QUALITY RELATED ISSUES AND THEIR EFFECTS ON RETURNS OF PAKISTAN TEXTILE INDUSTRY

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ABSTRACT

Textile sector is the mainstay of Pakistan's economy. Its contribution towards GDP, exports and Manufactured Value Added (MVA) is highest. It is the biggest employer of manufacturing labor force in Pakistan at 39%. More than 60% of all exports from Pakistan come from textile related products and its contribution towards GDP is 9.5%. However Pakistan Textile Industry is not providing the returns at par with its potential. Main contributing reasons for this below par performance are usually contributed to external to industry factors i.e. law and order situation, energy crisis, lack of foreign direct investment, unfavorable policies and taxations, power tariff, elimination of quotas etc. Impact of these has remained very significant. However their also are internal issues which were in the control of the industry and almost equally have contributed towards this poor performance. This paper looks into these issues and studies their impact on returns through growth and profitability. Qualitative and Quantitative Study was conducted in 30 textile firms of varying size and capacity. Internal, external and mutual i.e. supply chain issues were studied and salient are being reported. Findings about significant factors are shared with a suggested optimal course of action.

Keywords: Pakistan textile industry, quality management, quality policy, quality related issues

1) INTRODUCTION

The textile industry of Pakistan is the eighth biggest industry to export textile products in Asia region. It contributes with 9.5% to the Pakistan's GDP, provides employment to more than 15 million people from a total of 49 million workforce of the country. Apart from that it is the fourth largest cotton producer with third largest spinning capacity contributing 5% to the world spinning capacity. Currently, for the production of textile

product there are 442 spinning units, 124 large sinning units, 1221 ginning units & 425 small units working in the country[1]. Despite having all the positive statistics and considered the back bone of country's economy, currently Pakistan has less than 1.0% of global market share on textiles, showing there is a great possibility for growth. Many studies have investigated the reasons for this lack of competitive edge and many attributing reasons have been put forward. However, an agreement exists on lack of quality; either in product, process or procedures is the main contributing factor for prevalent shortcomings.

Table 1: Economic Contribution of Pakistan Textile Industry

DESCRIPTION	CONTRIBUTION
Exports	64% Of Total Exports
Manufacturing	46% Of Total Manufacturing
Employment	38% Of Total Employment
Investment	31% Of Total Investment
Market Capitalization	7% Of Total
Interest	Rs. 4 Billion Per Annum
Salaries And Wages	Rs. 40 Billion Per Annum
Contribution To R&D	Rs. 116 Million Per Annum
Gross Domestic Product	9.5% Of Total GDP

Since 1990, the quality and quality management emerged as a trend in Pakistan industry specifically the textile sector. Terminologies like Total Quality Management, Six Sigma, ISO certification have reverberated since. As a result virtually every significant industrial concern in Pakistan initiated some form of quality management and/or improvement program. Most of these programs, however, have not achieved significant results and at least have not been at par with the success of similar methodologies adopted in developed economies. Very few industries actually recognized what it meant for their business. Most just tried following the trend without comprehending its impact on their actual profitability. This resulted in taking actions on quality but with insignificant reflection in the form of returns. This trend demonstrated that mere quality interventions cannot guarantee success and profits.

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[1] APTMA stats

Many companies embark on quality interventions without having an idea of what likely bottom-line impact would be. As a result they have no means to determine which action would actually benefit more. Many companies undertake these journeys without any guide map and/or strategy which may lead them to success and textile industry in Pakistan has remained no exception. Similar is evident in growth profile of Pakistan textile industry as shown in table 2 below, showing a very negative trend.

Table 2: Growth Trend of Pakistan Textile Industry (2001-11)[2]

Years	Growth (%)
2001-02	4.10
2002-03	5.20
2003-04	20.00
2004-05	24.50
2005-06	11.23
2006-07	8.40
2007-08	4.05
2008-09	-0.70
2009-10	-1.78
2010-11	1.00

This is the trend survey for last decade (2001 to 2011). This shows how growth is fluctuating each year. It also indicates the economic meltdown when growth rate goes into negative. In year 2004-2005 the growth rate was at its peak, as exports had increased and foreign investors were encouraged to invest, however afterwards of this peak, a continuous negative trend is evident. This trend can be contributed towards a number of factors i.e. energy crisis in country, law and order situation, Pakistan acting as a pedestal for post 9/11 war on terror etc. However there is more to this crisis situation than external factors only. If we see the SWOT analysis of Pakistan Textile Industry (Akhlaq, 2009); Strengths and Weaknesses i.e. internal factors against Opportunities and Threats i.e. external factors; we would clearly see that Performance of textile industry in internal factors (especially quality related issues) is also not noteworthy which coupled with external factors has contributed towards the subject poor performance.

