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Cotton Value Chain: Skill Gap Analysis in Garments Sub-sector

Implications for employment, poverty and livelihood

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KNOWLEDGE FOR LIFE

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List of Abbreviations

AFA	American Flock Association
AMKI	Average Market Knowledge Index
APBUMA	All Pakistan Bed-Sheets & Upholstery Manufacturers Association
APCEA	All Pakistan Cloth Exporters Association
APCPA	All Pakistan Cotton Powerlooms Association
APPLA	All Pakistan Power Looms Association
APSA	All Pakistan Sizing Association
APTMA	All Pakistan Textile Mills Association
APTPMA	All Pakistan Textile Processing Mills Association
ARTA	American Reusable Textile Association
ATMA	American Textile Machinery Association
Bn	Billion
BPR	Business Process Re-engineering
CAGR	Compound Annual Growth Rate
CCI	Chamber of Commerce and Industry
CEO	Chief Executive Officer
Cft	Cubic Feet
CTRI	Cotton and Textile Research Institute
CVC	Cotton Value Chain
DFI	Difficulty of Firing Index
DHI	Difficulty of Hiring Index
DOZ	Dozen
DTO	Director Trade Organizations
DTRE	Duty and Tax Remission for Export
EU	European Union
EURATEX	The European Apparel and Textile Organization
FBR	Federal Board of Revenue (formerly the CBR)
EPB	Export Promotion Bureau
FCCI	Faisalabad Chamber of Commerce and Industry
FDI	Foreign Direct Investment
FOB	Free on Board
FPCCI	Federation of Pakistan Chambers of Commerce and Industry
GDP	Gross Domestic Product
GoP	Government of Pakistan
GST	General Sales Tax
GWH	Gigawatt Hour
HR	Human Resource
HRD	Human Resource Development
HRM	Human Resource Management
ILO	International Labour Organization
IMF	International Monetary Fund
ISO	International Organization for Standards
IT	Information Technology
ITAA	International Textile and Apparel Association
Kg	Kilogram
KM	Knowledge Management
KSA	Knowledge, Skill and Attitude
KSE	Karachi Stock Exchange
LC	Letter of Credit
MDG	Millennium Development Goals
MMM	Marketing Management System
MNCs	Multinational Corporations

MTDF	Medium Term Development Framework
MTM	Masood Textile Mills
MEDI	Mennonite Economic Development Associates
NEPRA	National Electric and Power Regulatory Authority
NIDA	National Institute of Design and Analysis
NPO	National Productivity Organization
OGRA	Oil and Gas Regulatory Authority
OTEXA	Office of Textile and Apparel of USA
PAF	Pakistan Apparel Forum
PAKSEA	Pakistan Knitwear and Sweaters Exporters Association
PASFGEA	Pakistan Art Silk Fabrics & Garments Exporters Association
PBWEA	Pakistan Bed Wear Exporters Association
PCETA	Pakistan Commercial Exporters of Towels Association
PCFAMEA	Pakistan Cotton Fashion Apparel Manufacturers and Exporters Association
PCMA	Pakistan Cloth Merchants Association
PCTMA	Pakistan Canvas and Tent Manufacturers and Exporter Association
PGEA	Pakistan Garments Embroidery Association
PGMEA	Pakistan Gloves Manufacturers and Exporters Association
PHMA	Pakistan Hosiery Manufacturers Association
PRGMEA	Pakistan Readymade Garments Manufacturers & Exporters Association
PSRMA	Pakistan Silk and Rayon Mills Association
PTAD	Pakistan Trade Development Authority
PTEA	Pakistan Textile Exporters Association
R&D	Research and Development
RDS	Research and Development Support
RMG	Readymade Garments
SBP	State Bank of Pakistan
SME	Small and Medium Enterprise
SMEDA	Small and Medium Enterprise Development Authority
SMOT	Stitching Machine Operators Training Scheme
Sqm	Square Meter
SSGC	Sui Southern Gas Company Ltd.
TA	Trade Association
T&C	Textile and Clothing
TDAP	Trade Development Authority of Pakistan
TK	Takka (Bangladesh Currency)
TMAP	Towel Manufacturers Association of Pakistan
TQM	Total Quality Management
TSA	Textile Society of America
TSDB	Textile Skill Development Board
TTIB	Textile Training Institute Management Board
TUSDEC	Technology Upgradation and Skill Development Company
UAE	United Arab Emirates
UNDP	United Nations Development Programme
USA	United States of America
USAID	United States Agency for International Development
USCB	US Census Bureau
WTO	World Trade Organization

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Introduction

Cotton value chain (CVC) has a strategic importance in Pakistan, as it accounts for 8.5 percent of GDP, 46 percent of manufacturing, 61 percent of the total export earnings, and 38 percent of employment in the country (Government of Pakistan, 2008, p. 39). Alone textile and clothing sector is providing employment to 2.3 million people in the country (Adhikari & Weeratunge, 2006, p. 114). Moreover, textile industry is also important because it is the second largest employer of women in Pakistan (MEDI, 2007).

Background

Cotton value chain (CVC) is very long. Raw cotton is converted into cotton lint and seed through ginning. Cotton lint is processed for the production of cotton yarn, which is in turn used for the manufacturing of fabrics / cloth, hosiery, apparel, canvas, tarpaulin. Cloth is processed to have processed or dyed/printed cloth. Printed cloth is used for the manufacturing of readymade garments (RMG) and bed wear. Other textile products include terrycloth (for making highly absorbent bath towels and robes), denim (for making blue jeans), chambray (for making blue work shirts), corduroy, seersucker, cotton twill, socks, underwear, T-shirts, bed sheets, crochet and knitting items etc. Non-textile products of cotton include fishnets, coffee filters, tents, gunpowder, cotton paper (origin in China) and bookbinding. By-products of cotton are cotton seed oil, cottonseed meal (as feed for livestock) and cotton sticks (for fuel and organic matter). Cottonseed oil is highly valuable by-product of cotton. It has several distinct characteristics, being cholesterol-free, high in poly-unsaturated fats and having high levels of antioxidants (Vitamin E) which prolong its shelf life (Cotton Australia, 2007c).

Textile down-stream industry produces products like towels, tents and canvas, cotton bags, bed wear, hosiery & knitwear, and RMG. Hosiery sector comprises 12,000 knitting machines with existing capacity utilization of 70 percent. The sector has tremendous potential for exports but is facing new form of competition from the newly inducted members of the EU (Government of Pakistan, 2008, p. 43). RMG sector is the source of highest value addition along the cotton value chain. Towel sector currently has 700 towel looms. Handicrafts, garments, and embroidery are the sub-sectors of textile industry having great potential for creating jobs for women. Evidence is available that textile industry can help in enhancing the income of women to a substantial extent. For example, in a project of MEDI launched in Pakistan, average income of women increased from just Rs. 380/month to Rs. 1100/month (MEDI, 2007).

It was the textile sector which played a key role in the early stage of industrialization in the UK, some parts of the North America, and East Asian countries (Adhikari & Weeratunge, 2006, p. 113). Experience of these countries can prove to be of significant importance for Pakistan.

Despite the fact that CVC has strategic importance in the country in terms of its contributions towards GDP, export earnings, employment, poverty alleviation, and empowerment of women its real potential has not yet been realized. Entire textile value chain needs to be upgraded in terms of production management, dyeing, printing and wet processing, quality stitching, line supervision, machinery maintenance, factory floor performance, better technology, and research and innovation (Government of Pakistan, 2008, p. 40). Medium Term Development Framework (MTDF) 2005-10 of Government of Pakistan also suggests *"it is necessary to move out of the 'low skills equilibrium' which traps both individuals and employers in a low expectations and low productivity environment"* (Planning Commission, 2005).

Arguably, any improvement along the CVC is expected not only to give a boost to the GDP growth, manufacturing sector and export earnings, but also to create more employment opportunities, hence, it would help in alleviating poverty in the country.

One of the key challenges in the improvement along the CVC is the low productivity which is associated with low level of skills and knowledge. Planning Commission (2007, p. 114) believes that

serious constraint in achieving competitiveness in the international market is the low productivity in the country and without focusing on embedded skills base, competence and productivity, challenges of international trade cannot be achieved. It is evident from the fact that with almost same size of workforce (2.2 million) as in Pakistan, the annual turnover of textile industry in Europe is around Euro 198 billion, much higher than total GDP of Pakistan (EURATEX, 2002). Improvement along CVC demands creativity and innovations, which cannot be imagined without investing in knowledge and skill development.

Keeping in view strategic importance and current dimension of CVC, a study was designed and launched in the country. The overall goal of the study was to investigate the potential for enhancement in the knowledge and skills of the key stakeholders of the CVC so as to develop a skill building strategy for different stakeholders of CVC aiming at improvement along the CVC. The study will contribute to CABI's Commodity theme. This also relates to MDG1 (Eradicate extreme poverty and hunger).

Objectives of the Study

Objectives of the study include to:

- Analyze the cotton value chain: Inputs – practices – output; ginned cotton; yarn fabrics / cloth ; garments (RMG, bed wear, hosiery / apparel etc.); and others
- Identify key stakeholders and developing map
- Study role of knowledge and skill gaps in poverty / livelihood at level of each sub-system
- Assess knowledge and skills of key stakeholders (knowledge/skill census)
- Study the existing knowledge systems
- Develop action plans

Methodology

The study is being conducted in phases, starting from tail of the CVC i.e. garments and the related products. The report under review is the first report and covers only garments sector.

Data were collected from both primary and secondary sources for this part of the study. Secondary sources included government publications, world literature on the subject, relevant trade bodies and websites of selected garments related units operating in Pakistan. Primary sources included the sampled textile (garments) units. A semi-structured questionnaire was designed for this purpose and was pre-tested in Faisalabad. Besides, a mini-workshop was also organized in Faisalabad to further refine the questionnaire. The workshop was participated by 10 professionals working in garments sector.

A team of 4 members was selected from the professionals of CABI South Asia, who were entrusted the task of data collection from Faisalabad, Lahore, Multan and Karachi. Selected professionals already had the experience of surveys. However, before initiating the process of data collection from primary sources, a one-day orientation training was arranged for them at the premises of CABI South Asia to facilitate them in understanding the purpose of survey, nature of the questions, meanings of technical terms etc. Data were collected by them during the last three weeks of June 2008 and first fortnight of July, 2008.

As the study is explorative in nature, and time taken by each interview was going to take 2-3 hours, therefore, sample size was restricted to 15. However, only eight garments factories agreed to participate in the survey. The sampled companies had their own manufacturing units and were involved in the export business (Table 1). On an average, a responding garment unit had 1200 employees. Number of employees per manager ranged between 24 and 50 with average of around 32.

Table 1: Categories of Textile Garments Companies

Category	No. of employees	No. of companies	%age of sample
small	1-100	1	12.5
medium	101-1000	6	75.0
large	>1000	1	12.5

Among respondents, all small companies were reportedly registered as proprietors, and all large companies as Public Limited while 50 percent of the Medium companies as Private Limited and 50 percent as the Public Limited. (Table 2)

Table 2: Types of Textile Garments Companies

Category	Proprietorships	Private Limited	Public Limited	Total
small	100	0		100
medium	0	50	50	100
large	0	0	100	100

Age of the responding companies ranged from just 7 years to 45 years with average of 18 years. On an average, small companies were 7 years old, medium companies 19 years and large companies 15 years.

To supplement the findings of the study, several other short interviews were also arranged with people with diverse background in the textile sector – ranging from indenters, cargo professionals, researchers and textile media professionals.

Organization of the report

Findings of the study are presented in 13 sections of this report. Section 1 introduces the textile sector and the problem statement. Section 2 outlines the objectives of the study. Section 3 gives methodological considerations. Section 4 explores potential of value addition in the textile industry. Section 5 discusses business environment in Pakistan. Section 6, 7, 8 and 9 presents findings of the study relating to production management, marketing management, organizational management, and training and development systems of the garments sector. Section 10 discusses relationship of knowledge gaps in the garments sector with employment, poverty, livelihood and gender development dynamics. Section 11 identifies trends in the garments sector and Section 12 proposes policy recommendations for improvement in the garments sector. Last section contains relevant references.

Potential for Value Addition in Textile Industry

Profile of the textile industry is given in Table 3. However, Pakistan has tremendous potential for the production of value added cotton products from existing cotton production. There are several studies which provide sufficient evidence to substantiate this argument. Fort example, Banuri (1998, p. 10) estimated that one hectare of land, on the average, produced 581 kgs of lint cotton, 1,162 kgs of cotton seeds, 500 kgs of cotton yarn, and 5801 square meters of cloth. If the same ratios are used to assess the existing potential of value addition, then one can estimate that one hectare land in 2005-06 (with yield of 714 kg cotton lint) could produce 614.46 kgs of cotton yarn and 7128.94 square meter cloth. As during the referenced year, total area under cotton crop in Pakistan was around 3.103 million hectares, so it can be estimated that Pakistan produced 2.215 billion kg cotton lint, from which it could manufacture 1.907 billion kg cotton yarn, and 22.121 billion square meter cloth. During 2005-06, Pakistan exported 2.634 billion square meters of cotton fabrics at the rate of US$ 0.80 / square meter. If the above potential of 22.121 billion square meter cloth is totally exported at existing rate of US$ 0.80 / square meter, then Pakistan can boost exports up to US$ 17.697 billion.

Table 3: Cotton Value Chain in 2002

Sector	Units	Production
ginning	1221	10,314 m bales
spinning	445	1818 m kg
weaving	174	5600 m sq. meter
processing/ finishing	731	2700 m sq. meter
garments	4000	650 m pieces
terry towels	400	53 m kgs
canvas	2000 looms	32 m kgs
knitwear	700	400 m pieces

Source: Saleem (2003)

Question is how much potential has Pakistan for value addition in textile industry. One bale of cotton (equivalent to 227 kg) can be used to produce (Cotton Australia, 2006): 215 pairs of jeans, 250 single bed sheets, 750 shirts, 1,200 t-shirts, 2,100 pairs of boxer shorts, 3,000 nappies, 4,300 pairs of socks or 680,000 cotton balls. During 2005-06, Pakistan produced about 7074.84 million kg of cotton, equivalent to 9.76 million bales (each of 227 kg). So Pakistan with existing production can produce over 2 billion pairs of jeans, 2.44 billion single bed sheets, or 7.32 billion t-shirts. (Table 4) It is clear from the above statistics that CVC has substantial potential for improvement.

Table 4: Potential for Value Addition

Product	Units/bale of 227 kg	Total Units (million)
pairs of jeans	215	2,098
single bed sheets	250	2,440
Shirts	750	7,320
t-shirts	1200	11,712
pairs of boxer shorts	2100	20,496
nappies	3000	29,280
pairs of socks	4300	41,968
cotton balls	680000	6,636,866

Vietnam plans to double its textile and clothing (T&C) exports from US$ 4.8 billion in 2005 to US$ 10 billion in 2010 and number of people engaged in the industry from 2 million to 4 million during the corresponding period. Exports of T&C from Vietnam increased by 40 percent in 2002, 33 percent in 2003 and 9.4 percent in 2005 (Pakistan Textile Journal, 2007). These statistics clearly indicate existence of huge potential in the world T&C market. If this potential is exploited, it can significantly contribute towards achievement of Millennium Development Goal 1 (MDG1).

T&C quota regime phased out on January 01, 2005. Earlier it was being estimated that Pakistan would be second major beneficiary of this development, however, such predictions did not come true (Adhikari & Weeratunge, 2006, p. 117). Question is why? Answer to this question is discussed in the following sections of the report.

Business Environment

Business environment in a country is the major determinant of the size and patterns of investment. Hence, it is an imperative to study the business environment of Pakistan to investigate into dynamics of value chain analysis. Business environment can be segregated into three levels: overall business environment of the country; industry specific environment; and the sector-specific environment. As scope of this report (first phase of the study) is the garments sector, therefore, third level of analysis of business environment covers the garments sector.

