

# MOC MICROECONOMICS OF COMPETITIVENESS



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## **Textiles Cluster in Pakistan** *Final Paper*

### **Group Members**

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## I. Introduction

This paper presents an analysis of the Textiles and Apparel Cluster in Pakistan. The first section of the report gives an overview of the socioeconomic performance of the country followed by an assessment of its business environment. The second part explores the performance of the cluster with a special focus on its role in the national economy, its historic evolution, and analysis of the cluster Diamond. The penultimate section summarizes the strategic issues faced by the country and the cluster. The final section presents a set of recommendations to improve the performance of the cluster.

## II. Country Analysis

### a) Background

Pakistan is a country of approximately 165 million people. Geographically, it is situated in South Asia with its borders with India in the East and Afghanistan in the West.

Figure 1: Map of Pakistan



Source: World Atlas 2007

Since its independent from the British rule in 1947, Pakistan has undergone many turbulent political phases leading to three long military regimes during 1958-70, 1977-85 and 1999-todate. With its creation, it also inherited a long legacy of tensions with India especially over the issue of Kashmir

which has resulted in four wars thus far. In 1971, Pakistan also faced a major set-back when East-Pakistan (now Bangladesh) seceded and became an independent nation. Pakistan geopolitical problems were further compounded by its strategic location and proximity to Afghanistan which made her a frontline state during the cold war against Russia. Now Pakistan is an important ally of the USA in the global war against terrorism.

***b) Overall Economic performance***

With a GDP per capita (PPP) of US \$ 2,600, Pakistan continues to be an underdeveloped country, suffering from decades of internal political disputes, low levels of foreign investment, and a costly, ongoing confrontation with neighboring India. However, government's recent policies bolstered by generous foreign assistance and renewed access to global markets since 2001 have generated solid macroeconomic recovery over the last four years.

<b>Pakistan: Economic Performance at a Glance</b>	
□ GDP (PPP)	: \$427.3 billion (Estimated)
□ GDP Growth	: 6.5% (Estimated)
□ GDP/capita (PPP)	: \$ 2600
□ Total Labor Force	: 48.29 Million
□ Unemployment	: 6.5%+ underemployment
□ Inequality (Gini)	: 41 (FY98/99)
□ Inflation rate	: 7.9%
□ Exports	: Textiles (garments, bed linen, cotton cloth, yarn), rice, leather goods, sports goods, chemicals, manufactures, carpets and rugs
□ Export partners:	: US 24.8%, UAE 7.8%, Afghanistan 6.6%, UK 5.7%, Germany 4.5%
□ Imports	: Petroleum, petroleum products, machinery, plastics, transportation equipment, edible oils, paper and paperboard, iron and steel, tea
□ Import partners	: Saudi Arabia 11.1%, UAE 10.3%, China 9.2%, Japan 6.4%, US 6%
□ Exchange rate	: Pakistani rupees per US dollar - 60.35 (2006)

Source: CIA Fact Book 2006

The recent growth rate of 6.5% is fueled by double-digit gains in industrial production over the past year. As a result, the economy has become less dependent on agriculture. However, management of inflation remains erratic with consumer inflation rate standing at 8% in 2006 (CIA 2006).

***c) Phases in economic policy***

In terms of economic history, the country has followed the popular global trends. Thus far, it has passed through three distinct phases:

i) **Import Substitution:** During President Ayub Khan's era (1958-1969), the government followed a path of import substitution, centralized planning, emphasizing upon state-owned enterprises. Also, there was greater attention paid to agriculture with aim to bring green revolution. However, during this period, high tariffs on imports badly affected the competitiveness of national firms.

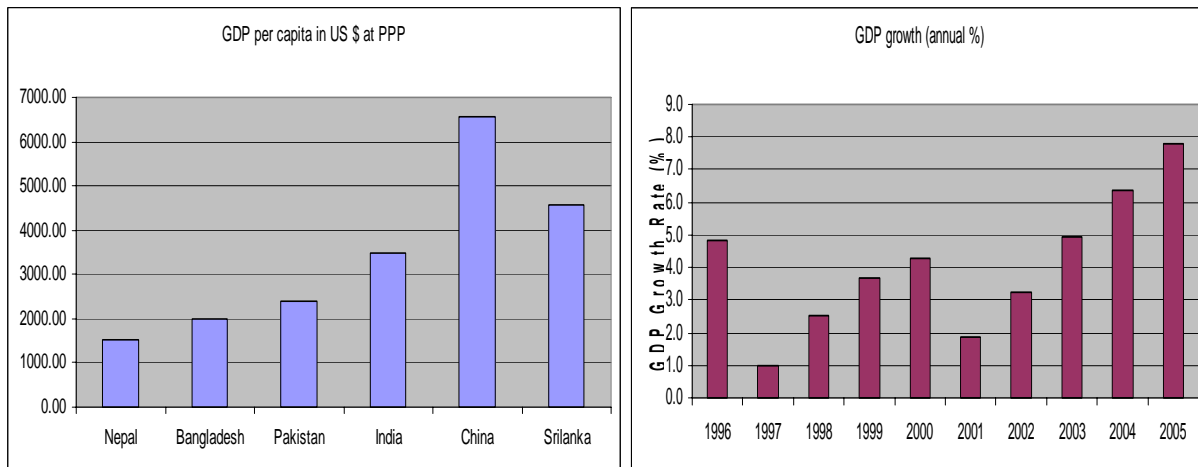
ii) **Nationalization:** The country followed the policy of nationalization in 1970s during President Z. A. Bhutto's period (1971-1977). All major banks, industrial houses, and even private schools came under the state control. However, this policy proved to be a failure as the industrial sector became highly inefficient, marked with political interference, and reduction in further private investment.

iii) **Privatization & liberalization:** For the last two decades, since 1980's, Pakistan is focusing on privatization and liberalization. All major commercial banks, major industries and utilities are being privatized. In the last five years, the thrust on market liberalization has further increased.

**d) Trends in GDP growth**

Based on the GDP growth rates over the last ten years, it appears that Pakistan is on a path of economic growth, though there was some decline in 2001-02 due to adverse global event, for instance the incidence of 9/11 and its repercussions.

**Figure 2: GDP per Capita Trends**



Source: WDI 2005

Over the last four decades, Pakistan had had very volatile GDP growth with turning into negative for a few years (WDI2005). However, since 2001, Pakistan has been on a steady growth path with a consistently increasing GDP. This importance of macroeconomic stability for this GDP growth rate cannot be overemphasized.

*e) Composition of economy*

Overtime, Pakistan’s economy has moved from its traditional agriculture base to manufacturing and then to services. Figure 3 shows that service constituted 52% of the GDP, agriculture 22% and manufacturing sector 26% of the GDP in 2005(WDI 2005).

*f) Social Sector Indicators*

Pakistan’s performance on the social indicators is largely poor (Table 1). The country has been ranked 144<sup>th</sup> in world on basis of Human Development Index (HDI) which is a composite indicator of per capita income, literacy rate, and life expectancy.

**Table 1: Comparative Statistics on Social Indicators**

<b>Parameter</b>	<b>Bangladesh</b>	<b>India</b>	<b>Pakistan</b>
Health expenditure per capita (current US\$)	13.7	31.4	13.6
Health expenditure, total (% of GDP)	3.1	5	2.2
Improved water source (% of population with access)	74	86	91
Physicians (per 1,000 people)	0.26	0.60	0.74
Public spending on education, total (% of GDP)	2.25	-	1.97
Human Development Index (HDI)	137	126	134

Source: WDI 2004

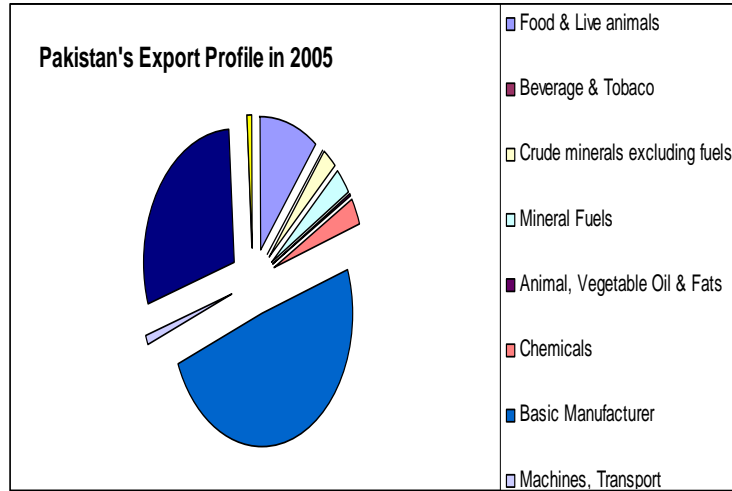
Like most developing countries, Pakistan’s Government is also increasingly spending in the social sector, for instance, in health and education. The outcomes, however, are far from the desirable.