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[2] Economic Survey of Pakistan

Textile industry in Pakistan has adopted quality for multiple reasons which go beyond the simple explanation of enhanced productivity. Main reasons of this adaptation have been increasing competition for international market shares, elimination of quotas post World Trade Organization (WTO) General Agreement on Tariffs and Trade (GATT), and international customers demanding adherence to quality practices and procedures.

Competition is being seen in many forms. Most significant competition to textile industry in Pakistan is being given by established competitors i.e. India, China, Taiwan etc. as well as new competitors are emerging i.e. Bangladesh. Existing crisis situation in the country also is not helping the situation. Furthermore elimination of quota regime has also snubbed the Pakistan Industry as a whole and specifically its textile segment.

2) STUDY DESIGN FOR RESEARCH

Research was conducted in 30 textile firms of varying sizes and ownership status from large and SME sector over the period 2007-2012. Main hypothesis is that "Quality as an input contributes significantly towards the Returns of Quality for Pakistan Textile Industry". Few input variables are positive i.e. hypothetically produce positive impacts on the desired output. These are the Quality Management Systems, introduction of Quality Control Systems, six sigma interventions, trainings on quality etc. At the same time, few inputs contribute negatively towards the desired output. These are issues which may be external, internal or related to supply chain of the industry.

To do a comprehensive study of the industry, there was a requirement to predefine a model/structure on which the analysis would be conducted. Basic process model used during six sigma studies was modified to fit the study. Updated model is shown in figure below;
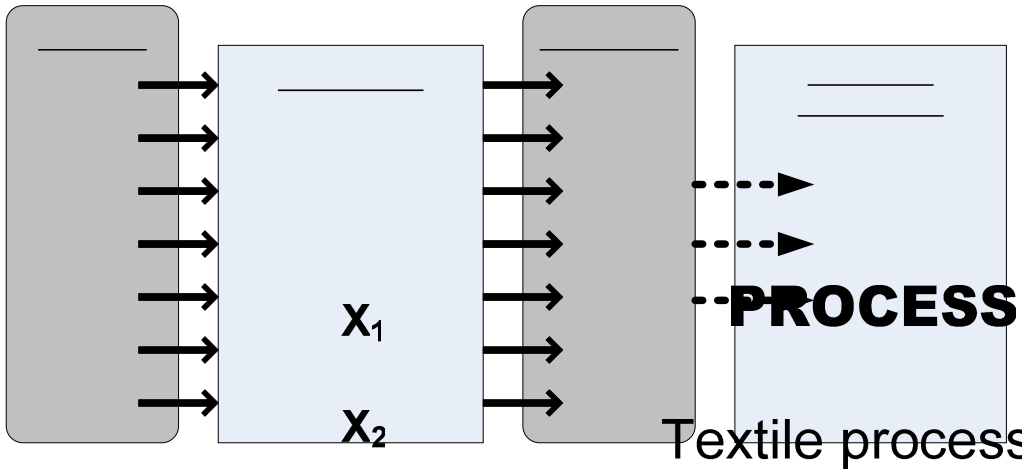
Figure 1: Research Design Model

X_1

X_2

X_3

X_4

X_n

PROCESS

Textile process & Industry in Pakistan includes firms having concerns in Ginning, Spinning, Weaving, Finishing, Articulating, Branding, Sales and Exports

At input quality interventions i.e. ISO certifications, Cost of poor quality, costs of quality (Prevention, Appraisal, Internal Failure, and External Failure) were measured. At output level, changes in revenues, operational costs, customer satisfaction, delighted status etc. were measured. The analysis was conducted for ascertaining the overall impact of impact of this process model on the desired outcome i.e. financial returns on quality.

Research questions are as listed;

• What is the strength relationship between quality and financial returns of textile industry of Pakistan?
• Which input variables of quality are more significant for output and outcome variables of the industry?
• Which issues/concerns have higher impact on the industry?

Research was conducted in three phases and each phase covered both qualitative and quantitative aspects of the research.

2.1) Phase One

This phase focused on examining the existing models in target industries. Surveys were carried out and industries visited and relevant people were interviewed for grasping the true on ground picture. Issues were discussed and prioritized. Data about quality systems working in the

industry and other inputs as well as the financial performance of these industries was recorded.