Overall Business Environment Indicators

There are several indicators which measure various dimensions of business environment in a country. Some of such indicators include: Ease of doing business, Difficulty of Hiring Index (DHI), and Difficulty of Firing Index (DFI).

According to World Bank (2007), Pakistan ranks at 76th position in the world on account of "ease of doing business", which implies that doing business in Pakistan is relatively a difficult task. There are 9 documents involved in export in Pakistan, where as they are 8 in India, 7 in China and 7 in Bangladesh. Similarly, number of days required to export a shipment are 24 in Pakistan, 28 in Bangladesh, 21 in China and only 18 in India (World Bank, 2007, pp. 97-99). Legal system is very complex and inefficient in Pakistan. It requires 880 days to get a contract enforced in Pakistan, where as that is 1420 days in India, 406 days in China and 1442 days in Bangladesh (World Bank, 2007, pp. 100-102).

During last three years, Government of Pakistan (GoP) introduced reforms every year. Currently, there are only 11 procedures involved in opening a new business in Pakistan as compared to 13 procedures in India and China. However, in Bangladesh, it involves only 8 procedures. As far as number of days required to open a new business is concerned, they are 24 days in Pakistan, 74 days in Bangladesh, 35 days in China and 33 days in India. Cost for starting a new business in Pakistan has been estimated at 14% of per capita income, where as it is 46 percent in Bangladesh, 8.4 percent in China, and 75 percent in India (World Bank, 2007, 88-90).

Head-hunting in Pakistan is relatively a difficult task. World Bank (2007), in its report Doing Business 2008 has given statistics of three indices of employment i.e. hiring index, a rigidity of hours index and a difficulty of firing index (p. 72). Difficulty of Hiring Index (DHI) which ranges from 0 to 100 (0 being most easy and 100 being most difficult), has been found to be 78 in Pakistan, 0 in India, 11 in China and 44 in Bangladesh. It clearly indicates that difficulty in hiring people is much more in Pakistan (World Bank, 2007, 91-93). However, firing is easy in Pakistan but when compared with India, China, and Bangladesh, it is relatively difficult. Difficulty of Firing Index (DFI) was found only 30 in Pakistan, 20 each in India, China, and Bangladesh.

Thus, the indicators of business environment suggest that it is relatively more difficult to operate business in Pakistan than most of its competitors.

Business Environment in Textile Industry

Johri and Qazi (2007) have identified several weaknesses in the textile sector, most predominantly the poor quality (Figure 1). Weaknesses at initial transfer points of CVC keep on adding to the magnitude of problem towards later transfer points. So quality is one of the serious constraints of the valued addition in the textile sector. Second major weakness of the CVC is the low productivity. Again same principle applies here. Low productivity at initial stages of the CVC leads to compounding of the problem as we move towards later stages of CVC. Third major weakness of the CVC is the old technology. This issue reinforces the first two weaknesses. It does not cause erosion

in quality but also dents the productivity. Low productivity is attributed to lack of knowledge and skills, poor technology and poor managerial practices.

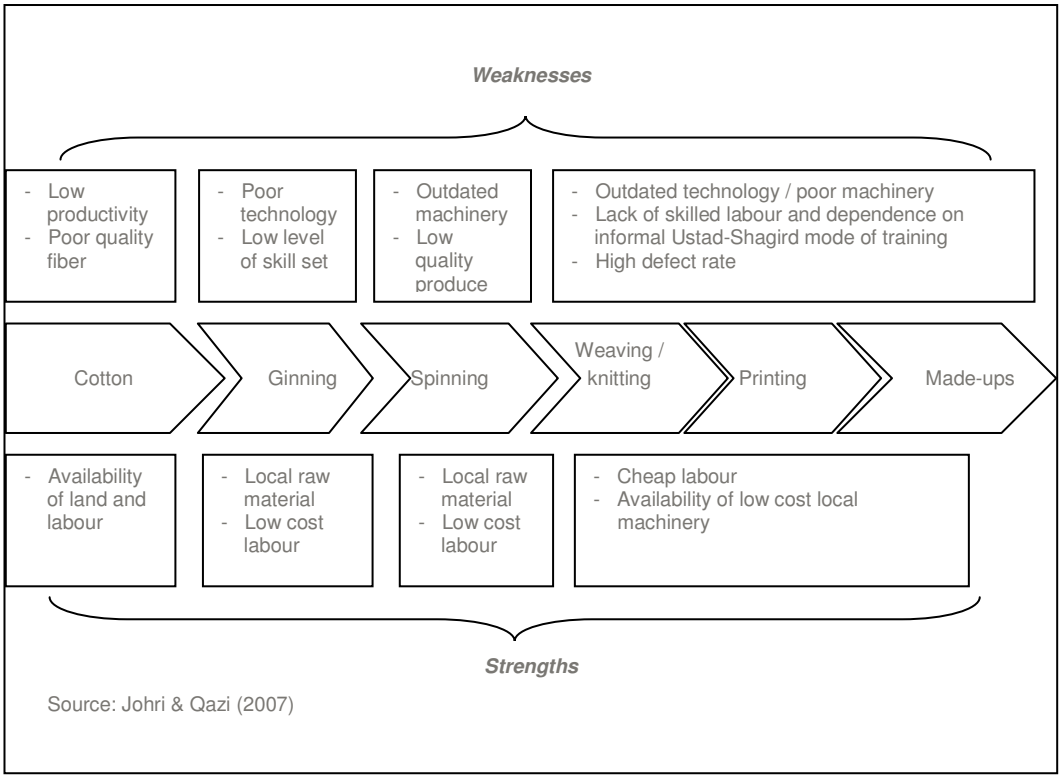


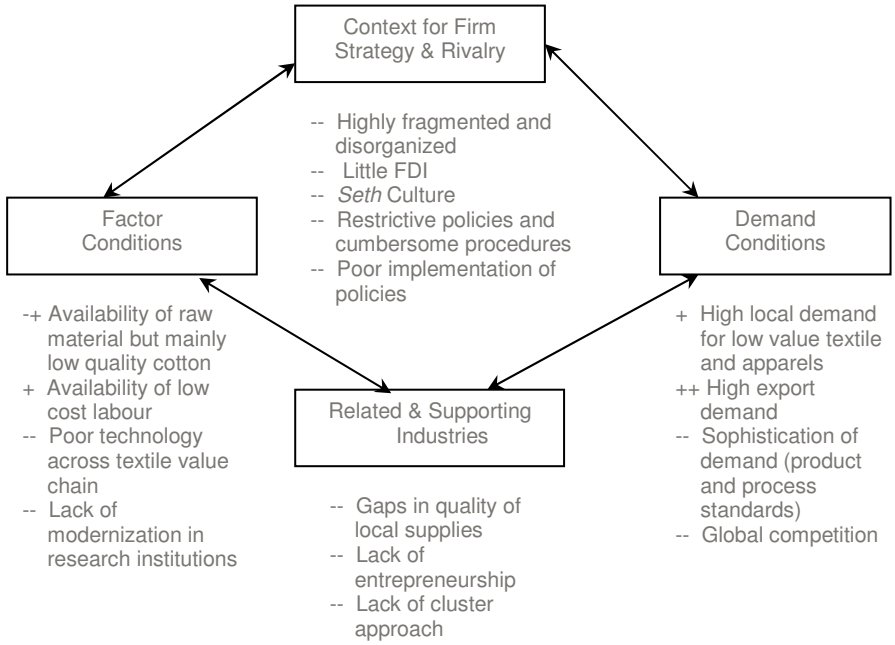
Figure 1: Strengths and Weaknesses of Textile Industry in Pakistan

Business Environment in Garments Sector

There are four dimensions which can be used to study the business environment in the Garments Sector, as suggested by Johri and Qazi (2007) which include: Context for firm strategy and rivalry, demand conditions, factor conditions and related / supporting industries, as presented in Fig. 1. Johri and Qazi (2007) coined the term "Textile Diamond" for this framework. So Textile Diamond was used for analysis of the business environment in the Garments Sector, which is presented below:

Context for firm strategy and rivalry

There are several issues related with context for firm strategy and rivalry in the garments sector. First, the sector is highly fragmented and disorganized. Second, it has attracted little FDI. Third, it is dominated by *Seth* Culture. Owner of the garments factories, in most of the cases, behave like master and treat employees as their slaves. Fourth, the sector is facing restrictive policies and cumbersome procedures (Johri & Qazi, 2007). All these issues are negatively impacting the performance of the sector. (Figure 2) The owners direly need (but unfelt by them) to chart a new way of managing people.



Source: Johri & Qazi (2007)

Figure 2: Textile Diamond

Policy Initiatives of the GoP

Another dimension of context for firm strategy relates with government policies and related institutions. Recent policy initiatives taken by the GoP are given in Box 1. Additionally, following institutions have recently been constituted for the promotion of Textile Industry in general and the garments sector in specific:

Federal Textile Board (FTB) was created in 2000 to prepare the textile industry for the post quota scenario. The Board is mainly working on following tasks (Government of Pakistan, 2008, p. 40):

- Clean Cotton Program
- Labour, Social and Environment Laws
- Modernization of Ginneries
- Rationalization of Tariff
- Facilitation in Sales Tax Issues
- Developing packages for the garment sector to improve its competitiveness in the international market.

In the light of Trade Policy 2005-06, Textile Skill Development Board (TSDB) was set to provide technical support to the Textile Garments Sector. The Board was tasked to develop a trained a critical mass of 10,000 to 12,000 stitching machine operators in one year, both for woven and knitted garments, by imparting training at the respective factory/unit. The programme has initially been launched in 34 garments units under Stitching Machine Operators Training (SMOT) Scheme: 15 units are in Karachi, 11 units in Lahore, 7 units in Faisalabad and one unit in Rawalpindi. Till March 2008, 3800 personnel had been trained: 2700 females and 1100 males. (Government of Pakistan, 2008, p. 40)

Box 1: Recent Initiative Taken to Support Textile Industry

Government of Pakistan has taken various initiatives to boost the textile sector and to make it compatible with other global competitors in the quota free regime, these are:

- *Establishment of separate Ministry of Textile (MINTEX) to focus on textile issues.*
- *Amendments in Labour Laws and Factories Act to make them ILO and WTO compliant.*
- *A Campaign for the production of contamination free cotton was launched with some amendments in Provincial Cotton Control Act, 1966. As a result the foreign matter in cotton has been reduced from 60 gm per bale to 5 gm per bale.*
- *Gradual reduction in import duty on textile machinery to 5%.*
- *Sales Tax on the import and local supply of major inputs/raw materials utilized in the manufacturing regime of textile industry, has been zero rated.*
- *Import duty on raw material, sub-components and components used in the local manufacturing of textile plants and machinery for export sector has been reduced to zero%.*
- *Import duty on ginning presses has been reduced to 5%.*
- *Turn over tax has been reduced to 1% on retailers of specified textile fabrics and articles of apparel including RMG or fashion wear. The 15% Sales Tax levied earlier on retailer has been reduced to 2%. Both these taxes will be final tax liability.*
- *Custom Duty, Sales Tax and Withholding Tax on raw materials for the manufacture of textile has been zero rated at the import stage to do away with the duty drawback/refund claims under the revised and simplified Duty and Tax Remission for Export (DTRE) Scheme.*
- *R&D support has been given to Garment Exports at 6%, Dyed/Printed & White, Home Textile at 3% & dyed/printed home textile at 5% of the FOB value.*
- *The MINTEX has launched studies by International Consultants M/s. Gherzi to conduct a study based on assessment of the cost of production in competing countries and the subsidies being provided by their respective Governments in order to enable us to develop a strategy to enhance competitiveness of the Industry in Pakistan.*
- *In order to meet the shortage of raw cotton, import of raw cotton was allowed from India through Wagah Border.*

Source: Economic Survey of Pakistan, 2007-08

Pakistan is facing an acute shortage of skilled manpower in the country and this issue was highlighted by the respondents and also seems to have recognition from the Government. Textile Training Institute Management Board (TTIB) was created by the GoP in 2008 to address this problem. TTIB has been given representation from academia and textile industry. (Government of Pakistan, 2008, p. 40). However, there is no evidence of impact of this intervention on the viability of benefitting organizations.
Other initiatives of GoP include:

- Technical Up-gradation of Garment Industry all over Pakistan. Project was initiated in 2007-08 with financial outlay of Rs. 100 million.
- Establishment of three Garment Cities at Lahore, Faisalabad and Karachi,
- Implementation of Export Plan
- Establishment of two Fibre Testing Laboratories
- Pakistan School of Fashion Design, Lahore
- Trade and Facilitation Project and Expo Centre, Lahore

Besides, garments cities are being established in Faisalabad and Lahore and Textile City in Karachi. However, respondents of the survey of this study indicated only two initiatives of the GoP that have benefited the industry:

- R&D support[1] to garments exporters.
- Rebates

[1] Federal government provided Research and Development Support (RDS) to the manufacturers and exporters of textile garments at the rate of 6% of the FOB value of exports consignments. It was meant for skill development, training of workers, upgradation of information technology and professional consultancy. In 2006, it was found that facility was being misused through over-invoicing and change of destination.

Anti-industry Government Policies

Respondents of the survey had plenty to grumble out. They identified following policy and political issues which were causing damage to the Garments Sector:

Political instability is damaging the businesses. The foreign buyers are now reluctant to offer orders to Pakistani exporters. Moreover, foreign suppliers of inputs (like chemicals, machinery etc.) are hesitant in accepting LCs opened by Pakistani importers.

Cotton Policy: The respondents pointed out that existing cotton policy was not in the interest of local textile industry. India has removed 14 percent custom duty on the import of cotton to facilitate local textile manufacturers to import cotton and meet their requirements. On the other hand, GoP has allowed export of cotton to India. Total production of cotton during the current year is around 11.5 million bales while total demand of the industry is about 16 million bales, leaving a shortfall of 4.5 million bales. So, export of cotton to India will create further pressure on the availability of cotton in the local market, which will result in further hikes in the prices of cotton.

Coercive nature of taxation system: Taxation system is very complex and coercive in nature. First, there are several types of taxes. Second, tax rates are too high to an unaffordable extent. Third, attitude of tax authorities is very rude and tough: they act as masters and tax payees as slaves or thieves. There is still long way to achieve desired level of tax governance in the country.

At present 10 percent withholding tax is being levied on the electricity bills. The business community in general and those in garments sector in particular believes that this tax is crippling the industry and must be waived. The general call for strike of business community (initial idea of Faisalabad Chamber of Commerce and Industry [FCCI]) had waiver of withholding tax on its agenda. Business community believes that natural gas is consumed by 98 percent of the industrial units, while remaining 2 percent industrial (mostly large industrial groups and multinationals) units consume captive power, so hike in prices of gas will badly hit almost entire country. However, according to newspaper sources, tariff on captive power has also increased by 68 percent during the referenced time so argument of business community loses substance. On the other hand, interviews with tax authorities (names not to be disclosed) have revealed that textile sector is not paying taxes up to its share. For example, entire textile industry is currently zero-rated in terms of General Sales Tax (GST) in true and real sense. The inputs and raw material used in the textile industry is also zero-rated for the purpose of GST. Even, electricity and gas consumed in the textile industry are also zero-rated. They argue that textile sector must pay some taxes at least withholding tax etc., as the Government is seriously facing the worsening issue of budget deficit. During the current year, Federal Board of Revenue (FBR) is anticipating shortfall of Rs. 400 – 500 billion in revenue collection. Tax to GDP ratio in Pakistan is just hovering around 11 percent which would have to be increased to at least 15 percent to manage such shortfalls.