**g) Country's export profile**

Pakistan's exports are predominantly concentrated

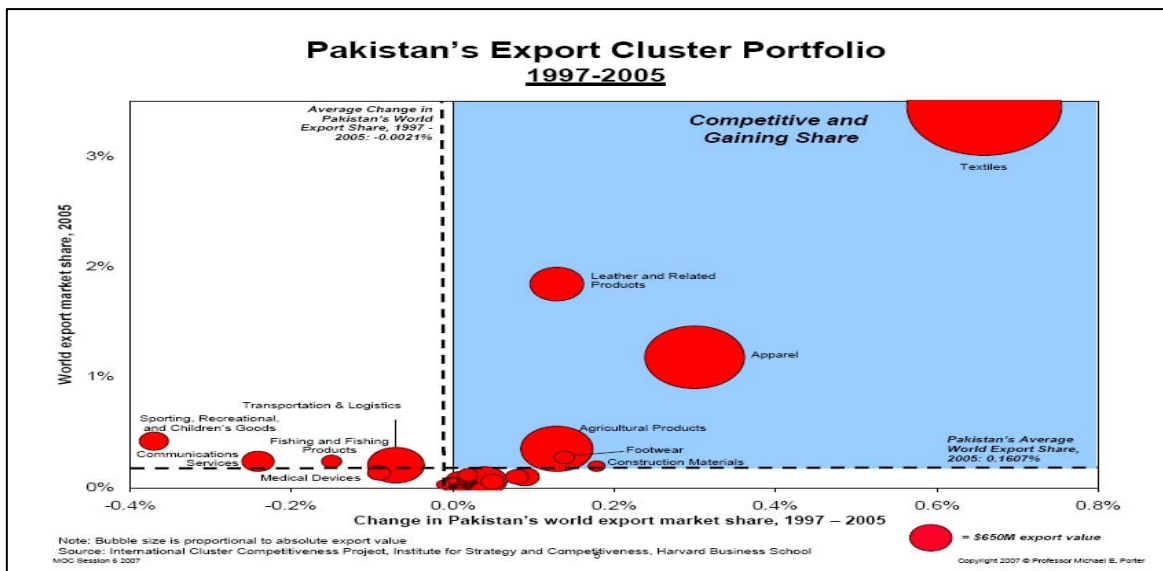
In low value natural items and manufactured items with low value addition. The manufacturing sector contributes to around half of the total exports and textile sector contributes around 46% of the

**Figure 3: ADB Data on Export Profile of Pakistan**



manufacturing sector's contribution. The USA has emerged as the most important destination for Pakistan's exports. Other major destinations include UAE, Afghanistan and United Kingdom. In terms of export clusters, Pakistan's economy is predominantly concentrated in textile, apparels, leather goods, agricultural products, construction material, logistics, transportation, and sports goods (Figure 4). Out of which Textile & apparel are the biggest and the fastest growing clusters. The challenge for Pakistan is thus to develop other emerging clusters to diversify its portfolio.

**Figure 4: Global Share and Growth Rates of Pakistan's Export Clusters**



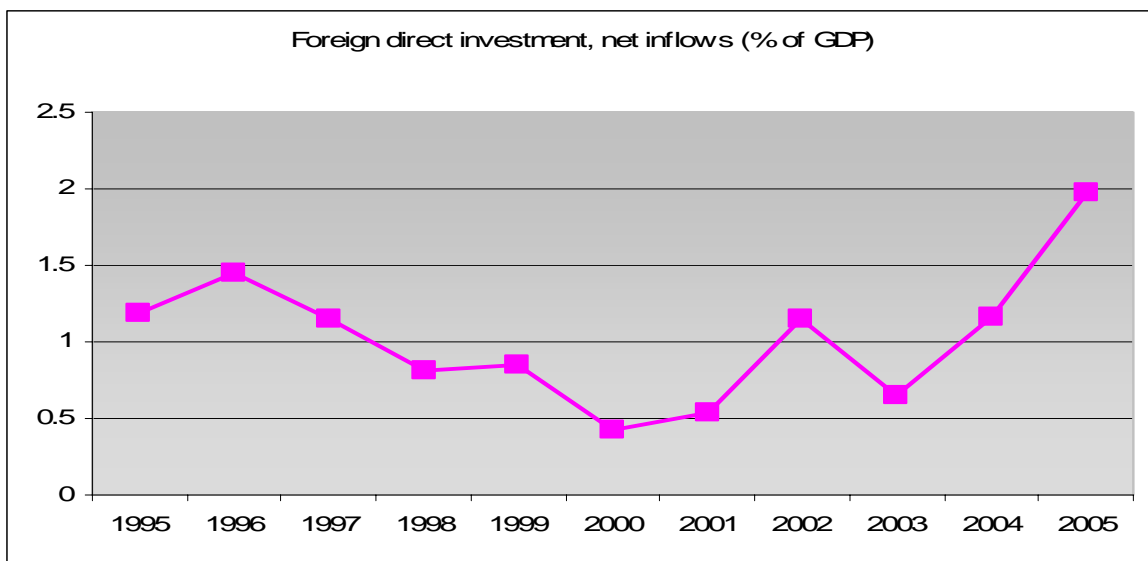
Source: Michael E. Porter 2007

### *h) National Business Environment*

Pakistan's national business environment is characterized by abundance of semi-skilled and low wage labor, moderate natural resources, poor infrastructure, high rates of corruption, poor governance, moderate level of university-industry collaboration and low scientific research on the factor side. The context of firm strategy & rivalry can be described as highly regulated, bureaucratic business environment, high tariffs, no substantial presence of foreign companies and static corporate culture.

Figure 5 shows that FDI as percentage of GDP has been generally low (1%) over the last one decade but it is gradually improving.

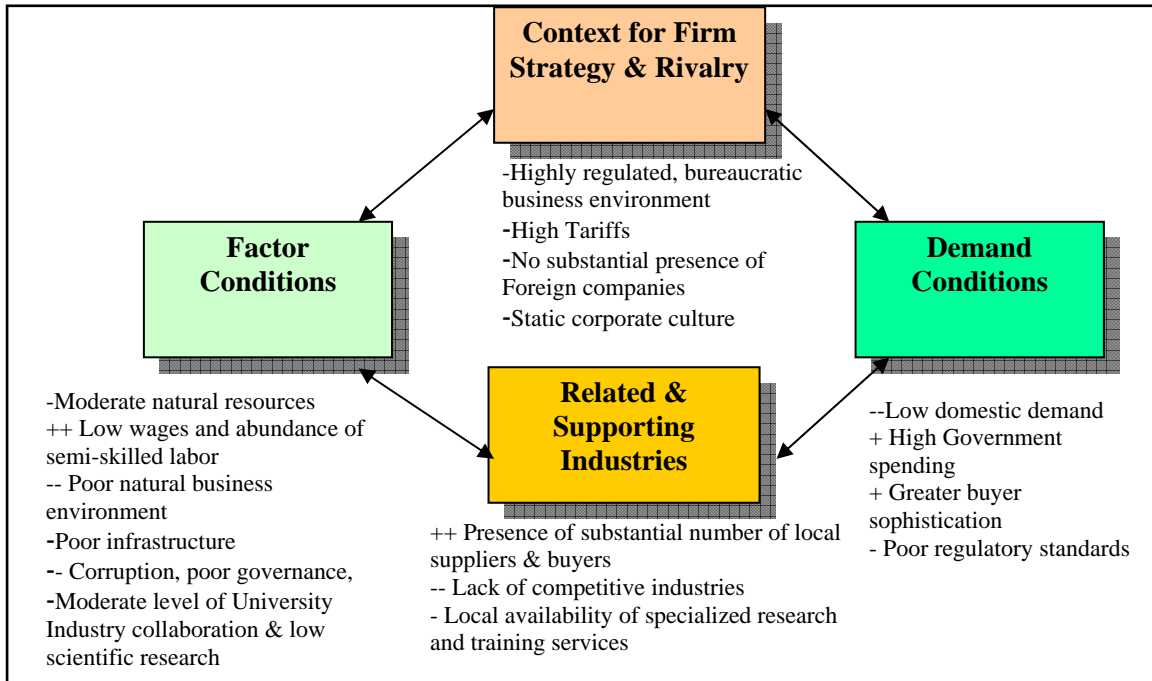
**Figure 5: Trends in Foreign Direct Investment**



Source: WDI 2005

The demand side is characterized by low domestic demand, high Government spending, greater buyer sophistication, and poor regulatory standards. The related and supported industries encompass presence of substantial number of local suppliers & buyers, lack of competitive industries, and low availability of specialized research and training services (Figure 6).