2.2) Phase Two

This phase determined the relationship between input and output variables. Here mathematical models were incorporated for establishing the relationship. Statistical data collected in the first phase was analyzed for inferences and put in statistical models to provide analytical tools. Statistical tools used were Pareto Analysis, Regression Analysis, Multi-Variable ANOVA, Econometrics etc.

2.3) Phase Three

This phase made the comparison of various issues on a pre-defined scale. Directional surveys were conducted and analyzed. Theme was to extend this research into defining theme of objectives for these firms and to identify the focal concern areas. This tried to provide a conceptual framework for textile industry in Pakistan. Research also prioritized interventions for textile firms to incorporate.

During the mentioned phases of study, various qualitative and quantitative findings were made and are documented in the following sections followed by results.

3) ISO 9000 IMPLEMENTATIONS

Many textile firms have adopted a quality management system through ISO 9000 series certifications. These include all top tier firms as well as almost all SMEs targeting export market which have also gotten them certified. ISO certification though has helped in recognition & implementation of quality procedures but survey conducted in 30 firms mainly in Faisalabad, Lahore and Karachi region revealed that it is considered more of a procedural requirement and a prerequisite supplier certification; and not a quality management system. Same is also reported by literature on international implementation. Scroufe et al (2008) has reported that ISO certification has increased bureaucratic channels and has lesser effect on the actual returns. Scott (2012) has also surveyed that ISO 9000 certification is causing more hindrance than help. Abrahamson (1996) called ISO certification a fad.

In Pakistan textiles, most of the textile concern is owned by big groups like Sapphire, Lucky, Kohinoor, Shehbaz, Fateh, Gulistan, Crescent, Ibrahim, Master, Ilahi, Ayesha, Chakwal, Chenab, Nishat, Chenab, Colony etc. Implementation of QMS in these firms has been reported as success but it is predominantly because of adherence to quality standards and practices elsewhere as well. Survey conducted revealed that the larger groups report on following benefits that they have achieved through Quality Management System.

- Higher sense of responsibility
- Higher self-discipline
- Greater employees satisfaction due to improved work environment
- Customer focused approach
- Smooth operation with lesser fire fighting

However SMEs report major achievements as retained international customers who categorically demand their suppliers to be ISO certified. As far as returns and profits are concerned, ISO certification has played insignificant role in producing significant returns for these firms.

4) PAKISTAN'S TEXTILE AND CLOTHING EXPORT PERFORMANCE

As indicated in the data of Pakistan bureau of Statistics, the overall export of textiles increased from $12.3 billion to $13 billion over the last year (2011-2012). However this is not a time for rejoice as the statistics suggest there was a decline from the year (2010-2012) of value $13.788 billion.

On the whole the partial rise is due to the export in Europe and US market since September 2012 where more than 75 products are in demand. Apart from the ready-made garments cotton yarn and cotton cloths are in more demand than the last year however raw cotton has observed a decline over the last year. Cotton yarn, cotton carded or combed and synthetic textile are in decline with cotton yarn in the critical stage. Tents, Canvas and Tarpaulins seem to be in more demand with have highest % of growth compared to this fiscal year to the last. Made-up articles (Excel towels bed wear) had hardly reported growth. 100% Capacity utilization was observed in the export of home textile which includes bed wears and towels. Even though Pakistan is still in recovery state from the year (2010 - 2011) the textile and clothing exports are in a

consistent growth especially in the last quarters, this was due to the continuous supply of Gas. The import of textile machinery has been subsidized by 10 % in the current fiscal year.

Table 3: Statement Showing Exports of Selected Commodities during Period July-June, 2012-2013[3]