Downfall in Pak Rupee: Pakistani Rupee is experiencing a downfall unabatedly and the Government is unable to deal with this issue. However, there was lack of consensus among the respondents on merits and demerits of this trend of falling worth of Rupee. Almost 80 percent of the respondents were in favour of the decline and even suggested that Government should let the Rupee fall further so that exports may get a relief. While, remaining 20 percent did not favour this idea and argued that spill-over negative effects of falling Rupee will be much higher than the benefits. Recently (July 13, 2008), IMF has also suggested GoP to let market forces decide the Rupee value to avoid further erosion in its foreign exchange reserves.

No power policy exists in the country: Poor power management is also crippling the garment units. Ban has been imposed on new connections of gas, eventually, industrial units have been debarred from installing their own private power units. Moreover, gas and electricity tariffs are being increased frequently. Since June 2008, prices of gas have increased by 31 percent and electricity tariff by 16 percent. Such tariff hikes have badly impacted the industry. Some of the respondents claimed that owing to this problem, hundreds of industrial units have become economically unviable, hence, closed down. This claim is supported to some extent by available government statistics. For example:

- Consumption of oil and petroleum in the industry fell down to 0.861 million tonnes during July-March 2007-08 from 1.224 million tones during the corresponding period of 2006-07.

- Consumption of gas in the industry declined to 227,245 mm cft during July-March 2007-08 from 229,073 mm cft during the corresponding period of the previous year.

However, statistics of electricity consumption does not support the claim. Consumption of electricity in industry has rather increased to 15,713 Gwh during July-March 2007-08 from 15,495 Gwh during the corresponding period of the previous year. However, claim cannot yet be nullified as impact of hikes in electricity tariff is yet to be materialized and may be seen in the statistics for the months after Feb 2008, upon their availability.

Moreover, it is point of concern that Sui Southern Gas Company Ltd. (SSGC) has recently submitted a petition with Oil and Gas Regulatory Authority (OGRA) that prices of gas must be increased after every six months: by 25 percent in January 2009, and by 45 percent by July, 2009.

Box 2: Appeal of Six TAs to the Prime Minister

Daily Business Recorder of 14th July, 2008, published an appeal of six TAs (including FCCI, PTEA, PHMA, APTPMA, APPLA, and APSA) to the Prime Minister highlighting important issues of the textile industry:

- **Rise in the Gas Tariff by 31 percent:** Only 2 percent of the industrial units (comprising large industrial groups and MNCs) are utilizing captive power, based on gas. Remaining 98 percent industrial units are consuming gas as a raw material. The recent 31 percent rise (in one go) in the gas prices has destroyed the existence of domestic industry in general and textile industry in particular. The latest rise may be withdrawn.
- **Unfair Distribution of R&D Facility:** R&D Refund (facility) to the exporters should be evenly disbursed without any discrimination between small and big exporters.
- **The Growing Interest Rate:** The continuing growth in interest rates of the banks is leading to the closure of entire domestic industry. During the last three years, the profits of five big banks has jumped from Rs. 6 billion to Rs. 116 billion and all the domestic banks are giving a very tough time to the textile industry. The industry should be saved from diminishing and export refinancing be provided to the exporters as per their entitlement to let them survive.
- **Levying of 10 percent Withholding Tax** on the Electricity Bills of Power Looms be withdrawn immediately.

Loaning policy is also non-transparent and non-conducive for the industry: Business community believes that current loaning policies of banks are causing damages to their business concerns. Interest rate is all times high and further rising. They argue that profit of 5 big banks in the country has soared from just Rs. 6 billion to Rs. 116 billion in just three years at the cost of prosperity of the businesses in general and the textile industry in particular. Agha Saif Ali Khan an owner of a Cargo Company revealed that:

> *In the textile sector, there are several companies which are held-up in the debt trap and the magnitude of problem is increasing. Some of the textile companies are rapidly dwindling into decrepitude. A renowned big company X (name not disclosed) in Faisalabad has to pay Rs. 16 billion back as debt to a commercial bank and total worth of the company's total assets are much less than the size of debt. It is almost an impossible task for the company to pay back the bank loans. So while realizing gravity of the situation, the bank has taken hold over all cash inflows and outflows of the company. Even salaries of the staff are not being paid without authorization of the bank authorities. The Bank is struggling to keep the company alive.*

Recently, the discount rate has been increased from 12 percent to 13 percent in the country's Monetary Policy for the year 2008-09. It can easily be anticipated that the banks will increase the mark up, hence, it will damage the industry by further escalating the cost of business operations.

Minimum wage rates: Minimum wage rates have been increased to Rs. 6000 per month with effect from 1st July, 2008, which has resulted in escalation of overheads by 25 percent. It was a common complaint among the respondents that wages of labour are continuously rising but their productivity is not increasing proportionally. Eventually, cost effectiveness of the textile industry in Pakistan is eroding. However, Adhikari and Weeratunge (2006, p. 113) believe that when wages increase in the textile industry, competitive advantage is negatively affected, however, this trend leads the industry to shift to higher value added products.

R&D Facility: The respondents of this study expressed the apprehension that 6 percent incentive relating to R&D is being withdrawn and argued that such action of the government will put the process of innovation at halt. However, probing lead to the finding that such facility was not being used for any R&D purpose, rather it was being treated as a compensation for the escalations in costs. Some of the respondents believed that R&D facility was not a subsidy, rather it was a compensation of duties and taxes paid by the exporters in the chain of production in one form or the other. Similarly, some of the respondents intimated that the prevailing R&D facility was available on volume basis, eventually, this policy was benefitting the big exporters and in this way small and medium size exporters were being put at comparative disadvantage.

Recently, six TAs have advertised an appeal to the Prime Minister, which highlights some of the major issues discussed above. The appeal is given in Box 2.

Factor conditions

Raw material is available for the sector but is mainly of low quality. Cotton is of poor quality. Labour has lower level of skills hence, poorly skilled labour leads towards low productivity. Technology available in the sector is generally poor. There is acute shortage of research and development activities (Johri & Qazi, 2007). Hence, factor conditions are not conducive for the development of the sector.

Related and supporting industries

Backward linkages in CVC for garments sector are ridden with poor quality supplies and poor quality output. The related industries are seriously lacking the element of entrepreneurship. Moreover, lack of cluster approach also persists. (Johri & Qazi, 2007) All these factors are not only causing problems relating to quality in the garments sector but also resulting into higher cost of production, eventually, eroding its competitiveness.

Demand conditions

There exists, high local demand for low value textile and apparels (Johri & Qazi, 2007). This phenomenon is impacting performance of the sector in both negative and positive ways. Demerit of this phenomenon is that sector is constrained with low incentive for moving towards higher value added products. While, the merit of this phenomenon is that it is keeping the sector surviving. On the other hand, in the international market of garments there exists high demand for the garments. It is a driving force, which is helping some export lead garments factories to gradually move towards higher value added products. However, majority of factories still remain trapped in the vicious circle of low quality and low value products.

During 2004-05 to 2006-07, export of most of the textile products (especially garments related) except knitted / croached fabrics have shown positive growth, ranging from one percent in case of textile made-ups (excluding towel and bed wear) to 18 percent in case of Art Silk and Synthetic Textiles (Table 5). Bed wear also showed strong growth with CAGR of 17 percent during the referenced period. Bed wear is the major source of earning foreign exchange among relatively higher value added textile products. Detailed analysis on important textile products is presented in the later sections of this report.

Table 5: Export of Selected Textile Products: Comparative Analysis

Commodity	2004-05		2005-06		2006-07		CAGR
	US$ m	% Share	US$ m	% Share	US$ m	% Share	%
Knitted croached fabrics	187	1.30	51	0.31	64	0.37	-42
Ready-made garments	1,088	7.56	1,310	7.96	1,385	8.16	13
Knit wears	1,635	11.36	1,751	10.65	1,961	11.55	10
Textile made ups.	2,436	16.93	3,044	18.50	3,070	18.08	12
• Bed wear	1,450	10.07	2,038	12.39	1,996	11.76	17
• Towels	520	3.62	588	3.57	603	3.55	8
• Textile made ups*	466	3.24	418	2.54	471	2.78	1
Tents and Canvas	66	0.46	39	0.24	69	0.41	2
Art Silk & Synthetic Textile	300	2.09	200	1.22	420	2.47	18

** (excl. towel & bed wear)*

Is demand of garments and related products rising? Three-year (2004-05 to 2006-07) analysis suggests that average unit price of most of the textile products except hosiery knitwear and bed wear have gained some improvement ranging from one percent in case of towels to 8 percent in case of knitted and croached fabrics (Table 6). It implies that demand of some products like Knitted & Croached Fabrics, RMGs, Tents and Canvas, and Art silk & Synthetic Textiles is increasing and that for some products like Knitwear (Hosiery) is decreasing, in relative terms. Though, average unit price of bed wear has shown negative growth during the corresponding period, however, the decline has been small.

Export of knitwear has increased by 10 percent in terms of US$, however, has exhibited decline in its average unit price by 7 percent. It indicates that increase in demand of knitwear has exceeded the decline in the unit price. Hence, price elasticity of demand for Pakistani knitwear in the international market is around 1.52. It means if price of knitwear declines by one percent, export earnings of knitwear products from Pakistan are expected to increase by 1.52 percent. The analysis suggests if the exporters / manufacturers manage to reduce the cost, they can reap more dividends.

Table 6: Average Unit Price of Selected Textile Products: Comparative Analysis

Commodity	Unit	2004-05 (US$)	2005-06 (US$)	2006-07 (US$)	CAGR (%)
					3 YRS.
Knitted & Croached Fabrics	Sqm	1.22	1.33	1.43	8
RMGs	DOZ	31.82	35.18	34.06	3
Knitwear (Hosiery)	DOZ	23.02	20.67	20.01	-7
Bed wear	Kg	5.48	5.43	5.44	0
Towels	Kg	3.74	3.70	3.78	1
Tents and Canvas	Kg	2.52	2.27	2.67	3
Art silk & Synth Tex.	Kg	0.75	0.69	0.79	3
Cotton Bags	Kg	4.09	4.12	4.18	1

Bed wear, knitwear garments, and RMGs are the major export oriented products related to the garments sector. Detailed market analysis of these three products is given below:

Bed wear: During 2006-07, Pakistan earned US$ 1996 million from the export of Bed wear, with CAGR of 17 percent from 2004-05 to 2006-07. However, during 11 months of the latest year (July-May 2007-08), exports of bed wear garments has shown decline (5.17 percent) as compared to the corresponding period of the last year. Further analysis suggests that Pakistan has improved in term of average unit price by around 4.91 percent, while quantity of exports has plummeted by 9.61 percent.

Box 3: Hosiery Industry

There are about 12,000 knitting machines spread all over the country. The capacity utilization is 70 percent approximately. Besides locally manufactured machinery, liberal import of machinery under different modes is also being made and the capacity based on exports is being developed. This sector has tremendous export potential. However, the sub-sector remained under pressure from its competitors 2007-08 and recorded a decline of 8.0 percent in exports as against last year amid tough competition emerging from the newly-inducted members to the European Union (EU) belonging to the former East European block.

Source: Economic Survey of Pakistan, 2007-08

USA is the biggest market for Pakistani bed wear. In 2006-07, USA accounted for over 47 percent of the total earning from bed wear. Share of USA has risen from 41.08 percent in 2004-05 with CAGR for three years (2004-05 to 2006-07) has been 26 percent. However, largest growing markets for knitwear include Chile, South Africa, Denmark, Austria, Italy, Belgium, Spain, Sweden and USA, in order, in terms of CAGR. (Table 7)

In the bed wear sector, the markets, where Pakistan appears to be loosing its grounds include UAE, Saudi Arabia and New Zealand with CGAR of -32 percent, -5 percent and -4 percent, respectively.

Table 7: Export of Bed wear Garments: Changing Market Dynamics

Country	share in export (%)	CGAR 2004-05 to 2006-07
Chile	0.89	56
South Africa	1.13	50
Denmark	0.84	48
Austria	0.75	43
Italy	2.72	32
Belgium	4.13	30
Spain	3.65	30
Sweden	0.95	30
USA	47.18	26

Knitwear garments: During 2006-07, Pakistan earned US$ 1961 million from the export of knitwear garments, with CAGR of 10 percent from 2004-05 to 2006-07. However, during 11 months of the latest year (July-May 2007-08), exports of knitwear garments has shown little improvement (1.87 percent) as compared to the corresponding period of the last year. Further analysis suggests that Pakistan has improved both in term of average unit price (1.08 percent), and quantity of exports (0.78 percent).

USA is the biggest market for Pakistani Knitwear. In 2006-07, USA accounted for over 64 percent of the total earning from knitwear. Share of USA has risen from 57 percent in 2004-05 with CAGR for three years (2004-05 to 2006-07) has been 17 percent. However, largest growing markets for knitwear include Benin, Algeria, Canada, Spain, and USA, in order, in terms of CAGR. (Table 8)

Table 8: Export of Knitwear Garments: Changing Market Dynamics

Country	Share in export (%)	CGAR 2004-05 to 2006-07
Benin	0.19	237
Algeria	0.13	144
Finland	0.26	26
Canada	2.58	24
Spain	2.79	23
USA	64.32	17

In the knitwear garments sector, the markets, where Pakistan appears to be loosing its grounds include Saudi Arabia, UAE, Greece, Germany and France with CGAR of -41 percent, -35 percent, -24 percent, -14 percent, and -14 percent respectively.

Pakistan is facing fierce Competition in textile, textile products and apparel. Knitwear market in the world has recently experienced a big boom. During January-September 2005, bed wear exports to EU from Taiwan increased by 1,165%, 663% from Cambodia, 235% from Laos, 226% from Philippines, 204 per cent from Sri Lanka and 65% from China (Aziz, 2006). While export of bed wear from Pakistan increased by just 40.6% in 2005-06 over previous year (Trade Development Authority of Pakistan, 2007): UK 4%, Germany 15%, Italy 57%, Spain 52%, France 9%, Belgium 36%, Turkey 141%, South Africa 72%, and South Korea 74%. Similarly, Bangladesh is progressing very fast on account of exports of garments. Last year Bangladesh earned US$ 7.8 billion only from the export of garments, almost six times than that of Pakistan.

RMGs: During 2006-07, Pakistan earned US$ 1385 million from the export of RMGs, with CAGR of 13 percent from 2004-05-2006-07. However, during 11 months of the latest year (July-May 2007-08), exports of RMGs has shown a little decline (2.84 percent) as compared to the corresponding period of the last year. Further analysis suggests that Pakistan has improved in term of average unit price by around 11 percent, while quantity of exports has plummeted by 12.41 percent.

Box 4: Readymade Garment Industry

The Garment Industry provides highest value addition in Textile Sector. This industry is distributed in small, medium and large scale units most of them having 50 machines and below; however, large units are now coming up in the organized sector of the industry. The industry enjoys the facilities of duty free import of machinery and income tax exemption.
During the year under review the sector recorded a healthy growth in exports (7.3%) as compared to last year. Currency differentials between India (Pakistan's traditional rival in this sector) and Pakistan as well as increased stress on quality control, played favorable for the country and diverted more orders towards Pakistani garment exporters.

Source: Economic Survey of Pakistan, 2007-08

USA has proven to be its biggest market. In 2006-07, USA accounted for about 39 percent of the total earning from RMGs. Share of USA has risen from around 35 percent in 2004-05 with CAGR for three years (2004-05 to 2006-07) has been 19 percent. However, largest growing markets for knitwear include Benin, Turkey, Spain, Greece, Australia, Finland, Belgium, Germany and USA, in order, in terms of CAGR. (Table 9)

In the RMGs sub-sector, the markets, where Pakistan appears to be loosing its grounds include Saudi Arabia (-45 percent), UAE (-34 percent), South Africa (-8 percent), and Canada (-2 percent) with CGAR in parenthesis.