**Figure 6: National Diamond**



***i) Latest trends in national business environment***

During the last five years, Pakistan has registered some significant improvement in the factor conditions. For instance, scores on quality of scientific research conditions, university-industry research collaboration, communication services, science and math education, financial market sophistication, venture capital availability and overall infrastructure quality has improved reasonably. However, the efficiency of legal framework, equity market access and quality of management schools is going down. In terms of context of firm strategy & rivalry, Pakistan has improved on labor-employer relations, lowering of trade barriers and local competition but has failed to improve the governance issues such as corruption and favoritism. While the government procurement and buyer’s sophistication has induced quality demand, the regulatory standards are far from satisfactory. The related industries have also coped up with this demand both qualitatively as well as quantitatively. *In summary, Pakistan has showed some significant progress in the Diamond conditions compared to past. However, with most of its rankings falling around 50s, Pakistan has to go a long way to strengthen her competitiveness.*



**Table 2: Business Environment Indicators 2005**

Indicators	Bangladesh	India	Pakistan
Business disclosure index (0=less disclosure to 10=more disclosure)	6	7	6
Cost of business start-up procedures (% of GNI per capita)	94.4	62	23.9
Ease of doing business index (1=most business-friendly regulations)	81	138	66
Firing cost (weeks of wages)	51	55.9	90
Procedures to build a warehouse (number)	13	20	12
Procedures to enforce a contract (number)	50	56	55
Procedures to register property (number)	8	6	6
Rigidity of employment index (0=less rigid to 100=more rigid)	30	41	39
Start-up procedures to register a business (number)	8	11	11
Time required to build a warehouse (days)	185	270	218
Time required to enforce a contract (days)	1442	1420	880
Time required to register property (days)	425	62	50
Time required to start a business (days)	37	71	24
Time to resolve insolvency (years)	4	10	2.8

Source: WDI 2005

***j) Productivity Vs Wage growth***

Analysis of average productivity growth and average wage growth shows that Pakistan's productivity is not catching up with the wage growth. Between 1994-2006, annual productivity growth average 1.2% while the corresponding wage figure was 3.63%, thus affecting the ability of the country to remain competitive (Figure 7 below).

**Figure 7: Growth Comparison of Productivity and Wages**

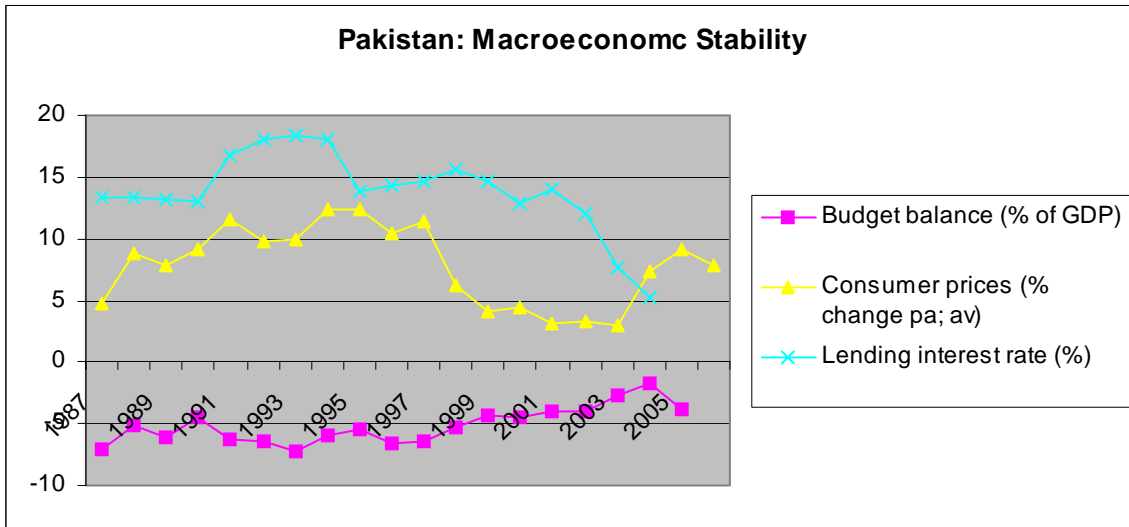


Source: EIU 2006

### ***K) Performance on Macroeconomic Management***

Figure 8 gives the trends key indicators of macroeconomic management including inflation rate and budget deficit. Currently government faced with increasing budget deficit and rising inflation rate which needs immediate attention. Government has already been doing some economic reforms since 1999 to improve its performance on fiscal deficit, inflation, taxes and expenditure management. However, there is need for more fiscal discipline.

**Figure 8: Performance on Macroeconomic Indicators**



Source: EIU 2006

Other cause of concerns for government include bad infrastructure where Pakistan was rated 3.36 after India which stood at 3.5 (GCR 2006). Also, as mentioned in the previous sections, poor institutions in the areas of tax system, Legal System, Enforcement and Civil Service also pose great challenge to improving the business environment in the country.

### **III. Cluster Analysis**

#### ***a) Historic Perspective***

Pakistan's textile industry has long historic roots. In the Indus River Valley of Pakistan, cotton was being grown, spun and woven into cloth about 3,000 years BC (Cotton Counts 2007). The production of textiles continued flourishing during different historic regimes such as *Sultanate*

period, *Mughals* dynasty and the British colonial times (Ali 1962). During the British colonial regime, India was a primary supplier of raw cotton for textile mills based in Manchester and other parts of the United Kingdom.

After Pakistan’s independence in 1947, the textile industry continued to grow largely due to government’s investments in irrigation systems and attractive packages for industry start-ups. Over time, the share of textiles in Pakistan’s overall economy as well as in the manufacturing sector remained significantly high. Figure 9 below shows that the share of textiles as percentage value added in the manufacturing has remained above 20% since early 1960s.

**Figure 9: Textiles and Clothing as Percentage of Value Added in Manufacturing**



Source: WDI 2005

***b) Importance of the Textile Cluster***

The Textiles and Apparels is the backbone of Pakistan’s economy. In 2005, textile’s contribution to overall GDP was 10% while its share in the exports was at a high of 60%.

**Figure 10: Contribution of Textiles 2005**

Sno		Ranking
1	Share in merchandize exports	63%
2	Share in manufacturing sector	46%
3	Share in manufacturing sector employment	38%
4	Share in GDP	9%
5	Ranking in World textile trade	10 <sup>th</sup>
6	Ranking in World Clothing Trade	15 <sup>th</sup>

Source: EPB 2005

Moreover, it is the biggest source of employment in the country providing employment to more than 1.3 million people (Figure 11). About 38% of the manufacturing sector employment is in textile sector.

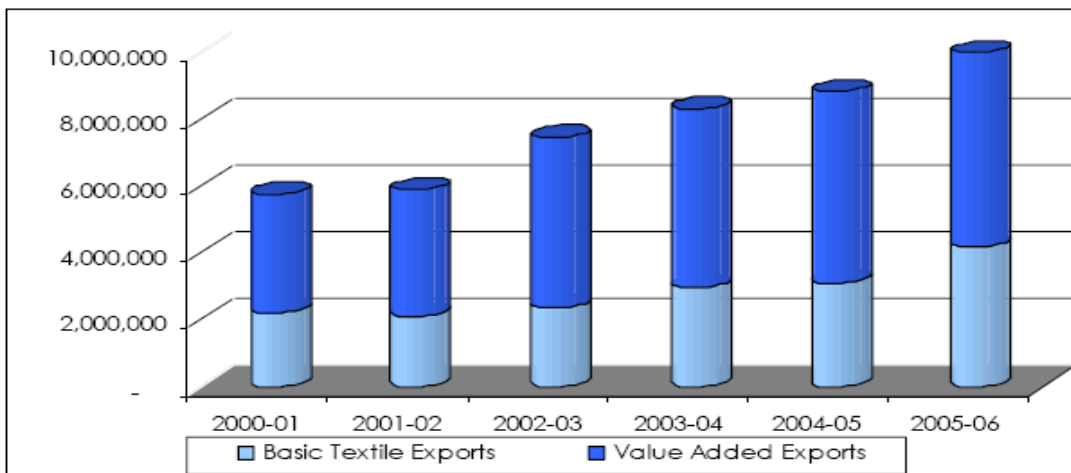
Sub-sector	# of people
Ginning	10,000
Spinning	201,152
Weaving	294,213
Knitting	47,221
Processing and Finishing	61,206
Stitching	734,805
<b>Total</b>	<b>1,348,597</b>

Source: SMEDA 2000

**c) Trends in Textile Exports**

Pakistan is exporting around US \$ 10 billion of textile goods each year (Figure 12). The exports of composed of both basic textile products such as yarn and value added exports including made-ups. The figure below shows that overall exports are increasing with increase in the value-added exports in absolute terms. However, it also shows that value added exports as proportion of overall textiles exports has largely remained same.