VALUE = (Rupees in Million) & (U.S. Dollars in Thousand)									
Commodities	Unit	July-June, 2012-2013			July-June, 2011-2012			%Change in July-June, 2012-2013 Over July-June, 2011-2012		
		Quantity	Value		Quantity	Value		Quantity	Value	
			Rupees	Dollars		Rupees	Dollars		Rupees	Dollars
Textile group	-		1,263,973	13,064,232	_	1,101,558	12,336,001	_	14.74	5.90
13. Raw Cotton	M.T	92,498	14,882	153,872	256,541	41,393	462,247	-63.94	-64.05	-66.71
14. Cotton Yarn	M.T	735,015	217,123	2,243594	575,842	162,004	1,809,798	27.64	34.02	23.97
15. Cotton Cloth	TH. SqM	2,078,811	260,347	2,690,941	2,066,558	218,160	2,442,483	0.59	19.34	10.17
16. Cotton Carded or Combed	M.T	4,570	605	6,198	7,541	1,028	11,639	-39.40	-41.15	-46.75
17. Yarn other than Cotton Yarn	M.T	12,020	3,808	39,485	10,272	3,181	35,625	17.02	19.71	10.84
18. Knitwear	TH. Doz	104,650	196,408	2,032,550	98,716	176,682	1,982,765	6.01	11.16	2.51
19. Bed Wear	M.T	264,247	172,538	1,783,528	248,788	155,108	1,741,650	6.21	11.24	2.40
20. Towels	M.T	171,795	75,060	775,809	145,876	61,326	686,376	17.77	22.40	13.03
21. Tents, Canvas & Tarpulin	M.T	34,690	12,274	126,459	28,725	8,243	92,074	20.77	48.90	37.34
22. Readymade Garments	TH. Doz	27,743	175,662	1,814,607	24,855	144,269	1,615,590	11.62	21.76	12.32
23. Art, Silk & Synthetic Textile	TH. SqM	312,470	39,369	406,204	417,467	48,817	546,344	-25.15	-19.35	-25.65
24. Madeups (excl. Towels & Bed Wear)	_	_	57,268	591,769	_	52,850	591,454	_	8.36	0.05
25. Other Textile Materials	_	_	38,629	399,216	_	28,497	317,956	_	35.55	25.56

5) ISSUES & CONCERNS RELATED TO QUALITY

Issues are segregated under three main categories;

- External issues: the issues which are external to textile industry and are primarily not under the control of firms;
- Internal issues: these issues are within the control of textile industry itself;
- Supply Chain issues: these issues are related to value chain and integrate internal and external issues.

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[3] Stats Division of Pakistan

6) EXTERNAL PROBLEMS OF THE INDUSTRY

6.1) Inflation

The exports of textile industry of Pakistan are affected by the double digit inflation rate. The decline in value of real money definitely affects the industry. It is because of general rise in price levels and changes in consumer price index.

6.2) Monetary Policy

The textile industry has also suffered with a tough monetary policy with withholding tax, which caused to increase the cost of interest rate and thus running textile business with high cost effect.

6.3) Price of Raw Material

The instability of internal condition of Pakistan, whether political or economic, causes fluctuations in the price of cotton and other raw materials which ultimately effect the production & operational cost. This results in decrease of local & international demand.

6.4) US and EU Cuts the Textile Import from Pakistan

The exports of Textile industry of Pakistan is mainly affected after import cuts of textile products from Pakistan by EU and US, which are the biggest importers. US has also imposed high duties on the textile import.

6.5) Lack of Investment

Pakistan is facing uncertain internal and external problems these days. This unpredictability in condition restricts the new foreign investments.

6.6) Removal of Subsidy

According to the finance bill of 2009-10, 0.5% of minimum tax on local sales, 16% federal excise duty on banking and 1% of withholding tax on import invited liquidity problem to the textile sector of Pakistan.

6.7) Law & Order Situation

Currently, the country is coping up with the worst political and law-and-order situation that is greatly affecting the textile industry. Threat of ransom and extortion is on the rise. That's why industries are looking to shift their investments to safer areas & country is lacking in additional investments in the textile sector.

6.8) Energy Crisis

This is the major problem of downfall of the country's economy nowadays. Frequently high electricity and gas load shedding affects every industry. Instant rise in power tariff has also caused the textile industry of Pakistan to suffer.

6.9) Elimination of Quotas

Post implementation of GATT, quota has been eliminated which has made competition more severe and has adversely affected textile industry in Pakistan being a developing country. Bangladesh, a major competitor has gained an advantage because of being a member of least developed countries (LDC).

7) INTERNAL PROBLEMS TO THE INDUSTRY

7.1) Inefficient Approach to Research & Technology

Keeping up the pace with the latest trends in technology helps to improve the product quality but due lack in same aspect, textile industry has gradually declined in quality performance as compared to other competing neighbor countries. Developed countries have utilized concepts of bio technology and genetic engineering to develop raw cotton especially colored cotton, organic cotton and various other varieties of cotton to enhance added value to their chain. It is one of the main reasons; focus of buyers from world's strong markets has been shifted to competing countries in textile sector.

7.2) Lack of Technology

Barring few major producers countrywide, majority of textile industry has lacked behind in ability to modernize the machineries/equipment. Due to obsolete technology, cost of production has raised high. The reason for same can be attributed to increase in import duties discouraging the local investors. Complexities in contracts with machinery exporters lead the quality fabrics manufacturers are more inclined towards exporting the fabric despite of raising demand of local industry. Due scarcity of collective skills in supply chain; the local stitching industry is deprived of standard quality fabric. Government needs to provide durable and attractive offers to local investors for easing out import of textile machinery.