Table 9: Export of Readymade Garments: Changing Market Dynamics

Country	Share in export (%)	CGAR 2004-05 to 2006-07
Benin	0.29	327
Turkey	0.98	204
Spain	5.60	33
Greece	0.56	33
Australia	0.60	31
Finland	0.32	31
Belgium	4.28	29
Germany	12.91	26
Italy	5.32	22
USA	38.56	19

Sectoral Trade Associations

Trade Associations (TAs) or Trade Bodies are representative organizations of the business organizations. They are registered with Director Trade Organizations (DTO), Ministry of Commerce, GoP. Almost every sector has a separate TA. Moreover, every region has a TA in the form of a regional chamber which is a collective representative of all types of business concerns. TAs are meant for facilitating the business community in promoting their businesses, looking after their interests, voicing their concerns at relevant forums, etc. Therefore, TAs are of significant importance in many ways. In USA there are hundreds of TAs relating to the textile and clothing industry, as US Textile industry is well organized. There are five leading bodies which provide valuable services for the textile professionals. They include:

- Textile Society of America (TSA)
- International Textile and Apparel Association (ITAA):
- American Textile Machinery Association (ATMA):
- American Reusable Textile Association (ARTA):
- American Flock Association (AFA):

The websites of US TAs are very rich in contents and information. Moreover, there is a Textile Museum in Washington DC which was established by George Hewitt Myers in 1925. It has vast collection of textile products. Every year 25,000 to 35,000 visitors from around the world visit the Museum. Such types of museums have support from the relevant TAs.

Related Trade Associations (TAs) in Pakistan

In Pakistan there are several TAs which represent various sub-sectors of the garments, most prominent are given below:

- All Pakistan Cloth Exporters Association (APCEA): It is only based in Faisalabad.
- All Pakistan Textile Mills Association (APTMA): The Association has its central office in Karachi, regional offices in Lahore, Peshawar, and Karachi, and liaison office in Islamabad.
- All Pakistan Bed-Sheets & Upholstery Manufacturers Association (APBUMA): It has its central office in Multan and regional office in Karachi.
- Pakistan Apparel Forum (PAF)
- Pakistan Art Silk Fabrics & Garments Exporters Association (PASFGEA): The Association has offices located only in Lahore and Karachi.
- Pakistan Bed Wear Exporters Association (PBWEA): It is only based in Karachi.
- Pakistan Canvas and Tent Manufacturers and Exporter Association (PCTMA): PCTMA has its offices located only in Lahore and Karachi.
- Pakistan Cloth Merchants Association (PCMA): PCMA is based in Karachi.
- Pakistan Commercial Exporters of Towels Association (PCETA): It has its offices located only in Lahore and Karachi.
- Pakistan Cotton Fashion Apparel Manufacturers and Exporters Association (PCFAMEA): It is only based in Karachi.
- Pakistan Garments Embroidery Association (PGEA): It is only based in Karachi.
- Pakistan Gloves Manufacturers and Exporters Association (PGMEA): It is only based in Sialkot.
- Pakistan Hosiery Manufacturers Association (PHMA): PHMA has its central office in Karachi and regional offices in Faisalabad, Lahore and Sialkot. [http://www.phmaonline.com/home.asp]. Hosiery and knitwear sector has 3,500 large, medium and small units, of which 85% are small, 10% medium and only 5% large. The sector is employer of 700,000 people. (PHMA, 2001)
- Pakistan Knitwear and Sweaters Exporters Association (PAKSEA)
- Pakistan RMGs Manufacturers & Exporters Association (PRGMEA). It is based in Karachi. PRGMEA has set up a training institute “Pakistan Readymade Garments Technical Training Institute” (PRGTTI) in Karachi in 1997. Since its inception, PFGTTI has produced 16000 trained professionals. [http://www.prgmea.org/]

- Pakistan Textile Exporters Association (PTEA): PTEA is the first ISO-9001-2000 Certified Trade Body in Pakistan. More than 300 permanent members with cumulative annual export earnings of US$ 4 billion.
- Regional Chamber of Commerce and Industry (CCI): CCIs are set up in almost all big cities of the country. However, there is only one CCI exclusively for women, which is established in Rawalpindi. All CCIs are federated into FPCCI.
- Towel Manufacturers Association of Pakistan (TMA): It is only based in Karachi.

All respondent companies reported to be member of a regional CCI. However, membership in case of other associations varied.

Facilities Provides by TAs

All of the responding companies reported to be member of at least one TA. However, the question is: are these TAs useful for the business community? The survey findings tell a dismal tale.

Almost 63 percent of the respondents pointed out that there was no benefit of the TAs as they were serving interest of only few power groups. There are several possible benefits of the TAs. Responses of the respondents against each possible benefit are discussed below:

Providing updates on Government Policies, Rules and Regulation: More than 50 percent of the respondents informed that they were not getting any such facility from any TA. Almost 38 percent of respondents informed that they were getting such information from the TAs on monthly basis and remaining about 12 percent informed frequency of such information as “once in a quarter”.

Providing updates on latest technology: Similarly, around 50 percent of the respondents were reportedly not receiving any such facility from any TA. However, almost 38 percent of respondents informed that they were getting such information from the TAs on at least monthly basis.

Arranging visits of foreign buyers: About 88 percent of the respondents informed that they were not availing any such facility from any TA. However, 12 percent reported that this facility was being availed by their organizations.

Arranging participation of members in international fairs, exhibitions and other trade events: Almost 88 percent of the respondents informed that they were not getting any such facility from any TA. Among the respondents, only 12 percent respondents reported to have benefited from such facility provided by any TA. Trade Development Authority of Pakistan (TDAP formerly the Export Promotion Bureau [EPB]) mainly does this job.

Providing training facilities: More than 75 percent of the respondents informed that they were not provided any training and development facility by any TA. However, 12 percent of the respondents reported having being benefited from such facility at least once.

Providing information on supply orders received from foreign buyers: Almost 88 percent of the respondents informed that they were not getting any training facility provided by TA. However, 12 percent of the respondents informed that they were getting such facility from their respective TAs on weekly basis.

Raising community voice / concerns / problems: About 50 percent of the respondents informed that their concerns / voices were not being raised by their TAs. Remaining 50 percent respondents indicated that their concerns were being raised by the TAs only once a year.

Websites of TAs

Almost all of the respondents were having information that the leading TAs have their websites. However, frequency of visits was found to be only 1.88 on a scale of 5.00 with 5 = daily, 4 = weekly, 3 = monthly, 2 = sometimes, and 1 = never. Results clearly indicate that frequency of usage of the

websites was quite low (well below satisfactory level). Almost 14 percent respondents informed that they had never visited website of any TA.

As far as usefulness of websites is concerned, 38 percent of the respondents indicated that those were not useful at all, and 12 percent responded that they had no idea of their usefulness, while remaining 50 percent respondents reported some usefulness. There are six possible benefits of the websites which are discussed below along with responses of the respondents:

- It contains updates on Government Rules and Regulations: Around 50 percent of respondents responded that the websites of some TAs did contain some updated information on government policies, rules and regulation.
- It contains latest information on buyers' requirements: About 25 percent of the respondents informed about availability of any such information on the website of any TA.
- It contains information on International exhibitions: About 38 percent of respondents responded that the websites of some TAs did contain some information on the international exhibitions, fairs and other trade events.
- It contains information on business management techniques: Less than 25 percent of the respondents informed about availability of any such information on the website of any TA.
- It contains updates on technology: Around 25 percent of the respondents informed about availability of any such information on the website of any TA.
- It contains updates on foreign markets: Only 25 percent of the respondents informed about availability of any such information on the website of any TA.

Production Management System in Garments Sector

Production management system in the garments sector is ridden with several issues like issues relating with quality and availability of inputs, old production technology, etc. However, there are some drivers which are orientating the production systems to new horizons, though pace is very slow.

Major Products of the Responding Companies

There exists a great deal of diversity in the products relating to garments sector. However, the respondents informed that following were the major products of their companies:

- Home textiles – sheet set, bed linen, curtain, kitchen items etc. (37.5 percent)
- Printed Clothes (25 percent)
- RMGs (12.5 percent)
- Hosiery and knitwear garments (12.5 percent)
- Sports wear (12.5 percent)

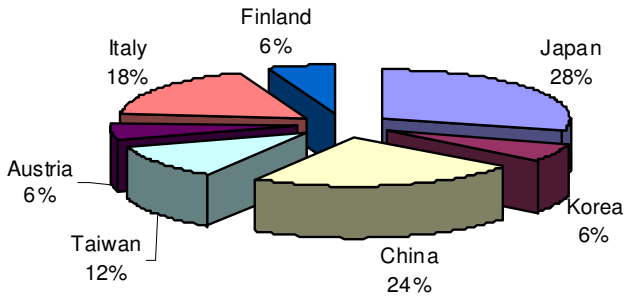
Production Technology

Following type of machinery was reportedly installed in the factories / mills of responding companies:

- Stitching Machinery: Lock Stitch Auto Trimmer, Overlock.
- Sewing Machinery: Lock Stitch, Overlock, Baratta, Chainstich, Single Needle, Double Needle, and Special Machines

Figure 3: Origin of Machinery

Age of machinery installed in the responding manufacturing units ranged from 2 years to 25 years with mean age of around 7.25 years. Only 25 percent of the reporting units had 2 years old machinery. Around 12.5 percent of responding units had machinery as old as 25 years. As far as make of the machinery is concerned, it was made of Japan (28 percent), China (23.52 percent), Italy (17.65 percent), Taiwan (11.76 percent), Austria (5.88 percent), Korea (5.88 percent) and Finland (5.88 percent). (Figure 3)



Machinery installed in most of the garments factories was old, even in some cases totally outdated. Due to lack of capacity (especially in term of quality oriented technology), competing countries have

used Pakistani yarn and Grey cloth for producing superior quality dyed and printed fabrics, and better quality made-ups (NPO, 2003).

Textile machinery related with garments sector is imported from countries like Japan, Italy, USA, Korea, and China. Therefore, import of textile machinery is an important predictor of the pace of innovation and development of the industry. Import of the textile machinery which peaked in 2004-05 at US$ 923 million, declined to US$ 772 million in 2005-06, US$ 503 million in 2006-07 and US$ 282 million in first eight months of 2007-08 (Government of Pakistan, 2008, 39). However, optimal benefits of such investment could have reaped if pace of investment could have started at least 3-4 years before phasing out of the quota regime. China, India and Bangladesh are posing tough competition to Pakistani textile products in the international market in terms of quality and price (Government of Pakistan, 2008, 39). Even current level of investment in the Pakistani textile industry was much lower than desired. The EU, alone in one year (2001), invested around Euros 7 billion in textile industry (EURATEX, 2002, p. 4).

Textile Industry in Pakistan had attracted investment of around US$ 7 billion during 1999-2008. Investment appears to be distributed all along the textile value chain, though with declining share towards later ends of value chain. Major investment had been made in the Spinning Sector (50.02 percent), which was a key transfer point in cotton value chain. Weaving sector secured 15.23 percent in total investment. Textile processing was another important transfer point which had attracted 17.08 percent investment. Knitwear, garments and made-ups jointly received 11.73 percent of the investment (***See Table 10*).**

Table 10: Distribution of Investment in Textile Industry (US$ 7 bn), 1999-2008

Sector	Percent Share
spinning	50.20
textile processing	17.08
weaving	15.23
knitwear and garments	07.02
synthetic textiles	05.76
made-ups	04.71
total	100.00

Source: Pakistan Economic Survey 2007-08, Government of Pakistan (2008, p. 39)

New investment in the textile industry has created 454,000 new direct jobs. However, acceleration in investment in the textile industry appears to be slowing down, which is evidenced from the statistics of import of the textile machinery.

Information Technology (IT). It offers several opportunities for boosting competitiveness in the firms. IT replaced people but enhances productivity. It costs but helps management in managing several business related problems. Masood Textile had introduced IT in several operations. Every employee on its arrival and leaving had to punch his/her card, eventually; IT had helped in ensuring punctuality and regularity in the organization. Every business operation was given a specific bar code which was printed on the product. So whenever, any complaint relating to any product was received, the management immediately traces the reason/fault back and could fix accountability. IT could track complete supply chain in no time as the company maintains all records. Moreover, daily performance record was also automatically maintained. At the end of day, every employee as well as the management of company knew level of his/her output. The company had also developed a performance-points system. Employees were rewarded accordingly. No body could object, as performance appraisal system was scientific and objective in nature. Masood Textile had succeeded not only in reducing number of defects in its products but also substantially boosted productivity of its employees.

What kind of machinery and equipment could improve your business competitiveness?

Around 25 percent of the responding units informed that they were quite satisfied with their existing machinery, while all other suggested following machinery/equipment for improvement in their business competitiveness:

- Computerized machines
- In sewing, overlock machines should be provided with pneumatic cutters so as to improve sewing quality and finishing.
- Shuttles machines may be replaced with air jet machinery
- 12 colours rotary machines should be replaced with 20 colours machines
- Order Tracking
- Automatic machines

Drivers of Change and Recent Initiatives for Improvement in Products / Services

There are 10 stages in business's life, where regulations impact, which include starting a business, dealing with licenses, employing workers, registering property, getting credit, protecting investors, paying taxes, trading across borders, enforcing contracts and closing a business (World Bank, 2007, 0). Textile business is driven by changes in fashion, therefore, textile manufacturing and exporting countries need to have flexible regulations (World Bank, 2007, 20). EURATEX (2002) believes that creativity in fashion and design is a major asset for gaining control over the future markets (p. 9). More you go downward along the CVC, the need of knowledge, skills, creativity and innovations tends to increase.

Around 29 percent of the respondents informed that they had done nothing new to bring improvement in their products and services at least during last five years. Even among others who took some initiatives, such attempts appear to be a patch work.

Only 14 percent of the responding units informed that they were in the process of launching skill development programmes at the supervisory level to enhance the product quality and the material handling. The planned interventions are presented in Table 11.

Table 11: Recent Initiatives by Respondent Companies for Improvement in Products

Intervention	Goal	% of respondents
Skill development programmes at the supervisory level	• Product quality • Material handling	37.5
Management Training Plans	• Increase efficiencies	25.0
Operators training	• Minimize salaries budget by training fresh	12.5
Information Technology	• Order Tracking	25.0
Automatic machinery	• Productivity • Quality	25.0
Dryer and rotary	• Productivity • Quality	12.5
Proper planning	• Productivity • Quality	25.0

Some of the companies like Massod Textile Mills are very successful (**See Box 5**).

Improvement Plans for Next One Year

It is crucial to study the improvement plans of the garments factories so as to analyze future of the sector. Survey findings reveal that around 43 percent of the respondents indicated that they had no plan on cards to take any initiative for bringing improvement in the products and/or services. However, remaining 57 percent of the respondents indicated some plans ranging from labour training to import of new machinery, and hiring of new experts to automization of the business operations through the introduction of sophisticated and expert task based IT tools. Results are detailed out in Table 12.

Box 5: Masood Textile Mill – An Icon of Innovation

Masood Textile Mill (MTM) is a success story in the garments business in Pakistan. It is in the business of manufacturing of knitted apparel products right from basic to highly fashioned garments. The success of MTM lies in its responsive to the emerging trends in the textile and clothing industry. Eventually, export of knitwear has experienced exponential growth during the period of 1998-2006. It grew from just over US$ 7 million in 2006 to US$ 102 in 2006. Growth in number of employees has also depicted similar trend.