**Figure 12: Trend in Textile Exports (US \$ 000)**



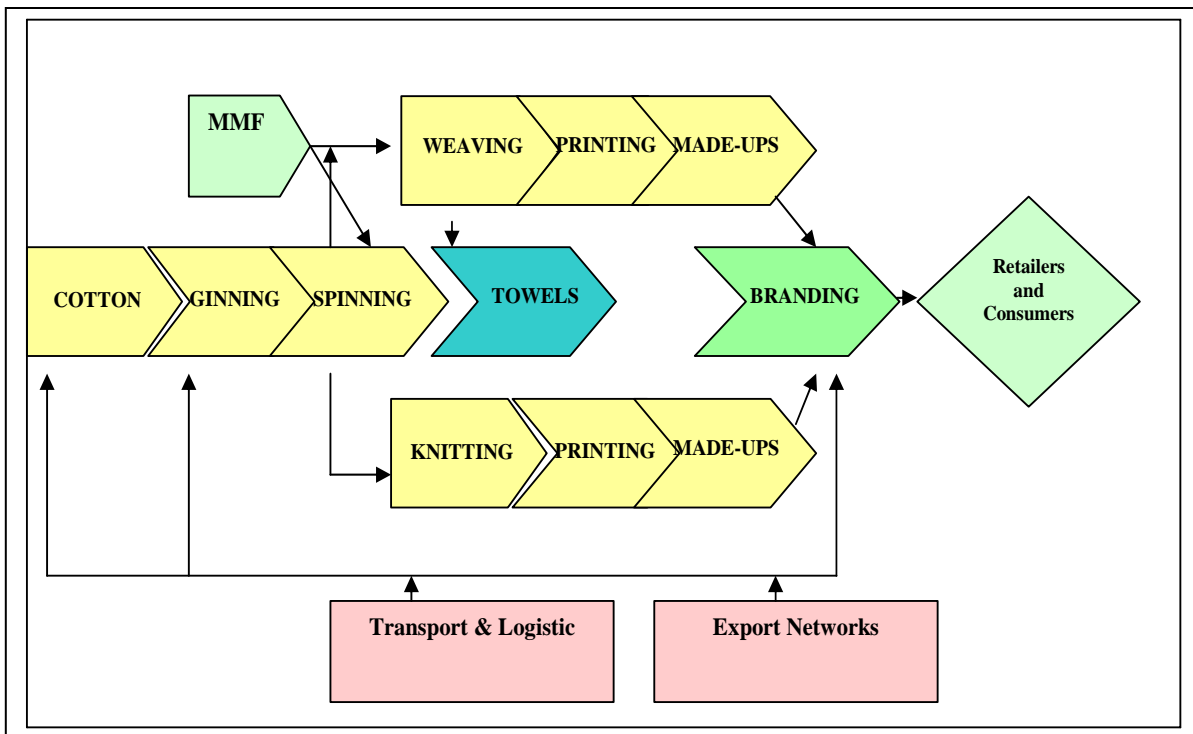
Source : EPB 2005

**d) Textile Value Chain**

A typical textiles value chain starts with cotton production which then passes through *ginning* where fiber is separated from the cotton seed. The next stage is *spinning* where the fiber is spun into yarn. At this stage, Manmade Fibers (MMF) such as polyester is also used as substitute for cotton fiber. The next stage of processing includes *knitting* and *weaving* depending on the type of fabric to be produced. The knitted or woven fabric then goes through *dyeing and further processing* such as bleaching. Once the fabric is processed, the last stage is *stitching* through which various made-ups are produced.

Additional steps in the value chain include *branding* and *retailing*. These core activities of the value chain are facilitated by a network of supporting activities that include *transport and logistics* as well as *export support*. Figure 13 gives an outline of a typical Textiles and Apparels value chain.

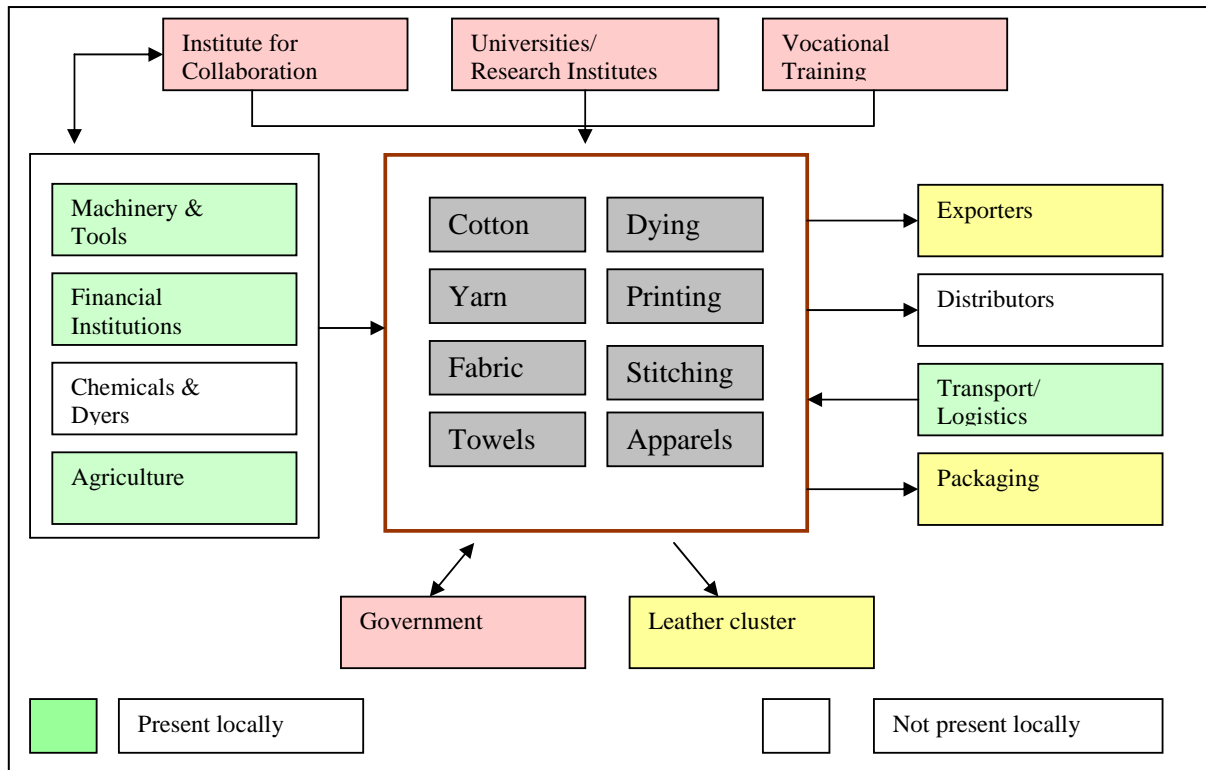
**Figure 13: A Typical Textiles and Apparels Value Chain**



***e) Textile Cluster Map***

The textile cluster contains a very diverse set of players and interconnections amongst the players. Some of the supporting include suppliers of machinery and tools; financial service providers, agriculture, transport and logistics. Whereas the textiles finished goods side, exporters, distributors and the leather clusters are important ones (see Figure 14)

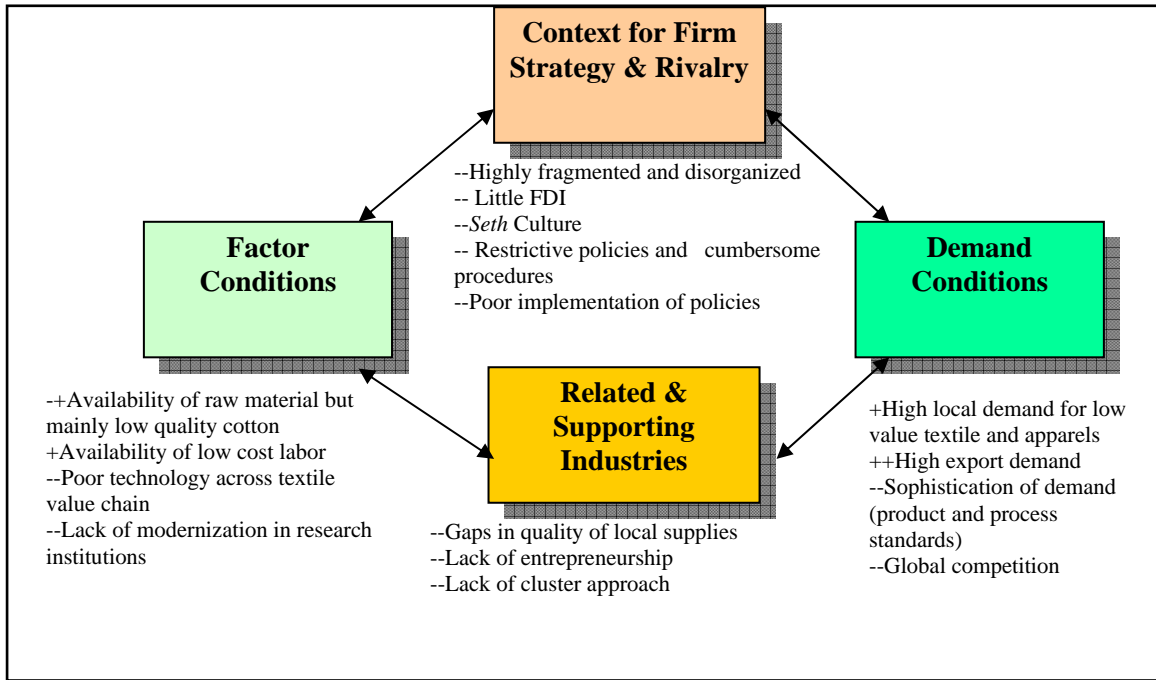
**Figure 14: Cluster Map**



***e) The Textile Diamond***

In the previous sections, we noted that textile cluster has generally shown a good performance in terms of overall growth. Nonetheless, the cluster has largely remained engaged in low-end of the value chain with heavy dependence on basic exports. The Diamond analysis below identifies various strengths and weaknesses that have led to the current outlook of the textile cluster. The details analysis of each aspect of the diamond is presented in the following sections.