7.3) Turnover of Employees in Textile Industry

The turnover of employees is the major issue all over the world and so is faced by the textile industry of Pakistan. The major reasons include job dissatisfaction, less career growth, bad working environment, ethical behavior, low compensation, lack of incentives and rewards, promotion on merit, lack of health care facilities, trust and honor, job descriptions, no trust and lack of appreciation, and no ease of movement. There could be a number of other factors that actually affect the mental satisfaction of the employees of our textile industry.

7.4) Increased Cost of Production

The continuous depreciation of Pakistan rupee increase the cost of imported material. The uncertainty in the cost of electricity lead to increase the production cost. The other factors like inflation & taxes are also caused to increase the cost.

7.5) Equipment and Machine

Most of the textile industries in Pakistan except some producers are operating with the old equipment. There must be modernization in machineries with time. Otherwise using old equipment may lead to increase the production cost & lead time.

7.6) Mixing of Cotton

Low quality is also a result of mixing cotton of different categories and thus producing an output of indefinite characteristics. Presently no standardization of ginning practices is being followed in actual though Government of Pakistan has issued the same through Pakistan Cotton Standards Institute (PCSI). Salam (2008) reported a reduction in contamination from 1.94 to 0.74 grams per bale when PCSI procedures were followed.

7.7) Underutilization and Lack of Quality in Processes

As afore mentioned; spindles (80%) and rotors (45%) are presently utilizing lesser capacities than design. This results in loss of contribution to national exchequer. Further to that, lack of quality in process has resulted in lack of quality in product. The average price of Pakistan yarn (US$ 2.3/Kg) is significantly below the world average (US$ 3.4/Kg) and its competitors as shown in figure below.
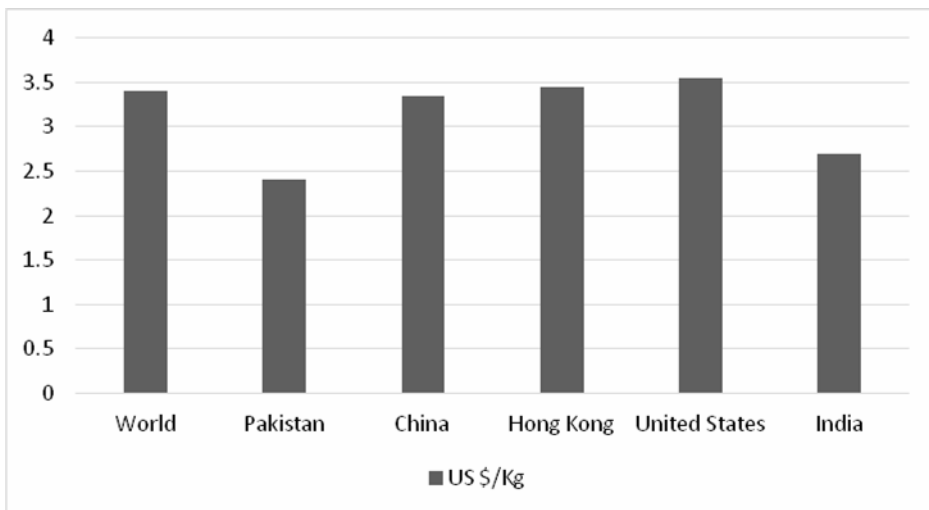

Figure 2: Average Export Prices of Yarn[4]

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[4] United Nations Comtrade Database

7.8) Lack of quality in R&D

Crisis in this industry is mainly due to lack of research, that is why other countries are producing good quality cotton, farmers (work force) and traders are going towards other fields, like farmers are utilizing their lands on other cash crops like wheat, sugar cane and etc. Obsolete technology is also a factor in declining the production. China, India have the latest technologies while in Pakistan's case, only few reputed industries like Gul Ahmed textiles and Al-Karam textiles go for R&D whereas majority avoid endeavoring into it. Secondly even the R&D at these firms is limited.

7.9) Quality in HR

Many textile industries have hired less qualified people for the operations. HR has less knowledge regarding supply chain, so less importance is given to the aspects that can reduce the production cost by considerable margins.