MTM maintains a well developed IT system, which regulates production and marketing management system. It is also having a system for training and development of the employees in the organization

Table 12: Future Improvement Plans

Improvement Plan	Goal	% of respondents
Labour training	• Improve sewing skills • Improve stitching quality	25.0
Training Plans	• Increase productivity	25.0
Implementation of Real Time Tracking	• Optimizing lead time	12.5
New machinery	• Increase productivity	12.5
Hiring a fabrics expert	• Improve quality	12.5
Supervisory training	• Product quality • Material handling	12.5

Production Related Problems and Issues

Availability of Inputs

Respondents informed that rising cost of inputs was the major problem they were facing. Since January 2008, prices of almost all items have reportedly increased. However, reported hikes varied from respondent to respondent. On an average, prices of yarn have increased by 35 percent, fabrics by 54 percent, chemicals by 83 percent, maintenance cost of machinery by 9 percent, labour wages by 29 percent, and other stuff by 11 percent. Details are given in Table 13.

Table 13: Reported Hikes in Prices of Inputs

Input	Reported hikes in prices (%)	
	Range	Average
Yarn	30 – 40	35
Clothes	50 – 58	54
Chemicals	15 – 150	83
Maintenance cost of machinery	8 – 10	9
Labour	20 – 38	29
Bukram	7 – 15	11
Buttons	7 – 15	11

The year 2008 has experienced high fluctuations in prices on inputs. One of the respondents explained complexity of the issue of price hikes as follows:

> *Mr. Ishaq Dar, the Finance Minister told the press that statistics of cotton availability in Pakistan, published by the previous government were over-stated. The news sent a negative signal in the market of cotton and cotton products. In just one day, price of ginned cotton rose by Rs. 500/40 kg leading to the level of all times high i.e. Rs. 4000/40 kg. Prices of yarn also soared. For example, price of 31-PC poly cotton yarn increased from Rs.560/10 lb in December 2007 to Rs. 720/10 lb in June 2008.*
>
> *Another commonly used input in textile industry is the peroxide. It is used in bleaching, finishing etc. Its price has increased four times since December 2007. Another input is the Sulfur Black, which is severely short in the market. In a matter of just six months, cost of dying has increased from just Rs. 8/meter to Rs. 16/m.*
>
> *Fuel prices have risen. No new connection for gas is available these days. Hence, no power plant can be installed. As per existing load shedding arrangements, mills are shuts down in a week for 24 hrs. Power breakdown has serious implications for quality as well. When rotary machine shuts down due to breakdown of electricity, around 500 meter cloth is damaged, which loses its value by at least 50 percent.*

Quality of Inputs

Survey has revealed many issues relating to quality of inputs. Input-wise findings are discussed below:

Cotton yarn: Cotton yarn is an important input in the garments sector. It is the input, other than the labour, where Pakistan needs to have competitive and comparative advantages. However, findings of the survey suggest that there are some serious issues with quality of cotton yarn. About 50 percent of the respondents termed the quality of cotton yarn just satisfactory, where as 38 percent reported it as excellent and 12 percent as good. Mean score of quality of cotton yarn is found to be 3.88 on a scale of 5.00 indicating substantial room for further improvement and value addition. Almost all of the respondents agreed that contamination was a major issue in the quality of cotton yarn. Probing suggested that generally cotton yarn was being purchased through brokers, who have least interest in quality so yarn purchased through them mostly carries serious quality problems.

Poor quality yarn especially due to contaminated cotton, results in production of defective fabrics (NPO, ud, p. 3), which leads to lower market value of garments in the international market. One of the problems lies in inconsistency of quality of cotton yarn. One lot of cotton yarn may differ in characteristics and features from another lot. If by virtue of mistake or deliberate action, two lots are mixed, it may result in inconsistent quality of products. Therefore, an efficient Quality Control System is needed to ensure quality. Some garments factories manage this problem by fixing a distinctive Lot No. on each lot of yarn. Masood Textile issues a Bar Code to each lot to manage such problems.

Fabrics: Quality of fabrics was reported excellent by 33 percent, good by 50 percent and just satisfactory by 17 percent of the respondents. Mean score of quality of fabrics is found to be 4.16 on

a scale of 5.00 indicating some room for further improvement and value addition. Almost 40 percent showed serious concerns about quality of fabrics.

Dyes and Chemicals: Most of the dyes and chemicals used in the textile industry in general and the garments sector in particular are imported from countries like Germany, China, and India. However, quality of dyes and chemicals used in the processing of clothes was reported excellent by only 12.5 percent, good by 62.5 percent and just satisfactory by 12.5 percent of the respondents. Mean score of quality of dyes and chemicals is found to be 4.0 on a scale of 5.00 indicating some cushion for further improvement and value addition.

Color is a qualitative dimension of a cloth(e) with respect to light. If colour is skilfully applied on a cloth(e), it definitely, adds significant value to the product. But in Pakistani textile industry, generally, substandard dyes are used in the processing of cloth, eventually, processed clothes lack consistency in colour (Memon, 2007).

Labour: As afore-mentioned, labour is an important input in the garments sector, where upon Pakistan is supposed to have competitive advantage, as labour is abundantly available in the country. However, in the survey, none of the respondents reported quality of labour as excellent. It was indicated as good by only 37.5 percent of the respondents. On the other hand, 50 percent termed it just satisfactory and 12.5 percent poor. Mean score of quality of labour is found to be 3.25 on a scale of 5.00 indicating substantial room for further improvement and value addition. These findings suggest that there exists substantial potential for value addition and development in the garments sector through improvement in the skills of the labour engaged in the sector.

Elastic: Elastic is also an important inputs in the garments sector. Almost all of the respondents agreed that good quality elastic was not available. It was indicated as satisfactory by 57 percent of the respondents. On the other hand, 43 percent termed it poor. Mean score of quality of elastic is found to be 2.66 on a scale of 5.00 indicating substantial room for further improvement and value addition.

Output Quality

Satisfaction of the manufacturers about the quality of their products is an important predictor of the potential for value addition and improvement. Almost 63 percent of the respondents showed dissatisfaction with the quality of the outputs. However, they suggested some reasons for the poor quality of the products, which are given below:

- Unskilled labour: Reasons include expensive labour
- Low quality yarn
- Unscheduled load shedding leads to disruption in the production process, which results into deterioration of and inconsistency in quality of the products. Fluctuations in power supply also result into similar problems.
- Poor shading / Shade mismatch
- Colour stains during processing
- Colour fly
- Packing the products in poly bags
- Poor quality of insert cards
- Fibre contamination
- Manufacturing environment is not conducive
- Lack of efficient and effective management
- Lack of friendly and productive environment
- Lack of real time tracking of inputs
- Lack of availability of accessories
- Shading in case of repeat orders: Shading causes quality problems in case of repeat orders

All of the reasons are manageable. Some of the reasons can be managed through proper education and training of employers and employees, while other can be managed through bringing improvement in the backward linkages in the CVC. Evidence of manageability of these issues is

available. Out of 250 textile companies listed with the Karachi Stock Exchange (KSE), 25 textile companies have been good performers owing to the reasons like efficient use of resources (raw material etc.), finance and human resource management practices, use of Total Quality Management (TQM) for superior quality products, effective marketing strategies, and continuous modernization and upgradation of production facilities (NPO, 2003, p. 4).

Careless and mismanaged manufacturing processes not only lower down the value of the products but also increase probability and magnitude of rejection by the foreign buyers. Almost 63 percent of the respondents reported rejection rate ranging from 5 percent to 30 percent. Incidence of rejection further increase cost of business operations. In view of the above results and discussion, it is suggested that strong checks and controls are needed at each stage of procurement of inputs, manufacturing, processing, packing and shipment.

Production and Processing Losses

Production and processing losses vary from organization to organization. For the sake of this study, the losses were divided into eight categories: inventory losses, processing losses, re-processing losses, cutting losses, knitting losses, stitching losses, packing losses and rejection losses. (Table 14)

- **Inventory losses:** Inventory losses reported by the responding firms range between zero percent and 2 percent with average of 0.92 percent. Statistics imply that some firms are managing inventory issues very well while others are struggling.
- **Processing losses:** Processing losses reported by the responding firms range between 5 percent and 10 percent with average of 7.57 percent. Statistics show that some firms are managing processing issues effectively while others are unable to manage the issue.
- **Cutting losses:** Cutting losses reported by the responding firms range between 5 percent and 6 percent with average of 5.33 percent. Statistics indicate that difference between high performers and low performers is small which means almost all firms are facing this problem.
- **Knitting losses:** Knitting losses reported by responding firms range between 1.5 percent and 2 percent with average of 1.88 percent.
- **Stitching losses:** Stitching losses reported by the responding firms range between 1.5 percent and 5 percent with average of 3.14 percent. Statistics imply that some firms are managing stitching losses quite well while others are struggling.
- **Re-processing losses:** Processing losses reported by the responding firms range between 0.5 percent and 8 percent with average of 3.6 percent.
- **Packing losses**: Packing losses reported by the responding firms range between 0.05 percent and 3 percent with average of 1.54 percent.
- **Rejection losses**: Rejection losses reported by responding firms range between 2 percent and 5 percent with average of 4 percent.

Box 6. Image Garments Trims Material Costs by 20% with Integrated System

Image Garments (Pvt) Ltd. was established in 1985. It manufactures polo shirts, cotton T-shirts, and fleece garments for exporting those to Europe and the United States. Its annual turnover is around US$6 million.

The company succeeded in reducing material costs by 20 percent through proper inventory control, reducing wastage by documenting and re-using it, increasing operational efficiency by standardizing manufacturing processes, improving productivity and reduced error rate by integrating purchasing, inventory, and production processes.

Source: http://www.oracle.com/customers/snapshots/image-garments-case-study.pdf

Material costs can be reduced by reducing losses. For example, Image Garments succeeded in reducing material costs by 20 percent through various measures like inventory management, etc. **(See Box 6)**

Table 14: Types of Magnitude of Business Losses

(in percent)

Losses	Range of losses		Average
	Minimum	Max	Losses
inventory losses	0	2	0.92
processing losses	5	10	7.57
re-processing losses	0.5	8	3.6
knitting	1.5	2	1.88
cutting	5	6	5.33
stitching losses	1.5	5	3.14
packing losses	0.05	3	1.54
rejection	2	5	4

Another problem lies in the need of re-processing of clothes owing to inconsistencies in quality. Magnitude of problem is high to such an extent that around 3-10 percent of the cloth is subjected to reprocessing. SMEDA found that rate of defects at the processing and printing stage was 10 percent (SMEDA 2000).

It is interesting to note that almost 87 percent of the respondents reported that they were not having any system for managing accounting of the damages. If the garments factories are imparted training in how to manage accounting of damages and manage losses, their competitiveness can be improved substantially.

Marketing Management

Marketing strategies play an important role in the success of the companies. Poor marketing management practices are being proven to be the stumbling blocks in the growth of firms in the garments sector.

Marketing Strategies

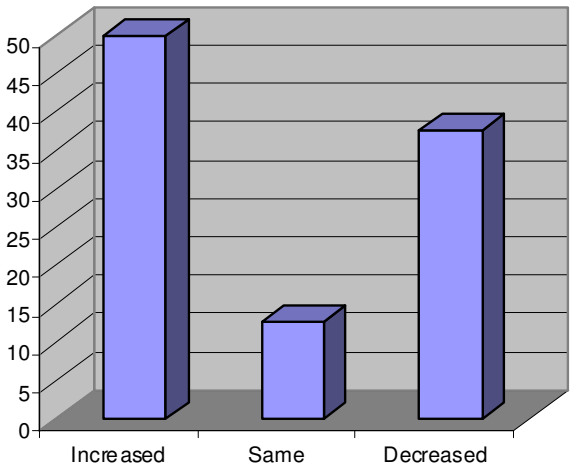
It was interesting to note that on one hand some of the respondents complained about dearth of the orders from foreign buyers, on the other hand, some indicated that they were unable to accept every order. It clearly reveals that those who have such complaints have some deficiencies in the marketing management system (MMS). Keeping in view the importance of the MMS, some indicators like availability of brochures and websites were used to gain further insights.

Survey results reveal that all small companies and 67 percent of medium companies did not have any promotional brochures, while 33 percent of medium and all large companies had brochures for their products. All responding companies falling in Medium and Large categories were reportedly having their own websites for promotion of their products while none in small category had this facility.

Trends in Exports

Figure 4: Growth in Export

Is export of garments increasing? Results of the survey are presented below (Figure 4):



- **Increased:** Around 50 percent of the respondents informed that export earnings of their companies had shown improvement during last one year, as compared to previous year. Such companies included all large size companies and 50 percent of the medium sized companies.
- **Decreased:** Around 38 percent of the respondents informed that export earnings of their companies had experienced decline during last one year, as compared to previous year. All companies which reported decline in export earnings were predominantly featured as medium sized companies.
- **Same:** Only 12.5 percent of the respondents informed that export earnings of their companies had remained same during last one year as compared to previous year. All such companies were small in size.

Above results clearly reveal that most of the companies are prospering amid some failures. What is the future of Pakistani garments sector? Statistics of textile products for the period Jan-May 2007 and Jan-May 2008 indicate that exports of textile products from China to USA have experienced decline of 1.12 percent on overall basis, though some items showed improvement. It is interesting to note that during the same period, export of yarn, fabrics and made-ups from China to USA showed increase while that of apparel experienced a sharp decline of 6.17 percent. On the other hand,

In 2006, the USA imposed safeguard quotas on several categories of Chinese T&C (Pakistan Textile Journal, 2007), which created an opportunity for T&C exporting countries, however, Pakistan could not exploit the opportunity, hence, the vacuum was filled by Vietnam. It is worth-mentioning that China is about to decide to increase rebate rates from 11 percent to 13 percent for the garments sector in a bid to revert the ongoing trend and boost the exports. If that happens, China may bounce back in the market.

During the afore-mentioned period, Pakistan also experienced decline on over all basis, however, pattern of decline has been different. Export of Pakistani yarn, and fabrics (which are a raw material for textile industry) plummeted and that of made-ups, and apparel showed some improvement. Moreover, in apparel sector, India has also showed negative performance (-1.51 percent) in US market during the same period. Even total world export of apparel to USA has seen negative growth (-3.88 percent) during the same period. (OTEXA, 2008). It appears to be a positive sign for Pakistan on two grounds:

- All major exporters of apparel for USA including China and India appear to be losing grounds in higher value added products and leaving space for Pakistan. This finding is endorsed by several studies which have concluded that China is losing its comparative advantage in the textile sector (Adhikari & Weeratunge, 2006, p. 113).
- In Pakistan, export of less value added products (yarn and fabrics) is declining, which means more raw material will be available for the manufacturing of higher value added products like apparel.

Further analysis on the markets is presented in the following sub-section.

Target Markets for Exports

Survey found 9 export destinations for the products of sampled companies. Most of the companies reported more than two countries as their target markets.

USA

Around 63 percent of the companies reported to have USA as the biggest market for their products. Do these results match with secondary data?

In 2006, USA is a big market for the textile and textile products. In 2006, USA imported around US$ 100 billion worth of textile and textile related products. Share of Pakistan in these US imports, was just 3.4 percent. The worry aspect is the increasing competition from its competitors. Exports of textiles to USA from Indonesia and Vietnam were less than those from Pakistan but in 2006, the aforementioned two countries have gone ahead of Pakistan. In the latest year (2006), Indonesian and Vietnam exports of textiles to USA grew by 26.5 percent and 18 percent, respectively, but those from Pakistan increased by around 12 percent. (Table 15)

Table 15: U.S. Imports of Textile Products and Apparel (US$ m)

Source Country	2006	2005	2004	2005 - 2006	
				$ Change	% Change
Total Imports, All Countries	99,196.8	95,571.6	89,831.9	3,625.2	3.8%
Total Imports, Top 25 Countries	88,065.1	83,571.1	75,771.6	4,494.0	5.4%
Total Imports, Excluding China	69,077.6	69,554.0	71,589.7	-476.4	-0.7%
China	30,119.1	26,017.5	18,242.2	4,101.6	15.8%
India	5,532.5	5,131.1	4,119.4	401.4	7.8%
Mexico	6,846.2	7,627.1	8,208.1	-780.9	-10.2%
Indonesia	3,882.7	3,069.5	2,607.1	813.3	26.5%
Vietnam	3,308.3	2,793.2	2,637.0	515.1	18.4%
Bangladesh	3,025.3	2,485.7	2,092.9	539.6	21.7%
Pakistan	3,369.2	3,010.5	2,656.3	358.8	11.9%
Canada	2,870.8	3,115.3	3,333.3	-244.5	-7.8%
Honduras	2,528.6	2,697.8	2,751.7	-169.3	-6.3%
Cambodia	2,151.2	1,727.4	1,442.2	423.8	24.5%
Thailand	2,150.7	2,151.3	2,183.0	-0.6	0.0%
Italy	2,338.8	2,420.0	2,557.4	-81.1	-3.4%
Philippines	2,074.0	1,911.1	1,900.9	162.9	8.5%
Sri Lanka	1,733.2	1,704.2	1,606.7	29.0	1.7%
Guatemala	1,697.9	1,844.0	1,971.8	-146.0	-7.9%
Hong Kong	2,907.3	3,643.1	4,025.3	-735.8	-20.2%
Korea, South	1,789.9	2,098.3	2,768.8	-308.3	-14.7%
El Salvador	1,432.4	1,644.7	1,754.5	-212.3	-12.9%
Taiwan	1,576.9	1,737.7	2,214.8	-160.8	-9.3%
Turkey	1,365.6	1,643.5	1,813.3	-277.9	-16.9%
Dominican Republic	1,557.7	1,861.9	2,074.4	-304.2	-16.3%
Jordan	1,253.9	1,083.0	957.0	170.9	15.8%
Nicaragua	880.1	716.5	596.1	163.5	22.8%
Egypt	806.0	613.3	562.7	192.6	31.4%
Peru	866.6	823.4	694.4	43.2	5.2%

Source: USCB (US Census Bureau): http://www.census.gov/foreign-trade/statistics/country/sreport/country.xls

Other markets

Canada, UK and Germany were reported to be the target markets for around 50 percent of the sampled companies. Around 37.5 percent of the sampled companies were exporting their products to Turkey. Netherlands was being targeted by only around 25 percent of the sampled companies. (Figure 5)

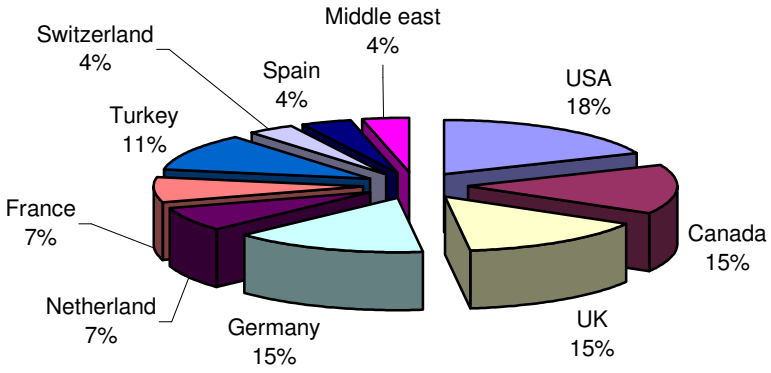


Figure 5: Weight of Markets in terms of Number of Exporters

What are the best markets?

Around 50 percent of the companies reported USA as the best market for garments and 37.5 percent held the view that Europe (especially the UK) was the best market. However, 12.5 percent opined that USA was best market for only large consignments and Europe for small consignments.

Target Customers

Number of foreign customers determines success and sustainability of the firm. The survey found the number varying from 3 to 100 with average of 26 buyers per company during last 12 months in case of responding companies. It indicates that the firms at lower end are prone to high risks in the market and likely to have lower price for their products and to have higher probability of exploitation from the foreign buyers. The discussion leads to the suggestion that the companies need to acquire marketing skills so as to diversify their customer base and minimize the risk. This definitely demands rigorous training of the marketing force. This appears to be the most neglected area and needs urgent attention from the policy makers, relevant public sector agencies, Pakistani commercial offices (operating in the potential markets) and the TAs.

It is also important to know, to whom the exporters are selling their products? Majority of the respondents (63 percent) reported to be exporting to only foreign wholesalers, while remaining 27 percent reported multiple customers (including wholesalers). Owing to complexity of the indicator two different types of analysis have been carried out: 1) combination analysis 2) weight of customers according to responses. Around 25 percent of the respondents were exporting to wholesalers and superstore chains (***See Table 16 & 17***).

Table 16: Target Customers: Combination Analysis

Target Customers	Wholesalers	Exporters	Superstore chains	Indenters
Wholesalers	63	-	-	-
Exporters	13	-	-	-
Superstore chains	25	25	-	-
Indenters	13	13	13	-

Table 17: Target Customers: Weighted Response Analysis

Target Customers	Weighted response
Wholesalers (abroad) only	0.54
Exporters (local) only	0.15
Superstore chains only	0.23
Indenters only	0.08
Total	1.00

Around 87 percent of the respondents termed wholesalers as most favourable customers and only 13 percent considered retailers as most favourable customers. The respondents who treated retailers as most favourable customers assigned following reasons:

- Higher per unit profits
- Less requirements of documentation
- Better information

On the other hand the respondents who reported wholesalers as most favourable customers assigned following reasons:

- Higher total sales: Almost 63 percent of the respondents of this category
- Higher per unit profits
- Better information

How to fetch higher market price?

Fetching higher market price remains a big challenge for the companies. Only 12.5 percent of the companies reported that international market price of their products was less than that in the local market. Why were they selling below cost of production? Probing suggested that they were doing so only for sake for showing their presence in the market and for not losing their customers with the hope that situation will improve in near future.

However, all other companies (87.5 percent) reported international market price higher than the local market price. Ratio of international market price and the local market price according to reported data ranges from 0.97 to 10.5 with average of 4.37. Such huge variation indicates the existence of great potential in the international market. (Table 18)

The above results lead to the conclusion that quality improvement, productivity enhancement and brandification of the products can substantially contribute to the profitability of the companies engaged in the garments sector. Weaknesses in these areas are attributed to gaps in knowledge, skills, and attitude (KSA).

Table 18: How to Fetch Higher Market Price? (Views of Respondents)

How to fetch higher market price?	Percent of respondents
higher level of quality	25.0
innovations in designs	25.0
manufacturing according to changing needs	25.0
timely delivery	12.5
improving confidence	12.5
reducing cost of production	12.5
improved finishing	12.5
developing and establishing brands	12.5
enhancing marketing skills	12.5
market analysis	12.5
tracking changing fashions	12.5
proper analysis of the customer's demand	12.5

Market Information

Sources of Information on Input Market

Possible sources of information on input market include market surveys, contacts with selected sellers, newspapers, internet and others. Internet emerged as top rated (75 percent) sources of information. Around 25 percent of the respondents were reportedly not using Internet as a source of information. Contacts with selected sellers and market surveys jointly emerged as second important source of information. Newspapers were rated as least useful source of information and were not being used by 62.5 percent of the respondents. (Table 19)

Table 19: Major Sources of information relating to input market

Source of Information	Percent of respondents	Cumulative weight
Internet	75	0.32
Market surveys	62.5	0.26
Contacts with selected sellers	62.5	0.26
Newspapers	37.5	0.16
Total	100.0	1.00

Perceived Level of Knowledge about Market

Knowledge about market is a vital determinant of success in the international market. Only 25 percent of the respondents reported excellent knowledge level of their respective companies about international market of their products. On the other hand, more than 62 percent of the companies reported level of their knowledge just average. On a scale of 5, perceived average market knowledge index (AMKI) was found to be 3.13 reflecting substantial potential for further improvement.

Marketing Tools

Several marketing tools are being used in the export business. Weights for use of different tool were developed, which reflect magnitude of usage. They are presented in Table 20.

Table 20: Marketing Tools in Practice

Marketing Tools	Percent of respondents
Internet	0.27
Exhibitions	0.23
Distribution of free samples	0.09
Brokers	0.05
Company profiles	0.05
Company Website	0.05
Email	0.05
Fair price shops	0.05
Fax	0.05
Product brochures	0.05
Visit of foreign markets	0.05

How did you know marketing tools? Around 60 percent of the respondents informed that they learnt themselves how to use the marketing tools. Only 20 percent reportedly learnt through having MBAs, and just 10 percent through formal training. (***See Table 21***)

Table 21: How did You Know Marketing Tools?

How did you know marketing tools?	Percent of respondents
Self-developed	60
MBAs	20
Formal Training	10
Colleagues in the organization	10

Collaborations with Other

None of the companies reported to have any collaboration with any other firm for marketing. Collaboration among companies can create a synergetic effect. Moreover, the companies can reduce the cost of business, and improve quality through collaborations.

Marketing Related Constraints and Problems

Marketing related constraints identified by the respondents include:

- Only inferior quality packing bags are available in the local market.
- High professional costs
- Less access to international markets
- Financial constraints
- Price fluctuations
- Changes in demand of customers both qualitatively and quantitatively
- Pakistan is losing image in the world / unsafe
- Low prices of products , with shorter lead times and best quality
- Limited orders

Freight charges have experienced rises during recent years, making export less competitive. Freight charges per container are US$515 in Pakistan while that in China are as low as US$390 (World Bank, 2007, 48).

Organizational Management

Organizational management is an important determinant of the success. Garments sector in Pakistan is ridden with several problems pertaining to the organizational management. Most of the organizations are plagued with *seth* culture. Inefficiencies, low productivity, process and production losses, lack of professionalism, poor ergonomics, and wastes are commonly persisting problems in most of the companies.

Productivity of HR in the Organizational

Several empirical studies indicate that 20 to 50 percent of GDP growth in many countries has accrued only from productivity gains (Government of Pakistan, 2007b). In EU, productivity of the textile industry has risen from just Euros 30,000 per employee in 1980 to about Euros 90,000 in 2000 (EURATEX, 2002, p. 41). On the other hand, in Pakistan productivity of employees remains a big challenge. In the present survey, about half of the respondents termed productivity of people in their organizations as just satisfactory, while only around 13 percent reported productivity as very high. (Table 22)

Table 22: Productivity of Human Resource

Productivity of people	Percent of respondents
Very high	12.5
High	25.0
Just satisfactory	50.0
Low	12.5
Very low	-

Temperature in stitching unit goes sometimes beyond 50^{o}C. This makes working environment highly non-conducive for the workers. Eventually, productivity of the employees and quality of the products are badly affected. Survey found that majority of the companies was not aware of the consequences of ill-managed working environment. It is another important area for training of the senior management of the companies. It is suggested that a series of seminars on Ergonomics should be arranged for them.

Issues relating to Organizational Management

There are eight organization management related issues identified by the respondents. Around 38 percent of the respondents termed “incompetence of top management” as the top most issue in the organizations. Around 50 percent of the respondents pointed out that lack of professionalism was second most important issue in their organizations. (Table 23)

The respondents reported several issues relating to productivity of people working in their organization, which include poor working environment, short production runs etc.. Majority of the respondents (87 percent) reported that productivity of marketing staff was quite low, eventually, the companies were receiving very small number of orders from foreign buyers. Some of the respondents indicated that poor development of human resource (in terms of low level of skills, job related necessary knowledge), lack of controls (negligence) and low education of lower level of staff were major reasons of low productivity in the organizations.

Table 23: Issues relating to Organizational Management

Issue	Top most issue	Second important issue
Incompetent top management	37.5	25.0
Lack of hierarchies	25.0	-
Poor gap filling	12.5	-
Poor goal setting	12.5	-
Lack of team management	12.5	-
Lack of professionalism	-	50.0
Poor documentation	-	12.5
Poor performance appraisal	-	12.5

Low productivity and availability of low level of skill-set are also attributed to the poor recruitment and selection process. Very few textile firms advertise vacancies in the press and / or on their websites. Head-hunting is generally done through personal contacts and other conventional methods. However, the recruitment system in Pakistan is experiencing following trends:

- Several specialized websites have been created by some individuals and groups, on which new job opportunities relating to textile and other sectors are advertised: most prominent among them include Rozee.com (http://rozee.com)
- Some specialized recruitment firms have emerged which head hunts on the behalf of their clients (textile firms). Though, client base at the moment is very small. But their business is growing slowing. Some of these recruiting agencies include: Al-Muhammad International Services – Textiles Headhunting (www.almuhammadgroup.com), Talent Hunters (Pvt.) Ltd., Lahore. Usually, they do not charge their clients, any thing, but they charge fee, equivalent to two monthly salaries, to the successful candidates. Muhammad Sarwar Sindhu, CEO of Al-Muhammad International Services informed that his company was the first company in Faisalabad, which was specifically striving to cater HR needs of textile companies. He revealed that his company was facing several challenges: the textile companies run by *seths* were unwilling to opt a new way of recruitment though they had nothing to pay for headhunting.

It is concluded that if selection and recruitment system is improved in the textile sector, it will automatically translate into improved productivity, increased exports and additional jobs.

Use of Information Technology in Management

Sector-specific use of IT is very much needed for bringing significant improvement along the CVC. IT technologies are needed for different specialized expert tasks in the textile industry (EURATEX, 2002, p. 17).

Around 75 percent respondents reported to have an IT system in their organizations, while 25 percent did not have any system. The companies who reportedly had an IT system indicated following benefits:

- Sharing of information within the mill in no time
- Proper management of record
- Data of all departments
- Auto-dosing system for dyes and chemicals
- Emailing
- Timely information
- Timely decision making
- Internal communication
- Time savings

- Strong communication provides quick solutions to the problems
- Production management system is used to share the record of daily work processes along with sharing of the relevant information about the daily updates of the daily targets including the inventory management, b-grade and waste record online to the management. Efficient and effective communication channels are needed for facilitating communication among all departments of the manufacturing sector and the head office.

Financial Management

Around 63 percent of the respondents reported that their companies were facing the problem of capital inadequacy. However, rest of the respondents indicated that their companies had no such issue.

About 75 percent of the respondents reported that their companies were financing the business operations through lending from banks. They reported interest rate on which loan was secured from banks ranged from 7 percent to 16 percent per annum with average of 9.86 percent. However, remaining 25 percent informed that they were totally relying from their own sources and had never resorted to any bank for lending.

Following issues relating to financing were reported by the respondents:

- Less finance available
- Low liquidity
- Availability of capital is a problem. Even in some big firms, salaries have not been paid for three months.

Training and Development

Investment in professional growth of employees is crucial for success in the organizations (Barbeito, 2004, p. 102). Continuous training is needed to update skills-set of employees (Stovel & Bontis, 2002), aiming at enhancing the productivity (Arthur, Bennett, Edens & Bell, 2003, p. 234).

Training Infrastructure for Garments Industry

Education and training in textile sector is gaining popularity and recognition in the country. For example, National Institute of Design and Analysis (NIDA), Karachi (www.tusdec.org.pk) has been established by Technology Upgradation and Skill Development Company (TUSDEC) of Government of Pakistan.

Perceived Benefits of Training and Development

Perceived benefits of training and development rated very high by only 25 percent of the respondents (Table 24). It is obvious that culture of training and development practices in the garments sector is not satisfactory.

Table 24: Perceived Benefits of Training and Development

Perceived benefits	% of respondents
Very high	25.0
High	12.5
Just satisfactory	62.5
Low	0
Very low	0

Mean score of perceived benefits of training and development was found to be 3.63 on a scale of 5 reflecting just over satisfactory level of perceived benefits.

Almost 87 percent of the respondents reported that top management of their respective organizations had a belief that training and development of employees enhance performance and productivity, while remaining 13 percent did not vote for this statement.

Training Strategy

Only 14 percent of the respondents informed that against almost 75 percent of the positions of operators, they were recruiting fresh and inexperienced persons and then train them according to their requirements so as to minimize the operating expenses.

Number of employees who participated in any training during last one year varied from nil to 100 with average of just 15. Almost 38 percent respondents reported that none of the employees from their companies had participated in any training during the referenced period. However, 13 percent reported that on an average 100 employees from their organizations had benefited from training during the same period.

Out of the respondents who reported participation in any training during last 12 months, almost 38 percent reported sewing techniques as theme of training participated. Other themes of training courses participated include material handling (12.5 percent), inventory control (12.5 percent),

stitching (12.5 percent), machinery installation (12.5 percent), and TQM (12.5 percent). It infers that only 12.5 percent of the companies had concerns relating to quality (Table 25).

Table 25: Themes of Training Participated / Arranged

Themes of training	% of respondents
Sewing techniques	37.5
Material Handling	12.5
Inventory Control	12.5
Stitching	12.5
Machinery Installation	12.5
TQM	12.5

Training Needs of Employees

As far as training needs are concerned, there was consensus among all the respondents that employees of their organizations definitely had skill gaps and needed training. Around 38 percent weight was assigned by the respondents to the technology related training, and 31 percent to the management related training. However, less weight was assigned by them to training needs in areas like marketing (15 percent), financial management (8 percent) and quality management (8 percent) (Table 26).

Table 26: Training Needs for Employees

Area of training need	Weightage percentage
Technology related	43
Management related	29
Marketing related	14
Quality (ISO)	7
Financial Management	7

Training Needs of Top Management

Does top management of companies need training? Around 87 percent of the respondents agreed that top management of their respective organizations definitely needed training, however, remaining 13 percent did not respond to the question. Among the various themes of training needs for the top management in organizations, maximum weight was given by the respondents to management related areas (40 percent), followed by marketing related areas (30 percent), technology related areas (20 percent), and issues relating to ISO certification (10 percent) [Table 27].

Table 27: Training Needs for Top Management

Area of training need	Weightage percentage
Management related	40
Marketing related	30
Technology related	20
Quality (ISO)	10

Issues relating to Training and Development

Most of the employers do not have awareness about HR issues and modern HRM practices. Training and development is rarely considered as a desirable organizational activity. Except few companies, there is no culture of training and development in the textile companies.

Problem of lack of shared vision is very common in the organizations. Employees mostly do not know that for which customer they are manufacturing. Their knowledge is confined to the tasks they have been assigned.

Most of the employers lack emotional intelligence. Any employee, whatever the rank he or she, can face humiliation at the hands of employer(s) at any time leading to demoralization. It was revealed that in textile companies, turnover of employees is very high.

The respondents agreed that special workshops should be arranged for mill owners in areas like safety and health, administration, people management, self management, selection and recruitment skills, pay and compensation methods, technical / technological skills (awareness about latest technologies…), and supply chain management.

Working times in garments factories are flexible but very odd. Most of the respondents revealed that there was a time for arrival but no fix time for leaving. No employee can leave without permission of the employers, even after duty hours are finished. Usually, the day begins at 9 am (however, in some factories workers keep on coming till 1100) but no fix time of day end. Some employees have to work till mid-night.

Most of the factories lack basic facilities for employees. Even, cold drinking water is rarely available for the employees in the summer. Labour issues need to be resolved through legislation and education.

Most of the employees are grossly underpaid, notwithstanding their level of education and experience. On the other hand, some employees like dye masters are highly over paid: most of them are not qualified dye masters and even usually lack basic education.

So training of senior management is needed in managing human resources and managing training and development initiatives.

Informal Learning and Development

Culture of Sharing Information

Culture of sharing information within the organization was reported to be excellent by 12.5 percent and good by 50 percent. However, around 38 percent of the respondents termed it just satisfactory (Table 28).

Table 28: Culture of Sharing Information

Culture of sharing information	% of respondents
Excellent	12.5
Good	50.0
Just satisfactory	37.5
Poor	0
Very poor	0

Ways of Informal Learning

There are at least four common ways of informal learning within an organization:

- Circulation of learning material
- Group meetings
- Post-training reflections
- E-sharing

Informal learning through above four ways was found to be quite low. Mean value varied from 2.13 in case of post-training reflections on a scale of 5 to 2.75 in case of circulation of learning material (Table 29).

Table 29: Informal ways of learning: Mean Scores

Way of learning	Mean score on scale of 5.00
Circulation of learning material	2.75
Group meetings	2.63
Post-training reflections	2.13
E-sharing	2.50

Around 50 percent of the respondents reported that their organization had never facilitated learning of employees through e-sharing or post-training reflections. Around one fourth of respondents reported that learning material had never been circulated in their organization and about 13 percent respondents informed that group meeting was never facilitated as a tool for learning and development of employees. (Table 30)

Table 30: Informal Ways of Learning: Incidence of Use

Way of learning	Never	Few times	Somewhat	Common	V. common
Circulation of learning material	25.0	25.0	12.5	25.0	12.5
Group meetings	12.5	12.5	37.5	37.5	-
Post-training reflections	50.0	25.0	12.5	-	12.5
E-sharing	50.0	-	12.5	37.5	-

Skills Gaps and Linkages with Poverty/Livelihood

Potential for Job Creation

Textile is one of the major sources of employment and livelihood in Pakistan. It accounts for 39 percent of the employment in the country. Textile industry has tremendous potential for job creation, as is substantiated from the following arguments:

- During 2006-07, share of textile in GDP was just 8.5 percent while its share in employment was 38 percent. It means share of all other sectors is around 91.5 percent in GDP and 62 percent in employment. So ratio of share in employment to share in GDP comes to 4.47 in case of textile industry and just 0.68 in case of all other sectors. It implies that employability of the textile sector (share in employment / share in GDP) is 6.6 times more than average of all other sectors.
- Share of textile in total exports has dwindled from 61.1 percent in 2006-07 to 53.8 percent during 2007-08 (July-Feb) and its share in GDP has remained static (8.5 percent) during the same period but share in employment has increased from 38 percent to 39 percent during the referenced period, which indicates that textile has more potential for creating new jobs. This phenomenon is due to the fact that textile is yet a predominantly labour intensive industry despite of several technological innovations and their application in this industry (Adhikari & Weeratunge, 2006).
- New investment (US$ 7 billion) in the textile industry (from 1998 to 2008) has created 454,000 new direct jobs. It implies that one million US$ investment in the textile sector creates direct job opportunities for around 65 persons. In other words, US$ 15,418 investment creates job for one person. However, acceleration in investment in the textile industry appears to be slowing down, which is evident from the statistics of import of the textile machinery.

Based on the above arguments, it is concluded that textile is a strategic sector and it can be used for creation of additional jobs in the country. Only one percent growth in employment in the textile sector means increase in employed labour force by 0.38 percent, which can help in cutting down the size of poverty stricken masses in the country. In 2006-07, 2.68 million labour force was unemployed in the country, with unemployment rate of 5.32 percent.

Skill / Knowledge Gaps Vicious Circle

Low skills low income is a simple equation. Low skilled employees in an organization mean organization with low productivity, low quality / low value output. It results into low competitiveness in the market leading to low returns for the firm. Such situation not only leads to low investment in HR and technology (obstruction in expansion and/or up-gradation of the existing system), but also results in low wages and low morale of employees. Low morale means low self-esteem, which is one of the three elements of under-development. On the other hand, low wages means lack of access to basic necessities, which is a second element of under-development. Lack of investment in HR and technology again means low skills/knowledge, which completes one side of the loop of low-skill poverty vicious circle. Lack of investment in HR and technology also results in creation of no or few additional jobs. It means supply and demand of labour gets imbalanced in favour of supply. Less demand and more supply puts pressure on wages. Eventually, organizations remain in the vicious circle of low productivity, low quality output and low value output. (Figure 6)

Owing to labour with low skills and knowledge, head-hunting in Pakistan is relatively a difficult task in comparison with its competitors, as discussed in *Section on* ***Business and Environment*** of this report. That is why; DHI is 78 in Pakistan, 0 in India, 11 in China and 44 in Bangladesh (World Bank,

2007, pp. 91-93). As discussed above, low returns due to low competitiveness lead to low wages, lack of demand of employees, etc. Hence, firms manage to fire employees easily, even sometimes, denying the rights to labour given under Labour Laws. Therefore, firing is easy in Pakistan when compared with India, China, and Bangladesh. This phenomenon is evidenced from the statistics of DFI as discussed in *Section on* ***Business and Environment***. There exists dire need of creating awareness relating to labour rights (provided under Labour Laws) among the labour.

The initiatives of the GoP for capacity building in the textile industry seems to be lacklustre, and more or less follow a supply driven approach, hence, impact is yet to be witnessed. The TAs are yet to take any such initiative for skill building of the concerned sector on overall basis as discussed in *Section on* ***Business and Environment***. They still seem not aware of the power of information. Their efforts are concentrated in lobbying for subsidies and incentives from the GoP. At the level of organizations, there exists a lacklustre attitude of the owners/senior management towards capacity development of the employees. On the other hand, organizations like Masood Textile Mills which are quite aware of the importance of the learning and development have sufficient evidence of demonstrating impact of training and development on the prosperity of the firm (*Box 5*). The study has found several knowledge gaps at firm level.

Skill / Knowledge Gap in IT

First knowledge gap relates to IT. As discussed in *Section on* ***Production Management***, IT offers several opportunities for boosting competitiveness in the firms; it replaces people but enhances productivity; it costs but helps management in managing several business related problems. In the short run, people are replaced but in the long run, more job opportunities are created due to backward linkages. Evidence of success is available in firms like Masood Textile Mills. However, majority of the firms remain unaware of the fruitful dividends of IT. The pace of diffusion of technology and advanced practices is very slow primarily due to *seth* culture and the lack of capacity of the owners / top management of the firms (as discussed in *Section on* ***Business and Environment***). There exists an urgent need of capacity building of the owners and top managers. TAs and the TADP must pay attention to this issue as early as possible.

Skill / Knowledge Gap in People Management

This study has found that productivity of HR in the garments sector is quite low (*Section on* ***Organization Management****)*. Only 12.5 percent of the respondents termed productivity of people working in their organizations as excellent. People management skills seem to be totally ignored in most of the garments sector, primarily due to *seth* culture. The owners and top management of such organizations seem unaware of the consequences of bad organization cultures. So this emerges as one of the most important areas of skills gap. As discussed in *Section on* ***Business and Environment***, most of the issues related with organizational management can be attributed to poor people management skills. Further evidence for the existence of this issue is available in *Table 27*: around 40 percent of the respondents suggested that top management of their organizations should be imparted training in management.

So capacity building of the companies in people management skills will not only give a big boost to the productivity of HR, but will also make the companies as vibrant entities. This will eventually, also lead to better use of ergonomics, hence not only satisfaction of the employees will rise, their income level will also move upward and dropout rate will fall considerably. This will obviously, contribute to the better livelihood.

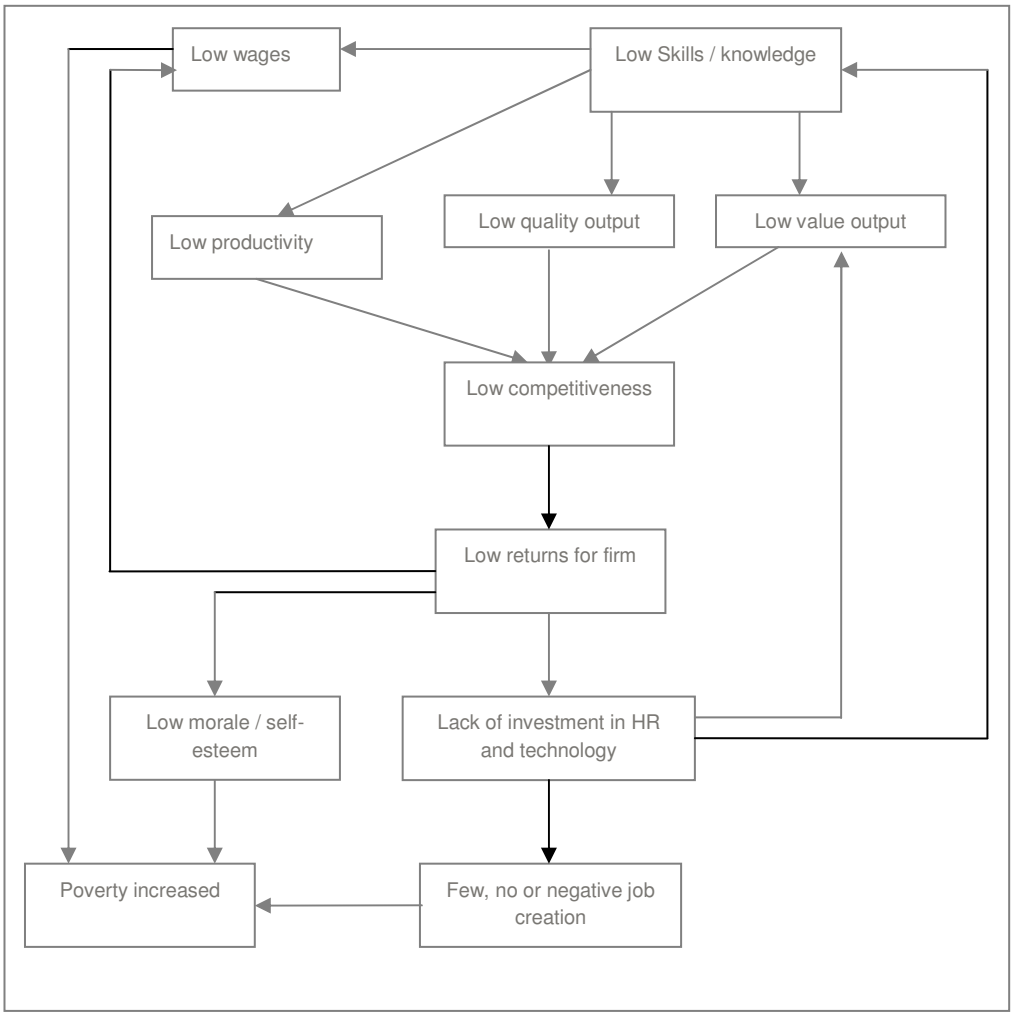


Figure 6: Skill-gap and Poverty Vicious Circle

Knowledge Gap in Training and Development Practices

Lack of training and development practices in the organization is another knowledge gap area. None of the respondent in this study reported quality of labour as excellent, which indicates that awareness of lack of skills of employees does exist among the companies, as discussed in Section *on* ***Production Management***. However, it appears that the owners / top management of the companies seem unable to establish a link of this problem with the need of training and development practices. Only a small number of organizations reported that such practices were on their futuristic plans. Majority of the respondent companies reportedly lacked enthusiasm in the capacity building of their employees. Due to such weaknesses in culture of learning and development, initiatives of the government relating to capacity building of the garments sector seem to be in vein.

Skill / Knowledge Gap in Management of Yarn Quality

Third knowledge gap lies in poor management of yarn quality as discussed in Section *on **Production Management***. Yarn quality is attributed with poor management of yarn inventory in the factory / firm and mismanagement at proceeding transfer points starting from farm to the spinning mill. It is clear that if capacity of farmers is enhanced in managing quality of cotton, its benefits will add value at all transfer points of CVC. Hence, every one associated with the CVC will be among the beneficiaries.

At firm level, problem arises, when cotton yarn of one lot is mixed with other. This process damages important characteristics of the yarn and problem surfaces at the stage of printing/processing in the form of defects (poor shades).

Skill Gap in Application of Dyes and Chemicals

Fourth knowledge gap pertains to the poor application of dyes and chemicals as discussed in Section *on **Production Management***. If colour is not skilfully applied on a cloth(e), it devalues the product and this is the most common problem in Pakistan. This is because there is acute shortage of qualified and trained dye masters in the garments sector.

Skill / Knowledge Gap in Creative Designing

Fifth knowledge gap relates with skill of designing. Creative designing adds substantial value to the value of garments products. A survey of garments shops in several shopping malls like Liberty Lahore, Jinnah Supper, Islamabad, and Park Tower, Karachi revealed that prices of one piece of garments with creative designs range from Rs. 2,000 to Rs. 50,000, which clearly indicates potential of value addition. As discussed in Section *on **Production Management***, creativity in fashion and design is a major asset for gaining control over the future markets. Fact is that more you go downward along the CVC, the need of knowledge, skills, creativity and innovations tends to increase. However, in this study, only 25 percent of the respondents termed innovation in designs as tool for fetching higher market price (Section *on **Marketing Management***). This finding vividly surfaces the lack of knowledge on this account. So capacity development in the creative designing can make the garments sector most vibrant and increasingly prospering. Obviously, this initiative will also create job opportunities as this process is more or less labour intensive.

Skill / Knowledge Gap in Losses Management

There are at least eight different types of process and material losses in the garments sector: inventory losses (0.92 percent), processing losses (7.57 percent), stitching losses (3.14 percent), packing losses (1.54 percent), re-processing losses (3.6 percent), knitting losses (1.88 percent), cutting losses (5.33 percent), and rejection losses (4 percent). These have been discussed in detail in *Section on **Production Management***. Such losses are mainly due to lack of capacity. This is evidenced from the success story stated in *Box 6*. Image Garments succeeded in trimming down the material costs by up to 20% with integrated system. Skill enhancement of employees in the material and process management can significantly contribute to the profitability of the organization. Obviously, employees with such proven skills will be more likely to have higher wages leading to improvement in their livelihood.

Knowledge Gap in Marketing Management

The study has found Marketing Management, as another area of knowledge gap, as discussed in *Section on **Marketing Management*** of the report. As discussed earlier, marketing strategies play vital role in the success of the companies. The study reveals that most of the companies are facing severe shortage of orders, and on the other hand, some companies are getting overwhelming

response to such an extent that they have to turn down some of the orders. It clearly highlights the need of capacity building in MMS.

Another indicator of the poor performance of the existing MMS of the companies is that exports of garments are more or less concentrated in quite a few markets, most predominantly the USA, as discussed in *Section on* ***Marketing Management***. If capacity of companies is enhanced in marketing management, it will enable them to diversify their markets, hence, market risks will diminish and returns will more likely to rise.

Another indicator of lacklustre performance of existing MMS is the low AMKI. Perceived market knowledge of the companies has been found just satisfactory as discussed in *Section on* ***Marketing Management****,* with AMKI of just 3.31 on a scale of 5, which clearly indicates substantial room for improvement. In other words, better market knowledge will definitely translate into higher ability to explore and exploit market potential.

Lack of capacity in marketing is also visible when results relating to marketing tools in practice, are analyzed (*Section on* ***Marketing Management***). Only 20 percent of the respondents informed that their companies had MBAs for marketing of their products and only 10 percent indicated that their staff had any formal training in marketing.

So, if MMS of companies is improved, they will be able to sell more in the international market, and fetch higher market price, eventually, this phenomenon will create a positive multiplier effect on the backward linkages resulting in the creation of additional jobs, more income and hence, improvement in the livelihood of the masses associated with CVC.

Knowledge Gap in Quality Management

Poor quality management has emerged as another important area of knowledge / skill gap. Several sections of this report have highlighted the issue of quality. As discussed in Section *on* ***Training and Development***, training of top management in quality management emerged as one of the 4 most important training need areas for the top management.

Knowledge Gap and Gender Development

Textile Industry is the second largest employer of women in Pakistan. Handicrafts, garments, and embroidery are the sub-sectors of textile industry where tremendous potential exists for creating jobs for women. Similarly, in the garments sector, in some jobs like stitching women are preferred over men. Women can do several tasks like sewing, making button holes, inserting buttons, cleaning the threads, ironing, folding, and packing etc.

So garments sector has strong potential for empowering the women through upgrading their skills. Evidences for success are available. For example, in a project of MEDI launched in Pakistan, average income of women increased from just Rs. 380/month to Rs. 1100/month (MEDI, 2007).

Under SMOT Scheme during 2007-08, TSDB has trained 2700 female stitching machine operators in Karachi, Faisalabad, Lahore and Rawalpindi. They are all employed in the garments sector. It is expected that such programmes will enhance earning capacity of the women in the garments sector.

It is concluded that capacity enhancement of women not only be used as a tool for poverty alleviation and gender development but also in economic development of the country.

Recent Trends in Garments Sector

World market of textile and clothing is booming. World T&C trade increased by 9.7 percent in 2006 (reaching US$530 billion), 11.6 percent in 2004 and 12.9 percent in 2003 (Bharat Book Bureau, 2008). This boom is mainly attributed to innovative business practices and conducive government policies (Box 7). The trends which the garments sector is experiencing are briefly discussed below:

Box 7. Key Trends in Manufacturing

"Industrial economies of the 21st century have short product lifecycles; production is flexible and lean, with focus on the entire value chain and not just on internal processes. Key drivers of growth now are people, innovation and capabilities and not just capital. In the 1980s-90s, it was shown that manufacturing could be undertaken anywhere; now designing can also be done anywhere. These activities are ideally suited for SMEs if they can become partners in an internationally accepted supply chain. This is the peril, but this is also the promise of the present globalisation."

Source: MTDF, 2005-10, Government of Pakistan

- Industry is moving out to Bangladesh as there are low wages, skilled labour and attractive rebates although Bangladesh is not a cotton producing country. In case of Bangladesh, minimum wage rates fixed at TK 1,662 per month which includes basic salary, house rent and other allowances for the entry-level workers (Daily Star, 2006) equivalent to Rs. 1645 (1 TK = 0.99 Pak Rupee). On the other hand, minimum wage rates in Pakistan are Rs. 6,000 per month. So, labour appears to be more cost effective in case of Bangladesh. Owing to very effective policies of the Bangladesh Government, export of RMGs increased from just US $40,000 1978 –79 to US $6.4 billion in 2004-05. The sector is providing employment to around 2 million workers, mostly women hailing from the rural areas. The experience of Bangladesh (non-cotton producing country) indicates that if the same model is adopted by any other developing country, competition for Pakistan may further increased.
- Second trend relates with changing dynamics of world market. For example, textiles exports from Asia to Africa and Europe rose by 19 percent and 11 percent respectively, while from Asia to North America rose by only 9 percent in 2006. On the other hand, intra-North American textile trade contracted by one percent during the same year. Similarly, Asian clothing exports to Europe jumped by 39 percent while to North America increased by just 15%. (Bharat Book Bureau, 2008).
- In Pakistan, there appears a trend of vertical integration of the garments sector so as to gain more control on the production and processing processes. This trend is more visible in Lahore.
- Some manufacturers (though quite small in number) seem quick in adopting innovative approaches to business management, hence, they are setting up a new landscape for the garments sector in Pakistan.

Recommendations

The findings of the study offer both opportunities and threats on one hand, strength and weaknesses on the other hand for the garments sector in Pakistan. Opportunities need to be properly tracked, analyzed and tapped and appropriate strategies need to be evolved in managing threats. Strengths need to be identified and reinforced. And, weaknesses need to be properly addressed. Improvement in the CVC can be materialized through bridging the knowledge gaps as identified in *Section on **Skills gaps and linkages with poverty/livelihood*** of this report, and can be used as a tool for poverty alleviation, improving livelihood and gender development. There are two key areas where improvement is needed: efficiency and quality. However, some of the additional recommendations are presented below:

Garments sector needs large number of **highly qualified personnel** and related institutions must realize the gravity of situation and develop a medium term plan for catering the needs of garments sector. Government should take target-oriented initiatives for capacity building of garments manufacturing owners, managers and employees. Though, some measures have been taken by the government to build up capacity of the sector but such interventions may not yield the desired results. Unless the practices of training and development are internalized in the factories and the offices, effectiveness of such interventions would remain questionable, as Raj (2005) observes that organizations invest resources on training and development while overlooking how such interventions could effectively contribute in the achievement of their goals, hence, resources are wasted (p. 7.1). Therefore, it is proposed that such interventions may be designed in such a way that they cater firm-specific training needs. Input-output-outcome-impact chain model should be implemented to evaluate the effectiveness of such interventions.

Labour Laws: A vast majority of the employees more particularly the women, working in the garments factories are unaware of their rights given to them by Labour Laws. Eventually, they get exploited by the *seths* in many ways. Even working environment is mostly non-conducive for working. So, there is exists an urgent need to launch a campaign to educate the employers as well as the employees with the Labour Laws. Apparently, this move would go against the interests of the business community, however, productivity of employees is more likely to increase, as is suggested by the Principles of Ergonomics.

There is a dire need to launch **quality campaigns** for the capacity building of the Ginners, Spinners, Weavers and Garments Manufacturers etc. In this connection, related associations / trade bodies like below, may be involved like Federation of Pakistan Chambers of Commerce & Industry (FPCCI); The Karachi Cotton Association; Pakistan Cotton Ginners Association; Pakistan Commercial Exporters of Towels Association; and Towel Manufacturers Association of Pakistan etc. The garments factories also need facilitation and technical assistance in achieving international certifications in quality. Certification in quality will not only boost level of confidence of importers in Pakistani garments products but will also enable the exporters in fetching higher per unit export earnings.

Brandification is another vital area where urgent attention of the manufacturers and exporters is needed. In fact, brandification is akin to the quality, therefore, development of skills-set of garments sector in marketing strategies and brandification can trigger an exponential growth in the export earnings.

Sharing of information among CVC stakeholders, horizontally and vertically, needs to be improved for catalyzing the process of improvement in the CVC.

Incentives should be given to the export-oriented manufacturers and which should be linked with quality of products measured in terms of export earnings per unit product. The government should sponsor the participation of only manufacturers (instead of only-exporters) in the international exhibitions and trade fairs.

Tax rates may be rationalized, GST on inputs for manufacturing exportable products may be reduced to 10 percent. Number of taxes should be reduced and attitude of tax authorities be improved. Withholding Tax imposed on electricity bills may be rationalized and be reduced to 2.5 percent.

A clear cut **pro-industry long term power policy** may be suggested. The power crisis should be overcome immediately and issue of load-shedding for the manufacturing units be properly addressed. NEPRA and OGRA should have representation from TAs / CCIs. Government may consider providing subsidy on gas to the garments exporters. It is suggested that subsidy on gas should be given at the rate of 2 percent to the companies with export earnings from Rs. 1 billion to Rs. 2 billion, and at the rate of 6 percent to the firms with export earnings exceeding Rs. 2 billion.
Interest rates of banks may be rationalized and brought down to normal levels and export refinancing facility should be provided to the exporters who are also manufacturers, according to their entitlements.

Technical knowledge data base must be prepared and be made available to the garments sector.
Integrated Operations: Cotton and textile industry in Pakistan direly needs backward and forward integration of operations. One option for improvement in value addition could be facilitating existing integrated textile units to extend the process of integration downwards, right up to farm level. Moreover, this would help in bridging communication gap between farmers and the ultimate users. This would help in improving efficiency and quality as well.

Collaborations with foreign companies: Board of Investment should closely work with textile firms in the country for developing partnerships with foreign companies equipped with advanced technology. Partnership could be any form like joint ventures, franchise system, input or technology supplies, marketing etc.

Creating diversity in markets: Pakistani textile products lack exposure to diversified markets. Currently, exports concentrate on few markets. For Pakistani products, USA is the biggest market. In 2005-06, Pakistan exported US$ 4.19 billion worth of products to USA alone, of which cotton and textile products accounted for 88 percent. Share of Pakistan in the US market of textile rose from 3 percent in 1995 to 5 percent in 2002 while that in European Union fell from 5 percent to 4 percent during corresponding period (Nordas, 2004, p. 17-18). After 2002, share of Pakistan in the US market of textile fell to 2.96 percent in 2004. However, year 2006 showed some improvement as share rose to 3.4 percent in 2006. But the recent statistics for the months of March and April, 2007 suggest that in March Pakistani textile exports to USA fell by 12.5 percent and in April by 4.9 percent. (US Census Bureau, 2007)

Central Cotton Research Institute may be upgraded into Cotton and Textile Research Institute (CTRI), and should be assigned the role of research and development relating to all sectors of cotton, textile and clothing. The revenue collected under Cotton Tax may be given to the CTRI for meeting the funding requirements of the research. Proposed CTRI should have strong linkages and partnership programmes with other related institutions as well like Agriculture Universities, Textile University, farmers and industry etc. Resource generation for CTRI can be easily made. First possible source is the Cotton Cess. During 2005-06, Government of Pakistan collected Rs. 240 million under the head of Cotton Cess (APTMA, 2008). Second source could be the R&D facility currently being extended to the textile exporters.

SBP in 2005 offered **R&D support** to the textile garments exporters, at the rate of 6% of the FOB value of the exports to EU and USA, specifically for the areas of product development, skill development and training, upgradation of information technology and professional consultancy (SBP, 2005). This intervention has not succeed for its real purpose except improving competitive advantage in terms of cost, owing to complexities of cultural artefact of our society, therefore, it is proposed that the funds allocated for this intervention may be used through proposed CTRI. Proposed areas for research include:

- Category – I: Ginning: behavioural dynamics in marketing; improvement in ginning technology; improvement in processes through BPR; enhancement of production efficiency through increased automation; and improvement in packing, handling, storing and transportation
- Category – II: Spinning: behavioural dynamics in marketing; improvement in spinning technology; improvement in processes though BPR; enhancement of production efficiency through increased; improvement in packing, handling, storing and transportation
- Category – III: Weaving: behavioural dynamics in marketing; improvement in weaving technology; improvement in processes like BPR; enhancement of production efficiency through increased; improvement in packing, handling, storing and transportation ;
- Category – IV: Processing: behavioural dynamics in marketing; improvement in textile processing technology; innovations in the use of chemicals / dyes etc.; improvement in processes like BPR; enhancement of production efficiency through increased; improvement in packing, handling, storing and transportation
- Category – V: Clothing – Garments, Knitwear, Hosiery, Apparel, Canvas etc.: behavioural dynamics in marketing; improvement in designing, cutting, stitching, and sewing technology; improvement in processes like BPR; enhancement of production efficiency through increased; improvement in packing, handling, storing and transportation.

Best Management Practices: Some companies like Masood Textile and Crescent Greenwood are very advanced stage on account of technology and management of people, while most of the organizations are lagging far behind. It is therefore, recommended that a comprehensive study may be launched to facilitate concerned trade bodies / associations in identification, documentation and dissemination of best practices. Every organization makes experiences – good or bad. There are islands of success in both inter and intra-organizations. Tools of knowledge management (KM) can be used to establish KM systems in the companies to ensure continuous improvement in the organizations. It is expected that deployment of KM tools will also create angst for creativity and innovations.

Information Technology: Information Technology offers efficient solutions to various business related problems. Currently, there are islands of some success in the world of garments in Pakistan. Such experiences need to be replicated in other factories. This move does not only have the potential of reductions in wastes and losses of resources but also help in triggering continuous improvement.

Joint Ventures and Transfer of Technology: There is substantial potential for FDI in the garments sector, however, the pace is very slow. It is recommended that CCIs and the concerned TAs should themselves evolve a strategy for arranging such ventures and should fix yearly targets. If they succeed in attracting US$ 5 billion every year in the garments sector, it will transform the technological landscape of the garments sector within few years.

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