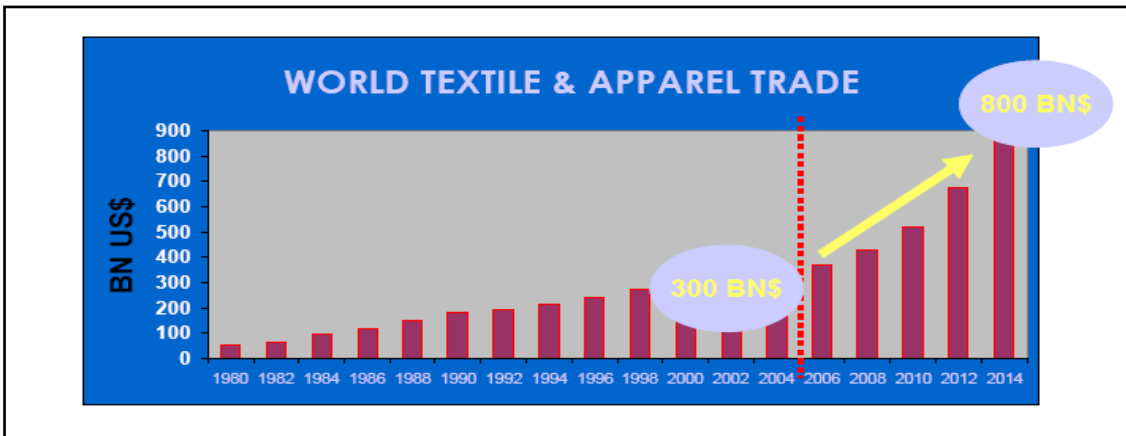
**Figure 15: Textile Diamond**



*i) Demand Conditions*

Pakistan’s textiles cluster heavily depends on global market. Currently, the global demand for textiles account for US \$ 300 billion which is likely to increase to US \$ 800 billion within the next 10 years. In addition to increasing global demand, Pakistan also enjoys a huge domestic demand owing to its huge population size i.e. 160 million (Figure 16 for global trend).

**Figure 16: World Export Demand**



Source: Werner International USA 2005

Currently Pakistan caters to about 3% of the global demand as it produces about US \$ 10 bn worth of textile products. China has the highest market share in global textile market, followed by India and Pakistan in the region (see Table 3 Below)

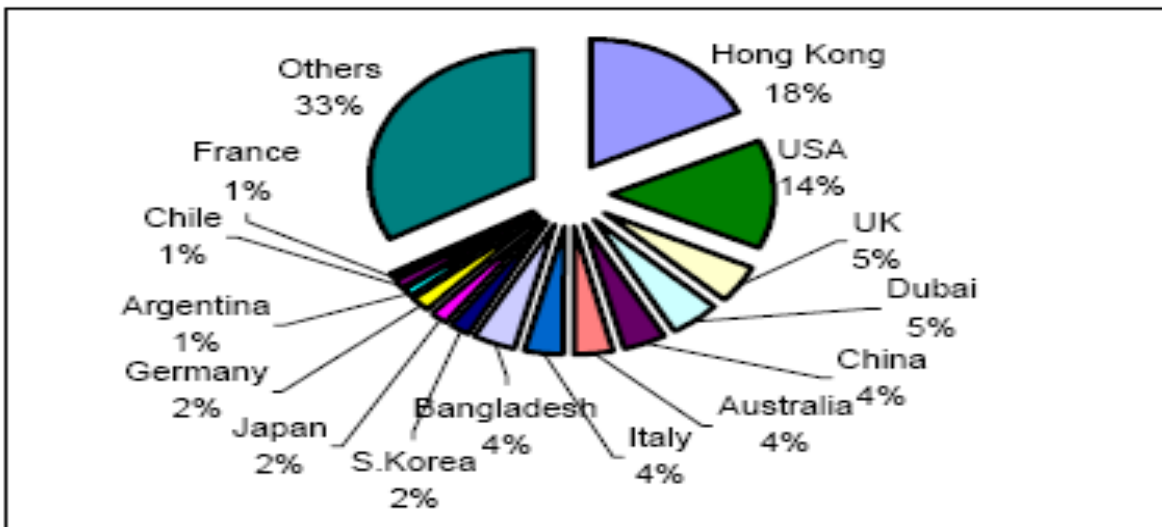
**Table 3: Global Market Shares 2005-06**

Countries	Production		Consumption	
	000 tons	% of World	000 tons	% of World
Pakistan	2,058	9%	2,584	11%
China	5,700	24%	10,000	41%
India	4,148	18%	3,655	15%
Total of the above three	11,906	50%	16,239	67%
Others	11,740	50%	8,095	33%
World Total	23,646		24,334	

*Source: USDA*

In terms of export destination, Pakistan is heavily dependent on European countries, USA and the Middle East. In addition to clothes Pakistan also exports cotton yarn and basic textiles to East Asian countries.

**Figure 17: Export Destinations**



Source: SMEDA 2000



*ii) Related Industries*

The growth of related industries in the textile cluster has largely taken place in the informal sector in a very haphazard manner. There are examples of organic clustering but a conscious effort on the part of industry players or government to promote a cluster based approach have always lacked. Generally, the capacity of related and supporting industries is often weak. Though, the linkage between various actors is also a cause of concern but there are some examples where the norms of reciprocity and interaction are very high. Faisalabad—one of the largest textile producing cities in Pakistan gives a good examples of organic clustering and interconnection amongst the members. Table below gives the list of variety of players that are involved in the textiles sector.

**Table 4: Participants in the Textile Cluster**

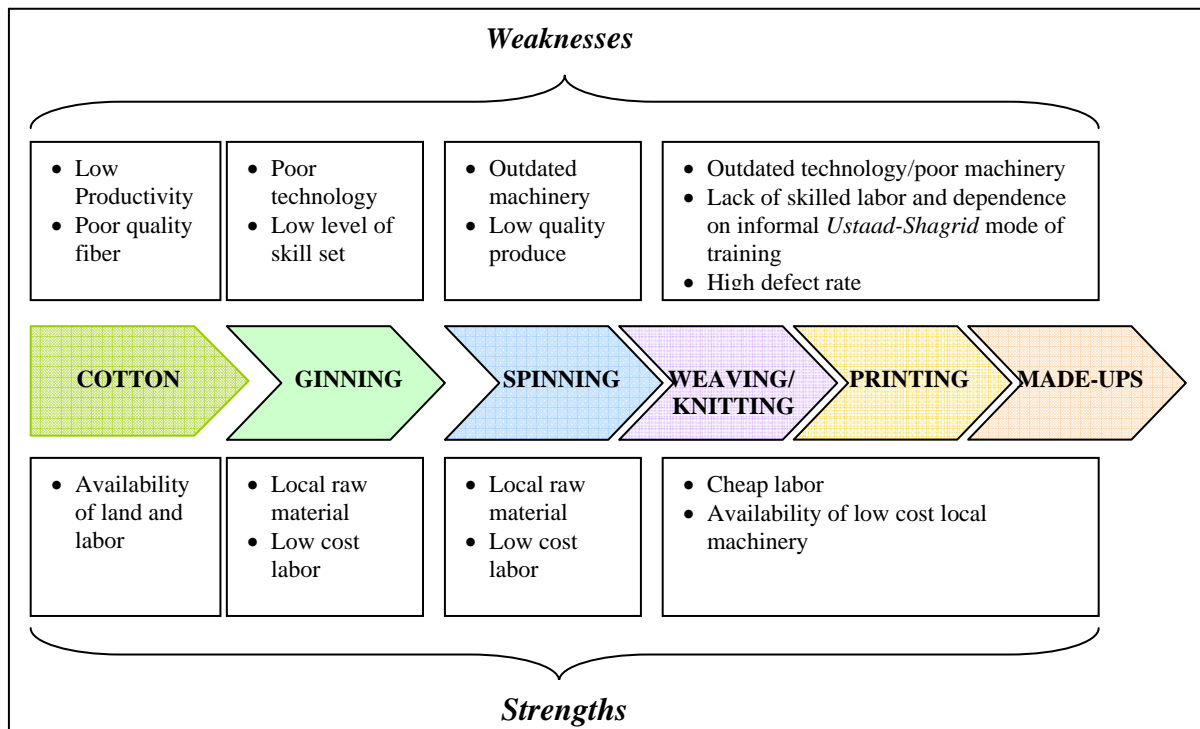
S. No	Textile Sub-Sector Activities	No. of Firms	S. No	Textile Sub-Sector Activities	No. of Firms
1	Cotton ginning and pressing	26	11	Textile composite	4
2	Cotton waste processing	53	12	Textile weaving(independent units)	32
3	Doubling of yarn	22	13	Textile weaving(power looms)	15000
4	Embroidery	21	14	Textile exporters	700
5	Hosiery products	301	15	Yarn merchants	800
6	Ready-made garments	40	16	Fabric Whole Sellers	300
7	Sizing of yarn	119	17	Textile Chemicals and Dye Manufacturers	9
8	Textile machinery, parts and service	197	18	Whole Sellers of Textile Chemicals & Dyes	200
9	Textile processing(printing/dyeing/fi nishing)	210	19	Textile Knitting	6
10	Textile spinning	42	20	Other Textile Firms (Carpets, Towels etc)	60

Source: Ul Islam F. (2006)

**iii) Factor Conditions**

As Textiles and Apparel cluster involves diverse set of activities requiring different of inputs, a detailed analysis of factors conditions across the value chain is required. Figure 1 summarizes the factor conditions faced by the cluster. Across the value chain, low cost of labor emerges as the major strength. The estimated cost of labor was 43 cents for Pakistan followed by 47 cents in India, 57 cents in China, 52 cents in Indonesia and 60 cents in Egypt while Bangladesh and Vietnam outweighed this advantage with even lower costs 27 and 29 cents respectively (BR 2007). However, gaps in skill set of labor and poor technology—two major constraints faced by the cluster largely offset advantage of cheap labor.

**Figure 18: Factor Conditions across Textile & Apparel Value Chain**



Pakistan is the fourth largest producer of cotton (9% world share) and is endowed with fertile lands and extensive irrigation network<sup>1</sup> (USDA 2007; UNU 2007). However, the cotton sub-sector faces serious productivity and quality gaps. The cotton yields for Pakistan were 586 kgs/hectare compared to 1129 kgs/hectare in China in 1999-2000. Moreover, most of the commercial varieties of cotton were of small to medium length (22mm-28mm) with coarse texture (SMEDA 2000). One of the major contributing factors to this low productivity and poor quality is non-adoption of modern planting techniques such as furrow planting which is 6-7% (Ibid).

At the ginning, spinning and weaving stages, dependence on outdated and less efficient technology is seriously hampering the productivity rates. For instance, the processing rate at the ginning stage is 8.3 bales per hour compared to 20 in the case of USA. Similarly, the spinning sector is largely dependent on less efficient technology e.g. spindles (9.2million units) compared to a meager 147,852 units of routers (Ibid). Similarly, weaving sector is dominated by conventional looms. The ratio of conventional power looms to shuttle-less looms is estimated to be 1 to 9<sup>2</sup> (ul Islam 2006).

Gaps in skill set of labor force only add to the problem of low productivity. Informal apprenticeship mechanism such as *Shagirdi* is the dominant form of skill transfer which eventually leads to inconsistencies in product quality. Ultimately, these inhibiting factor conditions, such as low quality of raw material, poor technology and insufficient skills, lead to low value addition and high defect rates. For example, 40% of exported fabric was grey in 2000—an indicator of low value addition. Similarly, the defect rate at the processing/printing stage was 10% (SMEDA 2000). It is pertinent to mention here that the overall factor conditions of the country particularly those related to road infrastructure and energy also play significant role shaping the productivity of textile sector. For instance, cost of freight from China to USA was 50% cheaper than that from Pakistan (PAKISSAN 2007).

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<sup>1</sup> Pakistan has one of the largest surface irrigation systems with 80,000 watercourses irrigating 13 million hectares of land (UNU 2007). It is also estimated the Pakistan has potential to bring 532,000 acres leading to an estimated increase of 1.3 million bales.

<sup>2</sup> Calculated based on the data from UI Islam 2006

*iv) Context for Firm Strategy and Rivalry*

Pakistan’s Textiles and Apparels industry is highly fragmented comprising many small-scale players with majority of them working in the unorganized sector (see Table 4). This fragmentation and emergence of small-scale operators is partly due to government policies of the past which declared unit size 40 looms and below as cottage industry and hence provided exemption from tax and stringent labor policies (ul Islam 2006).

**Table 4: Industry Structure and Capacity**

<i>Sub-Sector</i>	<i>No of Units</i>	<i>Installed Capacity</i>	<i>Production</i>
<b>Ginning</b>	1,221	5,488 Saws	10,314 M Bales
<b>Spinning</b>	445	a. 9,217 Spindles b. 147,852 Routers	1,758 M. Kgs. Yarn
<b>Weaving</b> a. Composite Units b. Independent Mills c. Power Loom Sector	a. 50 b. 140 c. 18,000	20,000-25,000 Shuttle-less looms 225,000 Conventional looms	5,6000 M. Sq MT (Approx)
<b>Finishing</b> a. Organized b. Small Scale Sector	a. 106 b. 625	-	2,700 M. Sq. MT
<b>Garment Units</b>	5,000	450,000 Sewing Machines	650 M Pcs
<b>Terry Towels</b>	400	7,600 looms	55 M. Kgs.
<b>Canvas</b>	100	2,000 looms	35 M. Kgs
<b>Knitwear</b>	700	21,000 Knitting Machines	5.50 M. Pcs

Source: Ul Islam 2006

Another important feature of the textile industry in Pakistan is that it is largely dominated by family owned businesses. For instance, in Faisalabad—largest textiles producing city in Pakistan, three families dominated the business and trade groups. This, on the one hand, promoted trust and effective contract enforcement thus reducing transaction cost, it also led to regulatory ‘capture’ thus diverting government incentives to benefit a few and stifled the competition (ul Islam 2006).

Some policies of the government with regards to taxes as well as incentives have been listed in the Figure 2. Though there are some favorable policies such as tax exemptions on import of machinery and duty-draw backs, the greater problem lies with their effective implementation. World Bank notes

that textile sector suffered from low diversification due to government restrictive policies on import of polyester (25% tariff rate) coupled with poor administration of import duties and duty rebates schemes (World Bank 2002). Lack of access of finances constitutes another important constraint for large number of small businesses in the cluster as the banking system is more aligned to serving large scale firms (ul Islam 2006).

**Figure 19: Duties and Incentives**

Taxes and Duties	Incentives
<ul style="list-style-type: none"> <li>• Corporate Income Tax (33-43%) or 0.5-1% of total turn-over for firms that export more than 80% of their textile production</li> <li>• Sales tax (Value-added tax) of 15% for registered firms and 18% for un-registered firms; exporting firms eligible for refund</li> <li>• 0.25% of export value collected for Export Development Fund (EDF)</li> <li>• Import duties of 15%, 25%, and 35% for raw, semi-finished and finished goods plus the sales tax at rate of 15%</li> </ul>	<ul style="list-style-type: none"> <li>• Exemption from import duty and sales tax on temporary imports of inputs for Garments if final good exported within one year</li> <li>• Exemption from import duty and sales tax for import of machinery subject to condition that firm exports a minimum 50% of production and adds a minimum of 40% value</li> <li>• Import duty rebates in the range of 2.20%-8.80% depending on the type and level of value addition</li> </ul>

Source: Vision 2005, SMEDA (2000)

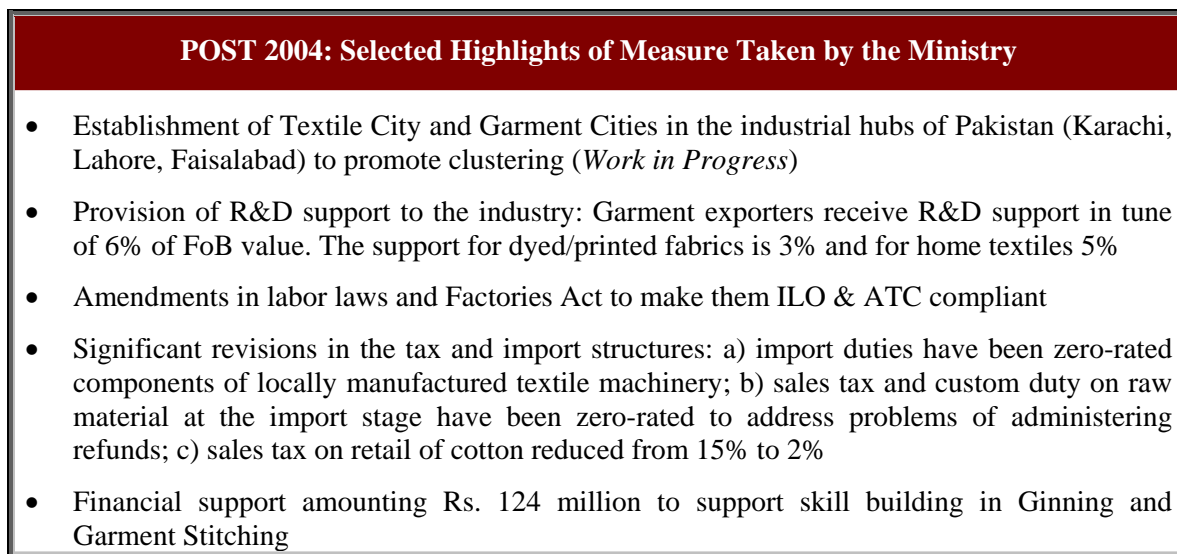
Arguably there is a need to improve the structure of incentives to offset some of the disadvantages (e.g. infrastructure and skill level) that Pakistan faces vis-à-vis competitors like China (BR 2007). However, lack of attractive and sufficient incentives is not the only constraint. The issue of almost non-existent foreign direct investment<sup>3</sup> in the textile industry is however also strongly linked with the country's overall image and poor business environment.

In the recent years, there have been some visible improvements in the regulatory and facilitative environment. Government has created a separate ministry—Ministry of Textile Industry (MOTI) 2004 with the specific thrust on technological up-gradation, product diversification and value

<sup>3</sup> Based on the data from Textiles Vision 2005, Small and Medium Enterprise Development Authority, there is only one joint venture with a foreign company in the sector.

addition (MOTI 2007). Furthermore, the Federal Textile Board (FTB) has been revitalized as a Public-Private sector body to take strategic decisions regarding the sector (Ibid). Figure 20 presents highlights of the improvements since the constitution of MOTI.

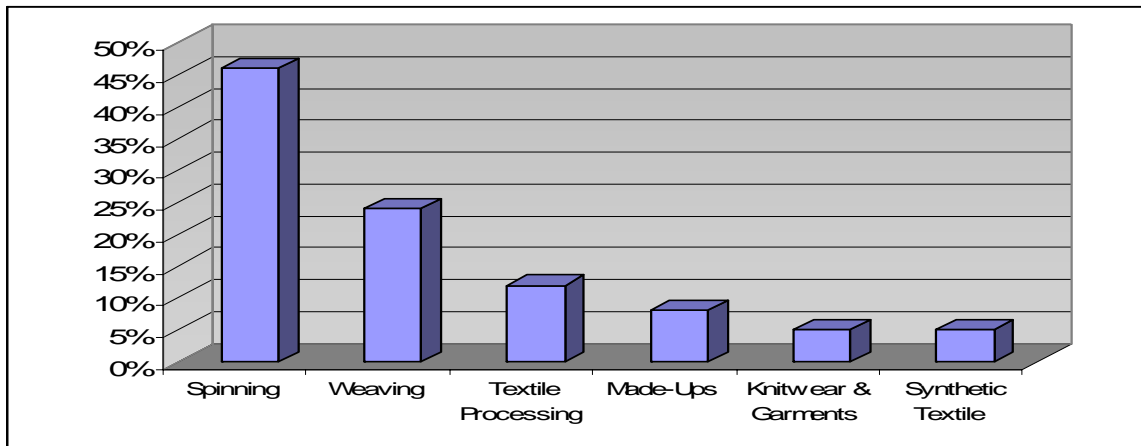
**Figure 20: Progress Highlights of Ministry of Textile Industry**



Source: MOTI 2007

Though it is premature to assess the impact of these changes on the technology up-gradation and value addition, distribution of investment (US \$ 5 billion) during 2000-05 suggest that Pakistan's textile still continues to invest heavily in the low end of the value chain (Figure 21). Furthermore, the raw material consumption rates increase during 2000-05 show 71% increase in the cotton consumption compared to 21% in Man Made Fiber(MMF); an indicator that industry still has to go a long way (MOTI 2007).

**Figure 21: Share of Investment in Across Textile Value Chain 2000- 2005**



Source: MOTI 2007

**v) Institutions: Institutions for Collaboration (IFCs) & Research Entities**

In the highly fragmented textile and apparel industry of Pakistan, the need for collaborative institutions cannot be overemphasized. Over time, a wide variety of industry associations and educational institutions have emerged to do policy advocacy and skill development in the industry. Figure 22 presents a list of selected industry associations and other institutions that serve the industry.

**Figure 22: List of Selected Industry Association and Other Institutions**

Industry Associations	Research and Educational Institutions
<ul style="list-style-type: none"> <li>• All Pakistan Textiles Mills Association (APTMA)</li> <li>• Pakistan Cotton Ginners Association</li> <li>• Pakistan Yarn Merchants Association</li> <li>• All Pakistan Textile Processing Mills Association</li> <li>• Towel Manufacturers Association</li> <li>• Karachi Cotton Association</li> <li>• All Pakistan Cloth Exporters Association</li> <li>• All Pakistan Bed Sheets &amp; Upholstery Manufactures Association</li> <li>• Pakistan Readymade Garments Manufacturers &amp; Exporters Association</li> <li>• Various local level cotton growers, and small textile operators associations</li> </ul>	<ul style="list-style-type: none"> <li>• Seven Agriculture Universities and Colleges</li> <li>• Pakistan Agricultural Research Council/ National Agricultural Research Centre</li> <li>• Nuclear Institute for Agriculture and Biology</li> <li>• Central Cotton Research Institute Multan</li> <li>• National Textile University</li> <li>• Textile Institute of Pakistan</li> <li>• Pakistan Institute of Fashion Design</li> <li>• Garment Weaving and Finishing Institute</li> </ul> <p><b>Others: Regulatory and R&amp;D Support</b></p> <ul style="list-style-type: none"> <li>• Pakistan Central Cotton Committee</li> <li>• Textiles Commissioners Organization</li> <li>• Pakistan Cotton Standards Institute</li> </ul>

Source: Authors Primary Data; Pakistan Trade Associations at Travel-Culture (2007)

Among the associations listed above, All Pakistan Textile Mills Association (APTMA)—an association of 360 organized sector mills—has been the strongest advocate and lobbyist for the textile industry (APTMA 2007). Besides providing information and advocacy support, APTMA has been active in filling the skills gap since 1994 through its Textiles Institute of Pakistan to produce graduates in Textile Science and Textile Management (TIP 2007). Though other industry associations are also playing a crucial role but they lack the visibility and effectiveness that APTMA enjoys.

Research and educational institutions are largely concentrated in the lower end of the industry value chain, for instance, agricultural research. In the recent decades, some initiatives have been taken by the private sector including that from APTMA to promote the skills in downstream activities such as fashion design. In overall terms, most of the institutions in the sector and specifically those under government management lack modern and market-oriented skills and research.

Perhaps the most critical missing part in the case of IFCs in the cluster is lack of coordination and cooperation. Different industry associations are largely engaged in policy advocacy for their respective segments which creates undue competition and fragmentation in the policy responses. Similarly, research and training entities lack mechanisms and incentives to coordinate with the industry to develop products and packages that are responsive to the market needs. Even the government recent efforts, for instance, revival of Federal Textile Board as public-private partnership forum, lacks broad representation of research entities and related industries<sup>4</sup> (MOTI 2007).

### **Strategic Issues**

As noted in the previous sections, Textiles and Apparel cluster in Pakistan is faced with many challenges. Figure 23 summarizes some of the challenges that are applicable to the cluster diamond.

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<sup>4</sup> The FTB membership is largely concentrated among the representatives of government agencies and industry associations that are directly engaged in various stages of textile value chain from cotton production to finishing. However, there is no representation of universities, research institutions or related industries except for one representative of textile machinery.



**Figure 23: Key Challenges faced by the Textile Cluster**

<p><b>Factor Conditions</b></p> <ul style="list-style-type: none"><li>• Availability of quality raw material</li><li>• Lack of skills</li><li>• Poor technology</li></ul> <p><b>Related and Support Industries</b></p> <ul style="list-style-type: none"><li>• Gaps in the quality of local supplies</li><li>• Poor coordination among cluster players</li><li>• Lack of finance to small enterprises</li></ul>	<p><b>Demand Conditions</b></p> <ul style="list-style-type: none"><li>• Increasing sophistication of demand e.g. product and process standards</li><li>• Increasing global competition</li></ul> <p><b>Context for Firm Strategy &amp; Rivalry</b></p> <ul style="list-style-type: none"><li>• Highly fragmented and unorganized sector</li><li>• Cumbersome regulatory procedures</li><li>• Very low foreign direct investment</li></ul>
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Undoubtedly, all the challenges mentioned above have important implications for the productivity and competitiveness of the cluster. In more priority terms, the following issues require immediate attention:

- Poor state of technology and production processes
- Poor skills set of labor force
- Limited value addition and low product diversification
- Lack of a well coordinated approach at the cluster level

The impact of these cluster specific issues is further amplified by some of the pressing challenges that the country as a whole is facing on the political and economic fronts. Apart from the endemic issue of political and social volatility in the country, the country is currently faced with the following strategic challenges:

- Poor governance and its implication for overall business environment and foreign investment
- Poor physical infrastructure (e.g. unreliable and costly energy)
- Excessive dependence on textiles and apparel cluster and limited diversification of exports

### **Policy Recommendations**

#### ***a) Addressing the Country Level Challenges***

The need for improving business environment cannot be overemphasized. Without improving the country's image, enhancing the effectiveness of legal and regulatory institutions, and upgrading the

physical infrastructure, direct incentives to local and foreign investors are less likely to yield desirable results. The current government is well cognizant of this need and has shown some visible progress in the macroeconomic management to restore the confidence of investors and businesses. However, there is need to do more on improving the governance side.

Following steps are needed to address the critical issues that the country as a whole is facing.

- Restore the autonomy of legal institutions and bring reforms in government agencies that are directly linked with business affairs including the Central Board of Revenue and Pakistan Customs. Also, devise and launch a global communication program with the help of international media to improve the image of the country
- Encourage private sector, increase public expenditure, and work with international institutions such as the World Bank and Asian Development Bank to improve the infrastructure particularly energy by exploiting the huge hydroelectricity potential available in the country
- Diversify the export portfolio by facilitating the development of multiple clusters particularly in the areas of logistics and communication, medical devices, horticulture, and tourism.

#### ***a) Addressing the Cluster Level Challenges***

As noted before, the current government has taken some very important steps to upgrade the Textiles and Apparel cluster in Pakistan. The emphasis of newly instituted policies and programs is to increase the productivity and unit value realization through increase uptake of better technology, greater value addition, and product diversification. However, there is need for greater involvement of other actors such as supporting industries and IFCs to accelerate the progress.

This greater involvement of players can only be achieved by developing shared vision among the industry actors. Therefore, instead of treating the cluster development as a subcomponent of the

overall textiles strategy<sup>5</sup>, a cluster-based textiles vision needs to be developed with broad involvement of private sector and other IFCs. In broad terms, our recommendations include:

- A transition from the existing low-end product concentration towards a more diversified and high unit value product portfolio through easy access to quality raw material, technology up-gradation, skill development, and R&D in product and process development
- A greater recognition of the need and value-added role of IFCs in the sector in terms of generating crucial market information and promoting awareness on issues of technology uptake and entrepreneurship development
- A further shift towards facilitative role of government through enhancing its role in financing R&D in product and process development, promoting public-private partnerships, and reducing the barriers to trade

Table 5 below gives the details of specific actions that are required from the major actors including government, private sector, and IFC to support the transformation of the textiles cluster.

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<sup>5</sup> Currently the Ministry of Textile Industry considers cluster development as one of the aims beside others such as product diversification, technology up-gradation and the like (see MOTI 2007)

**Table 5: Specific Recommendations for actors in the Cluster**

	<b>Government</b>	<b>Private Sector</b>	<b>Institution for Collaboration</b>
<b><i>Development of Cluster-based Textiles Vision</i></b>	<ul style="list-style-type: none"> <li>• Ministry of Textile Industry should launch and endorse the development a cluster-based textiles vision</li> </ul>	<ul style="list-style-type: none"> <li>• Participate actively and take lead in identifying binding constraints and their solutions</li> </ul>	<ul style="list-style-type: none"> <li>• Facilitate public-private consultation process and widely disseminate the cluster-based vision</li> </ul>
<b><i>Up-gradation of technology</i></b>	<ul style="list-style-type: none"> <li>• Establish a Textiles Technology Modernization to support the awareness and vendors research programs</li> <li>• Phase-out incentives on import of out dated/second machinery</li> <li>• Increase incentives for technology uptake such as accelerated depreciation and longer provision for carrying forward losses</li> </ul>	<ul style="list-style-type: none"> <li>• Participate in awareness programs to bring the shift from low-input low-output model to technology intensive high output model</li> <li>• Partner with IFCs to search for and bargain with technology vendors for better prices</li> </ul>	<ul style="list-style-type: none"> <li>• Launch technology awareness campaign for Mill owners</li> <li>• Work with government and private sector on Vendor Research and Development</li> <li>• Advocate with financial institutions to develop suitable products for technology purchase</li> </ul>
<b><i>Skill Development</i></b>	<ul style="list-style-type: none"> <li>• Revamp and upgrade existing training institutions to promote specialization</li> <li>• Explore the feasibility of private sector management of government training institutions</li> </ul>	<ul style="list-style-type: none"> <li>• Offer Apprenticeship Programs for graduates of training institutions</li> <li>• Participate in awareness programs to bring shift in <i>Shagirdi</i> (informal) mode of training</li> </ul>	<ul style="list-style-type: none"> <li>• Initiate educational and awareness programs for firms in the textile industry on the business value of formal and modern training</li> </ul>

	<b>Government</b>	<b>Private Sector</b>	<b>Institution for Collaboration</b>
<b><i>Improving regulatory environment</i></b>	<ul style="list-style-type: none"> <li>• Gradually eliminate the regulatory barriers on import of raw material particularly synthetic fiber &amp; textile machinery</li> <li>• Start single window operations and simplified procedure for exports &amp; imports</li> </ul>	<ul style="list-style-type: none"> <li>• Provide feedback to IFCs and government on responsiveness of regulatory policies</li> <li>• Ensure proper adherence to international labor, ethical, environmental standards</li> </ul>	<ul style="list-style-type: none"> <li>• Broker the environment of trust and reciprocity between private sector and government</li> <li>• Host promotion programs to encourage development and use of standards</li> </ul>
<b><i>R&amp;D in Product and Process Development</i></b>	<ul style="list-style-type: none"> <li>• Increase the incentives on R&amp;D for exporting firms and ensure its speedy implementation</li> <li>• Provide special budgetary support to Research Institutions engaged in the cluster</li> </ul>	<ul style="list-style-type: none"> <li>• Identify key areas for process and product R&amp;D</li> <li>• Co-finance research institution that are doing market specific R&amp;D</li> </ul>	<ul style="list-style-type: none"> <li>• Coordinate between private sector and research institution to set priorities for R&amp;D</li> <li>• Explore global best practices on R&amp;D in textiles</li> </ul>
<b><i>Marketing</i></b>	<ul style="list-style-type: none"> <li>• Establish a Textile Export Board with public-private membership</li> <li>• Open more export offices in developed countries and emerging economies</li> </ul>	<ul style="list-style-type: none"> <li>• Take lead in identifying new markets and product niches</li> <li>• Work with IFCs and Government for international marketing of Pakistan's textiles cluster</li> </ul>	<ul style="list-style-type: none"> <li>• Conduct global market research in textiles and apparels</li> </ul>

## References

- BR (2007): “Pakistan textile losing edge: regional exporters enjoy more incentives: Swiss expert” Business Recorder <<http://www.brecorder.com/index.php?id=543593&currPageNo=1&query=&search=&term=&supDate>> (accessed May 2, 2007)
- USDA(2007): Cotton: Background, Briefing Rooms, Economic Research Service, USDA, <<http://www.ers.usda.gov/Briefing/Cotton/background.htm>>(accessed March 31, 2007):
- UNU (2007): Indus Basin Irrigation System, <<http://www.unu.edu/unupress/unupbooks/80157e/80157E05.htm>>(accessed March 31, 2007),
- SMEDA (2000): Draft Textile Vision 2005, Small & Medium Enterprise Development Authority (SMEDA) , <<http://www.tco.gov.pk/Webs/Material%20For%20Website/Reports/Report%20Textile%20Vision%202005.PDF>, (accessed May 2, 2007)
- UI Islam Fahim (2006): “Clustering in Pakistan’s textile industry: comparative analysis of clustered and non clustered firms”, Ph D Working Paper Series, [www.jbs.cam.ac.uk/research/working\\_papers/2006/phd\\_wp0605.pdf](http://www.jbs.cam.ac.uk/research/working_papers/2006/phd_wp0605.pdf) (accessed May 2, 2007)
- PAKISSAN (2007): “Pakistan textile losing edge” at <http://www.pakissan.com/english/news/newsDetail.php?newsid=13492>, (accessed May 2, 2007)
- World Bank (2002): Pakistan Development Policy Review: A New Dawn? Poverty Reduction and Economic Sector Management Unit South Asia Region
- MOTI (2007) Ministry of Textile Industry homepage, [www.pakistan.gov.pk/ministries/index.jsp?MinID=40&cPath=602](http://www.pakistan.gov.pk/ministries/index.jsp?MinID=40&cPath=602), (accessed May 1, 2007):
- TIP (2007): Textile Institute of Pakistan <http://www.tip.edu.pk/>, (accessed May 1, 2007)
- Travel-Culture(2007) “List of Trade associations affiliated with The Federation of Pakistan Chamber of Commerce & Industry” [http://www.travel-culture.com/pakistan\\_trade\\_associations.shtml](http://www.travel-culture.com/pakistan_trade_associations.shtml), ((accessed May 1, 2007):
- CIA (2006): Economic Overview of the Country, CIA Fact book <<https://www.cia.gov/cia/publications/factbook/geos> }
- WDI (2005): World Development Indicators, ,[www.worldbank.org](http://www.worldbank.org)>, (accessed March 1-May 2 2007)
- EIU (2006): Economic Intelligence Unit, Pakistan Country Report 2006
- ADB (2006): Outlook 2006, Pakistan, Asian Development Bank , <[www.adb.org](http://www.adb.org)>, (accessed April 15, 2007)
- SBP (n/d): State Bank of Pakistan , <[www.sbp.org.pk](http://www.sbp.org.pk)> (accessed March 1, 2007)
- Planning Commission of Pakistan: [www.pakistan.gov.pk/ministries/planninganddevelopment-ministry/](http://www.pakistan.gov.pk/ministries/planninganddevelopment-ministry/), (accessed March 2, 2007)
- GCR2006: Global Competitiveness Report 2006
- Doing Business Report 2006 for Pakistan at <https://www.doingbusiness.org>, (accessed Feb. 25, 2007)

WERNER International (2006): Werner International at [www.wernertex.com/](http://www.wernertex.com/)

World Atlas (2007): Map of Pakistan, <[www.worldatlas.com](http://www.worldatlas.com)>, ( accessed March 1, 2007)

EPB 2005: Export Promotion Bureau, [www.epb.gov.pk](http://www.epb.gov.pk). (accessed March 1, 2007)

Cotton Counts 2007: The story of Cotton < <http://www.cotton.org/pubs/cottoncounts/resources.cfm>>, (accessed May 2, 2007)