8) SUPPLY CHAIN RELATED PROBLEMS OF PAKISTAN TEXTILES

World export of textile and clothing generated a flow of about 708 Billion $. The clothing sector accounting for approximately 350 Billion $ is particularly vital to those countries, where textile has been the main source of export and employment. However, Pakistan has suffered a decline of 5% in export of textiles as compared to last year statistics. The reason for same can be attributed to various challenges being faced by the country. Pakistan textile industry is the major exporter of processed cotton, yarn and fabric; however it is lacking behind other neighboring countries in terms of more value added products. Pakistan's textile industry consists of large scale organized sector and highly disintegrated medium and small units. Large spinning units in particular are most organized, vertically integrated composite entities. Spinning industry comprises 440 textile units (50 composite units and 390 spinning units) with 11.4 million spindles and 0.135 million rotors in operation. Pakistan holds the spinning capacity of 5% of total world production. Processing sector consists of dyeing, finishing and printing sub-sectors with approximately 700 textile processing units currently in operation. The

printing sector overwhelms the present industry with textile dyeing and fabric bleaching following it. The weaving sector however has been adversely affected by high cost of production due energy crisis, rising utility cost majorly due imposition of excise taxation (from capacity till production) and rise in cost of import due depreciation in value of Pakistani currency and volatile law and order situation. This in return led to non-retention of skilled labor forcing the textile industry to lose its competitive edge in international textile and export market. One of the prominent issue affecting mills weaving sector is remarkable growth of unorganized power loom among textile industry. Their success can be linked to favorable government policies and other market forces despite of being deprived of latest technology and shortage of quality yarn. This trend in weaving forced the industry to shift its priorities towards cotton spinning. Textile value chain is appended below for apprehension about progressive development from raw material to finished good product. A tabular description of revenues generated by these value chains through exports in last few years is appended below[5]:
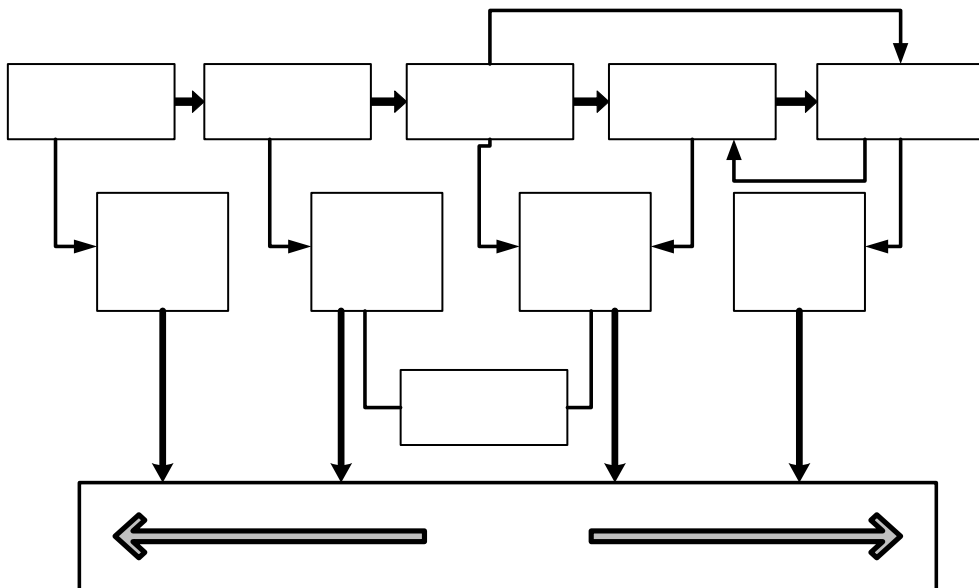

Figure 3: Textile Value Chain

Table 4: Product-wise Textile Export Trends

Textile Export	2008-2009	2009-2010	2010-2011	2011-12
Raw & Processed Cotton	241,979	340,185	383,151	470,133
Cotton Yarn/ other yarn	1,058,954	1,283,994	2,68037	1,836,095
Cotton Cloth	2,106,840	1,879,459	2,623,195	2,454,701
Knitwear	2,054,853	2,060,727	2,305,554	1,974,228
Bed Wear	1,526,642	1,640,869	2,088,898	1,748,327
Towels	546,591	602,867	762,308	684,183
Ready-made Garments	983,443	962,481	1,773,661	1,634,593
Other Textile Materials	1,256,996	1,406,549	1,602,667	1,225724
Total	**9,776,297**	**10,177,131**	**13,788,111**	**12,356,712**

(Thousand US$)

Textile industry being a saturated market counts lead time and product cost as major objectives of effective supply chain management. Basic characteristics of supply chain management are availability of efficient transportation system for shifting raw materials through well-organized infrastructure of roads and railways, suitable planning and logistics management, stowage spaces for goods storage, strict control on inventory, sharing of demands data, customer delivery, after sales service, presence of modernized maritime physical infrastructure with all enhanced port handling facilities. These all elements in conjunction with each other tend to lessen the lead time and cost of value chain, optimizing the return on investment. Framework of SCM is described in following figure.

Looking at the macro picture, a prominent concern of Pakistan textile industry has been inadequate implementation of quality practices in value chain management. Pakistan Textile industry is not coherent with successful quality practices in its supply chain and same has resulted in less profits. The export revenue generated during last few years by individual segments of textile chain clearly proves the same. The reasons for the same can be attributed to following factors:

8.1) Lack of Inventory Planning

Awareness regarding inventory planning at all stages (production, warehouses stock) is still lacking. This deficiency not only brings down resources but also adversely affect the quality of finished goods.
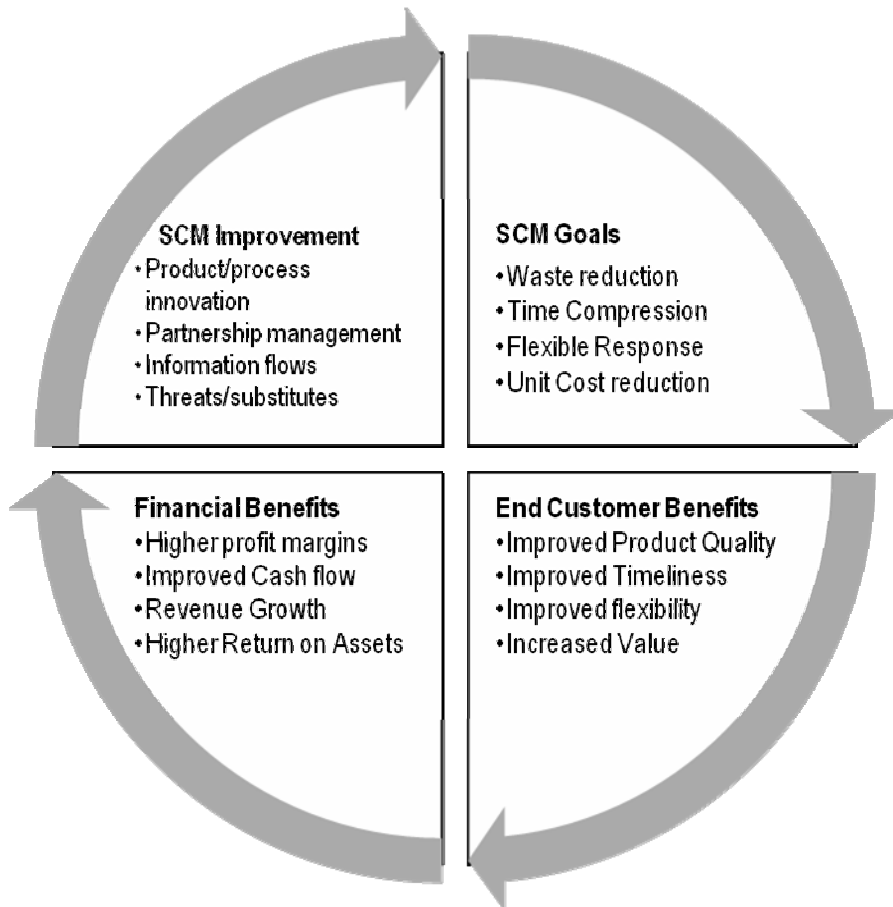

Figure 4: Framework of Supply Chain Management[6]

8.2) Non availability of Professional Planners/ Managers

Majority of planners and managers are deprived of professional skills and international market exposure. The dynamic shift in trends in international market has given birth to rapidly changing short orders. Subsequently, lead time and cost aspects have been adversely affected due persistence of lower industrial managerial skills. Same needs to be

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[6] Brewer & Speh 2000 – modified by authors

looked into through creating awareness among textile industrialists especially in educational institutions by implementing practical knowledge of SCM.

8.3) Weak Roads Infrastructure

Transportation of raw material through a well-established roads/railway infrastructure holds a vital role in ensuring effective implementation of SCM. Though, the government has been striving to uplift the standards of roads infrastructure throughout the country, same approach needs to be implemented in improvement of railways.

8.4) Ineffective Maritime Facilities

Non availability of deep sea container terminal results in higher maritime cost as large container ships cannot enter Pakistani ports due depth and other basic shore limitations. Most of the international shipping companies prefer transferring their cargo on large ships to accommodate greater number of containers. Moreover, the capacities at available terminals are not up to the required standard. This in response adds to delays in customer response time and increasing costs.

8.5) Global Recession

High inflation caused by global recession has risen from 7.9% to 25 % in a space of last 05 years. Hence, the price of commodities and production cost has gone up, considerably increasing the number of people living below the poverty line. Hence, unemployment has increased manifold reducing the customers buying power of value added items likewise.

8.6) Inefficient Labor Productivity

Despite of being in possession of cheap and plentiful workforce, majority of labor has proved to be inefficient and non-productive. According to study by federal advisor on textile, it takes Pakistan Textile industry to produce one piece of cloth in 133 minutes, whereas its competitors in Asia do the same job in 75 minutes. 30% of time is wasted in finishing while 12% is lost in washing. Labor productivity can be improved through imparting sustained specialist skill development.

8.7) Lack of Time Management

Absence of efficient and organized supply chain management system causes the lack in time management which is categorized as most critical aspect in business. International buyers expect on time delivery and delay in same result in imposing fine, increasing costs and hence leading to complete loss of business in some cases due breach of contract.

8.8) Lack of Entrepreneurship

Lack of entrepreneurial ability has been consistently observed overwhelming textile industry. The declining growth of weaving sector can be attributed to lack of marketing knowledge and entrepreneurship initiatives for more specialized products by the Pakistani entrepreneurs.

9) D ISCUSSION & RESULTS

Textile industry is the backbone of Pakistan's economy; it contributes to the national economy to a greater extent. Hundreds of thousands people are associated with it in different categories. In other words it gives employment to these people and also generates large amount of revenue in terms of exports and taxes. Many problems are associated with it that have been highlighted in this paper like lack of trained personnel etc. Competitors like China, India and Bangladesh have larger market share due to favorable government policies. More investors are attracted there due tax free zones, easy access to European countries. In this paper, some light is also shed upon political, economic, social and technological factors. If we convert the opportunities and weaknesses into our strengths then we can easily excel in the world market. Above all prevailing law and order situation and energy crisis is needs be resolved at national level. By using latest technology and investing in research textile industry of Pakistan can compete with its competitors. Supply chain management is also discussed; it is more dependent upon the transportation network.

Huge portion of yielded cotton is exported. This trend is increased to such a level that due to export of cotton as raw material, the demand of textile mills is not fulfilled by the local fields for whole year (Usmani, 2012). This constrains the manufacturers to import the cotton back to feed their mills. Further, the buyer has to buy that cotton in the form of value added garments at higher prices. The production cost and the lead time goes higher due to increase in imported inputs.

One of the main factors affecting the textile industry is the energy crisis. The huge crisis of electricity shortfall in the last decade and natural gas shortage for the last couple of years has hit the industry very badly. When receiving power breakdowns, the mills switch to alternate sources of power like Diesel Generators which increase the production cost. Realizing this, when they switched to natural gas generators, the shortage of gas caught them. This results in shrinkage of manufacturing facilities and the overall manufacturing and export. Furthermore, this crisis is the main reason for increase in production cost and decrease in overall export.

Another external force which is a cause of decline in returns is depreciation in Pakistani Rupee. The decreased value of Rupee affects the overall economy of Pakistan. But as textile is one of the largest sectors, this depreciation affects the industry severely. These effects are shadowed on supply chain. As Pakistan is also one of the biggest consumers of cotton, the huge amount of cotton is imported in the form of raw material and value-added textile. More or less, all the machinery and equipment are also imported to produce quality and standard products. So, the cost of overall imports shoots up rapidly resulting in increase in production cost thus pushing away the industry to acquire low cost as its competitive advantage.

Infrastructure of dry and sea ports of Pakistan is also a hurdle in time reduction as that of its competitors like China and India. Transportation by road is not so capable and equipped to help the sector in this competition. Sea infrastructure is a barrier in on-time deliveries in exports. The vessels are not so big enough to load huge quantity of containers. Pakistan does not have any deep sea port to carry the vessels of increased capacity (Arsalan, 2006). Furthermore, we are more dependent on foreign vessels to ship our orders. Due to these infrastructure problems, we are losing the export orders due to late-deliveries. Our competitors succeed in getting those orders because of their capability to fulfill the customer demands.

Implementation of Quality Management Systems through ISO series etc. has not been proven significantly effective as it has not induced a quality culture in these industries. These are merely undertaken as supplier requirement and not implemented in true spirit. Though the aspect has

given financial returns through retained international customer but has not been used for actual quality improvement and increase in profitability through improved processes and products.

Foremost finding of the research shows a statistically significant relationship between the quality as an input and performance of Pakistan textile industry. Main hypothesis as discussed before stands proven. