from the USSR, was created quickly and haphazardly, without presenting actors certain period aimed at change. Important liberalization and incomplete denationalization have taken place in cotton industry following independence, however there are difficulties with transitory profits throughout the growers. Price misrepresentations together with institutional setting problems hinder efficient pass-through. The ginning industry has been denationalized, input prices have been liberalized, funding and selling of cotton have also been privatized, and majority of the cotton farmlands have been reformed (Coudouel et al. 2006 pp.454-455).

As noted in Ikiara & Ndirangu (2003 pp.53-54) in the case of the Kenyan cotton industry, the Tajikistan cotton industry is also facing similar shortages of labor force improvement programs, an active know-how progress strategy, adjustment and lawful successive structure alongside the present liberal environment, wide-ranging strategy context comprising entire chains in and features of the cotton VC, and wide-ranging institutional strengthening strategy.

The problem of deficiency of competitive position is also a critical chain concern within each segment of the VC. This basically refers to inferior and expensive setup, excessive interest rates, adverse financial strategies, and unfortunate trade strategy that allowed unrestrained liberalization without offering period aimed at change. In this connection, strategic programs should be implemented alongside the consideration of whether the republic ought to be boosting actions in each segment of the VC or rather concentrating on some of them.

According to the Program of complete processing of cotton fiber to be produced in the RT for the period up to 2015, the acting industrial branch scheme has no capability to provide an efficient processing of cotton fiber and is incapable to meet the current demands. Switching from manufacture of raw materials and semi-finished products to the production of a full range of consummate cotton fabrics (entire VC linkage) and increase in industrial manufacturing effectiveness are the main initiatives to be addressed instantly.

5.2.2. Capacities of processing industry

It should be noted that in 1991 just three firms manufactured cotton yarn: Dushanbe Textile Mill (JSC "Textile"), Kurgan-Tyube Cotton Mill (JSC "Resanda") and Kanibadam Cotton Mill (JSC "Resmon"), with the overall volume being about 28 thousand tons of yarn per year.¹² Between 1991 and 2012 new facilities for processing of cotton fiber were set up and on January 1, 2013 they comprised 71 thousand tons per year (table 5.1). Pursuant to the table 5.1, compared to 1991 the capacity has been increased 2.5 times or by 43 thousand tons.

¹² Source: Program of Light Industry Development in the Republic of Tajikistan for period 2006-2015

Table 5.1: The volume of processed cotton fiber in the RT during 2011-2012

Company name	Production capacity of the processing of raw cotton (ton)	Processed (fiber) (ton)		Growth rate 2012/2011(%)	Usage of existing production capacity of processing industry (%)
		2012	2011		
Total within republic 24					
	71,010	10542.2	8276.9	127.4	14.9
JSC “Kabul-Textile”	12,000	-	50.7	-	-
LLC ”Javoni”	4,000	1000.4	1407.4	71.1	25
LLC ”Textile-city”	3,000	89.4	40.9	2.2 t	3
LLC JV “Satn”	2,000	411.6	817.9	50.3	20.6
JSC “Nurtex”	1,300	-	5.3	-	-
JSC “Resmon”	4,000	-	-	-	-
JSC “Toji”	500,0	13.4	20.7	64.8	2.7
JSC “Valizoda”	800,0	2.7	19.1	14.2	0.3
JS “Ehyoi Khujand”	1,000	-	-	-	-
LLC “Niku Khujand” new	2,500	413.8	82.4	5.0 m	16.6
LLC “Spitamen Textile” new	3,500	280.8	481.2	58.4	8
JSC “Olim-	6,000	4207.6	1889.8	2.2t	70.1

Textile” new					
OJSC “Resanda”	4,000	64.9	100.8	64.4	0.2
LLC “Resandai Khatlon”	3,110	254	396.3	64.1	8.2
JV “Kulob Textile”	2,000	82.4	12.9	6.4t	4.1
JSC “Samar”	2,000	-	59.7	-	-
JV “Zamin- Textile”	600,0	-	-	-	-
LLC “Avesto- 2010”	3,000	68.2	61.2	111.5	2.3
JV “Farres” new	1,200	53.9	41.7	129	4.5
LLC “Hima- Textile” new	4,000	932.7	838.8	111.2	23.3
LLC “Bofandai Norak” new	1,000	31.6	41.7	75.8	2.7
LLC “Nassojii Tojik”	3,000	1915.7	1722.7	111.2	63.9
LLC “UT- Tex”	3,000	138.7	185.7	74.7	4.6
LLC “Faizi Istiqlol”	3,500	580.4	-	-	16.6

Adapted from: Agency on Statistics under the President of the RT

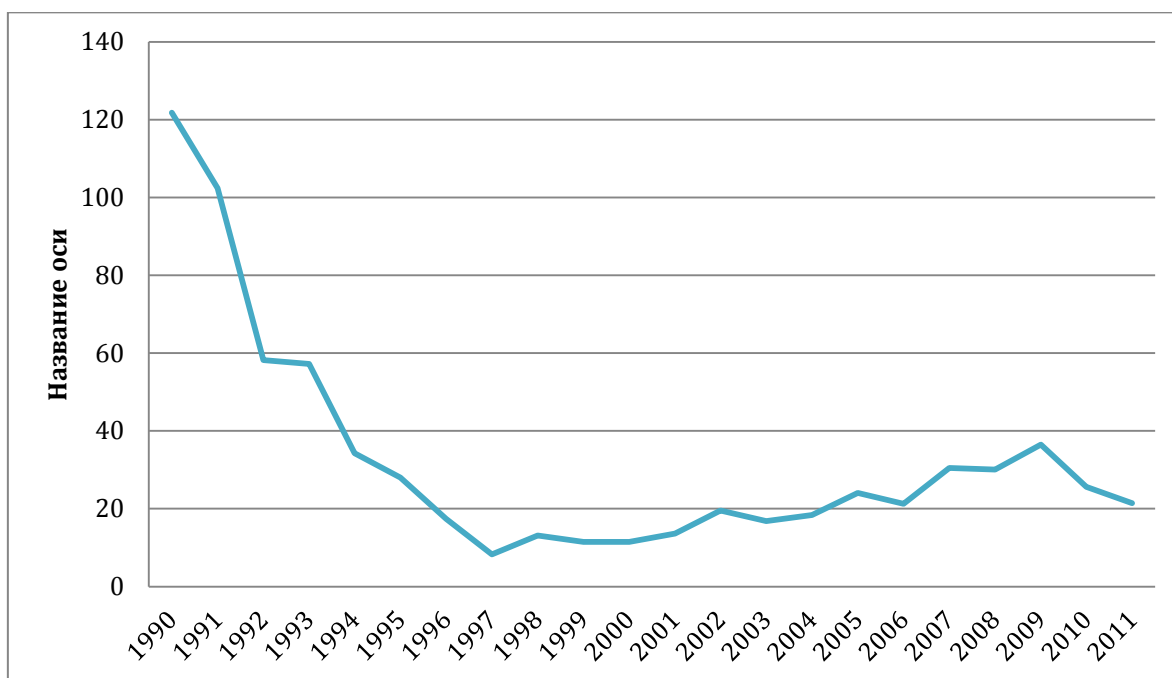
Despite new capacities being introduced, the share of cotton fiber processed within the republic remains very low while majority is still being exported. In 2003 the companies have processed only 20.5 thousand tons of cotton fiber comprising nearly 11.5 percent of cotton fiber produced in the country. In 1991 this was estimated 11.3 percent. It means that diversification of cotton fiber export during more than 12 years has actually been reduced. According to the Ministry of Energy and Industry of the RT the volume of cotton fiber processing in 2012 made up 10.5 thousand tons, which is 2.5 percent of total rate of cotton fiber, produced within country. In this period the exiting production capacities were used only by 14.9 percent.

The reasons for the decline are that enterprises unable to receive required volume of raw materials due to a lack of cotton fiber (almost 85 percent of produced cotton is exported as a raw material), price fluctuation for cotton fiber at the world market causes manufacturers to hold products until the price is increased, complicated mechanism of perfection for the purchase of cotton fiber (huge number of certificates, documents and approvals from various agencies) and modernization issues (outdated equipment, machinery equipment physically deteriorated).

According to the calculations of the efficiency of processing of cotton fiber within the country, the export of finished products is 1.7 times higher than the export of cotton fiber (other benefits for the state are reducing poverty, increasing employment and the replenishment of the budget through tax revenues). The increase in volume of cotton processing within the country may contribute to development of cotton fabrics' production, which is currently lower compares to the early 1990s. During early 1990s, cotton fabrics in Tajikistan made up 121.8 million meters whilst in 2011 this figure has drastically dropped to just 21.4 million meters. The main causes of this decline are

machinery and equipment that physically deteriorated (discussion regarding the modernization issues presented in section 5.3.3). Figure 5.2 describes the trend of cotton fabrics in Tajikistan during 1990-2011 in detail.

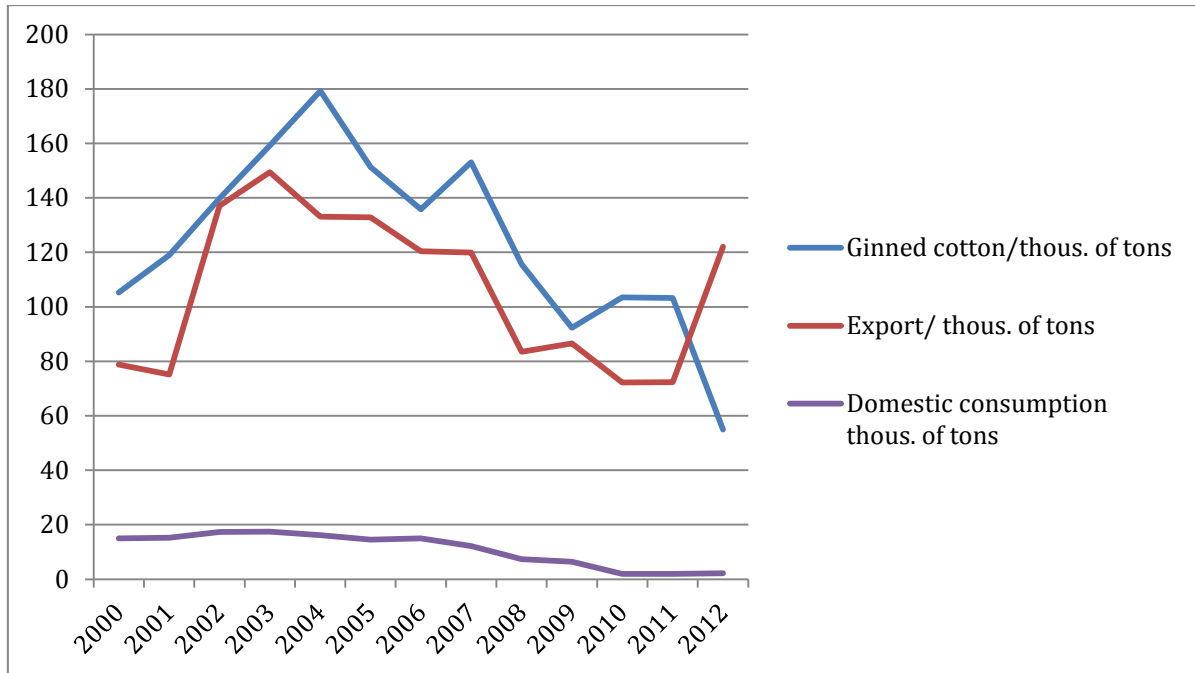
Figure 5.2: Cotton fabrics during 1990-2011 (million/meters)



Adapted from: Agency on Statistics under the President of the RT

According to the NBT, domestically ginned cotton in 2000 was 105.3 thousand tons. And the highest trend of ginned cotton was observed in 2004, which was 179.3 thousand tons, but in 2009 the volume of ginned cotton decreased to 92.3 thousand tons (see figure 5.3). In 2000 the domestic consumption of cotton made up 15 thousand ton and 17.5 thousand ton in year 2003, but starting from year 2008 and 2009 the domestic consumption declined to 7.4 and 6.4 thousand tons respectively. In 2010 the domestic consumption made up 1.9 thousand tons, which was less than the same period of 2009 (see figure 5.3).

Figure 5.3: Cotton indicators for period of 2000-2012



*Note: the year 2012 includes 11 month

Adapted from: www.nbt.tj, www.tajstat.tj (Accessed December 2012)

5.2.3. Modernization issues

According to the analysis of “Program of Light Industry Development in the RT for the period 2006-2015” the main problems within the sector are machinery and equipment which physically deteriorated, as there is no funding and relations with suppliers which results in the impossibility to provide spare parts (needles, etc.). Processing plants are still working with outdated Soviet-era equipment, which leads to poor performance of processing and failure to meet quality standards, required by export markets and higher levels of the internal market.

Outdated and depreciated equipment in most enterprises (except for few new ones) is a big factor of non-competitiveness and lack of value addition. Unfavorable taxation policies for business, high interest rates on loans (20-36 percent), and interruptions in the power supply, are the main barriers holding back investment in upgrading of existing equipment. Additionally, high costs and difficult access to spare parts for foreign equipment has a direct negative impact on production efficiency. Due to worn out and outdated equipment, many older plants cannot ensure consistently good manufacturing quality.¹³ It should be noted that the technical standard of cotton fiber processing plants do not match contemporary requirements (cannot comply with the demands of consumers' market), though there are exceptions in some joint enterprises such as Tajik-Italian, Tajik-South Korean, Tajik-American, Tajik-German and Tajik-Polish.

Due to negative earnings of companies, they cannot be considered as a full-scale source of funds for the modernization of manufacturing. It is therefore necessary to raise funds, loans being the first step. Nevertheless, the key point in obtaining credit is the issue of guarantees and collateral. The forms of deposits held by companies (shares, fixed assets), in general are not acceptable for banks for use as collateral. To get around this, the companies may use so-called compensation scheme that include insurance companies. The essence of the scheme is that the local firm gets a credit from external firms in terms of equipment turnkey (design, licensing, and related equipment), which will increase the production of export goods.

¹³ Source: Trade Promotion Program in Tajikistan, Textiles & Clothing Sector Export Development Strategy Tajikistan 25 November, 2010

To support the manufacturing industry, taking into account the fast and changeable demands of the consumers market for light industry, there are several measures that need to be done. The government needs to ensure cotton fiber enterprises have low transport expenses, provide raw materials and distribute export-made commodities to a selling market; assure that the companies are sufficiently staffed with qualified workers from cities, regions and countryside and carry out professional training for the workers and mid-level administration personnel; pay more attention to the consumer market by inquiring and arranging production of rival manufacturers that would comply with the market demand. It is also necessary to upgrade and restore the companies via setting modern technological capabilities and implement up-to-date technology in industrial manufacturing and processing, as well as arrange manufacturing of new kinds of the competitive outputs and present a contemporary technology of its manufacturing considering cost efficient side.

Chapter six: Conclusion and Recommendations

The objectives of the study were to analyze the current performance of development of the cotton industry, find out the major impediments of cotton sector development in Tajikistan and suggest the specific policy options available to the government for to upgrade the countries position in cotton industry value chain.

Given the asserted debt crisis that penetrates the sector, it is argued that the cotton industry is ineffective and poorly operated. As discussed in chapter five, there are several concrete issues that the cotton industry is affected by. The problems of high value of financing and weak method of cotton grading, high cost of borrowing, lack of investment in the cotton sector (foreign investors remain mostly interested in raw materials in Tajikistan), the low competitiveness of domestic products (due to use of obsolete technology compared with foreign counterparts this condition hinders the production of high quality goods, thus compared to the manufacturers in China, Uzbekistan, and Kyrgyz Republic the competitiveness of the domestic industry remains low in terms of price), weak institutional representation and the low efficiency of planned programs for development of the industry have led to a decline of cotton production.

The cotton industry is presently afflicted by inferior management, an inconsistent and weakening legal system, monopolistic misuse of proceeds, and failure to create a competitive position and a framework; all of which is detrimental to the attracting investment. In comparison, the cotton industries of the Kyrgyz Republic and Kazakhstan (two countries with similar economic, geographical, historical and political

situations) are presently flourishing with appreciable investment, competitive positions and high farm gate prices for production (World Bank , 2012, p. 7).

The sector is badly financed and framework for attracting new financial services is inferior. The cost of sustaining all players of the value chain is substantial, including collectors as well as intermediaries. Mobilization of farmers, increasing access to financing, input maximization, technology upgrading and modernization, improvement storing and handling, market expansion and development in extension services are cross-cutting recommendations for cotton industry. Proper financing of the cotton industry value chains is necessary in order to help farmers' approach process and sell their wares. Funding reasonable inputs such as high-grade seeds, crop protection products, fertilizers, watering, storing and cotton processing may well stabilize the sector and increase the amounts of farmers (MFC, 2011, p. 118).

The debt crisis in the cotton industry has demonstrated the danger of heavy dependence on commercial loans, and the extreme weakness of the existing alternatives to lend in cotton industry. Thus, measures to improve access to rural finance should be wide-ranging and comprise initiatives to strengthen all bank and non-bank financial institutions, as well as features and incentives for the provision of agricultural credits. Expansion of rural financing depends on the profitability of the rural economy, especially agricultural production and processing, the presence of a favorable legal, economic and political environment for financial intermediation and growth of a rural economy and the ability of financial institutions to effectively perform their function of financial intermediation, creating oriented products and services that enable the

mobilization of domestic funds to be available for important investment purposes at low costs (FAO, 2006).

Stable growth of value chains of the cotton industry (comprising cotton production and its exports) will hinge on the action of a robust private sector, centered on healthy competition amongst processors, agents, dealers and providers of materials and equipment, as well as an increase of the proficiency of farm manufacture. The straightforward point for attaining this objective is a change in the sectoral strategy that will enable producers to decide where to manufacture and whom to sell their cotton. For instance, while ginneries are required to compete for raw cotton by offering better prices, they need to increase the fiber production and effectiveness in order to get the proper materials. They would also pay a reasonable price for the by-products. Upon ending tension on farmers by the local influences so investors will be required to compete by presenting fair prices on material resources and on cotton as well.

It is important to mention that on March 2, 2013 the RT became the 159th member of the WTO. Tajikistan and the Kyrgyz Republic are the first WTO members from Central Asia's five independent states. Being a member of the WTO may bring positive influence and potentially could open up huge window of opportunity for the cotton industry by acquiring a broader approach towards external markets. Particularly, being a WTO member gives the chance for frequent growth in supplies of cotton products, cotton yarn, ready garments and different cotton outputs to world markets. Increase of such prospects would take place through removal of quotas, certificates and other non-tariff barriers outward from the RT.

The RT should modernize its cotton industrial technology to include up-to-date machinery. The RT should acquire skills and know-how from the global industry. This requires a strong commitment to the implementation of a national export strategy, including the rapid development of export-oriented industries. To this connection, companies need to modernize existing and commission new facilities.

6.1. The areas of intervention to upgrade the cotton industry value chain

In order to implement the policy of the GOT for the development of the cotton industry, the following tasks, such as: improvement of the legal framework, regulatory and institutional acts of the cotton industry, which contribute to development of the sector's infrastructure; protect the rights of producers and consumers, in order to foster the development of free competition and attract private investment and increase revenue; elimination of state production plans established by the central authority (Strategic planning should have the intention to increase motivations for producers by offering them independence to efficiently use resources and gain from their labor and economic decisions and provide competition amongst processors, mediators, who retail goods and purveyors of material and technical resources); and the presentation of rivalry strategy and processes that guarantee full involvement of financiers and processors of cotton in fair competition; the elimination of controls over the domestic shipping of cotton, that allows independent choice of the producer with regard to its handling and selling; provide practical assistance for the analysis and reform of the agricultural sector in order to develop the cotton industry and improvement of land use; develop mechanisms for the provision of loans for development of the cotton industry; develop a series (VC) of cotton industry from production to the sale of cotton, in order

to attract foreign investment for development of the sector; encourage the establishment of new spinning, textile, and clothing manufacturing companies; foster the establishment and development of manufacturing cooperation between cotton gin, spinning and textile manufacturing companies; implement policies focused on improvement of technologic discipline at companies and based on improving quality of finished/ready goods; develop a legal basis of using certified manufacturing facilities, which provide participants with quality, such as seeds, fertilizers and plant protection products; strengthen the foundation of infrastructure organizations that supply manufacturing facilities to cotton producers; create the conditions for private enterprises to purchase certified manufacturing facilities (fertilizers, pesticides, fuel, spare parts, etc.); expand the leasing of agricultural machinery; set-up enterprises for processing of cottonseeds in regions of the country, which should deal with cleaning and exposing (outcrop) of cottonseeds and training of young professionals and skills development of cotton industry employees in relation to the modern methods and the advanced technology of production, processing and sale of cotton (there needs to be some organizing of groups at professional and technical schools to train staffs of industrial cotton fiber processing companies and other relative light industry field) need to be done. As a consequence of these modifications, especially the rise in export prices, better prices will improve manufacturer and industry income, which would favor both the public and private sector as well.

6.2 Further studies

This study introduces the information and factors that can assist the Tajikistan's cotton industry to promote and develop its growth in the post-independence period. The

conclusions of this thesis are reasoned, real and true with some limitation, which could be avoided by conducting further study.

As the research is endeavored to identify the major impediments (factors that cause economic failure to cotton industry) of the cotton sector in Tajikistan, the conclusions are topical and pertinent to current government policy. Further study on the value chain of the cotton industry, including main competitor countries, which are producing and exporting cotton, could enhance the value of the conclusions.

Since this study mainly used secondary data, it is important to collect primary data as well, by conducting surveys of cotton plant (ginneries), farmers and other value chain actors. The conducting of a survey may contribute to more reasonable and valid findings and conclusions. Thus, any research in this vein is valued.

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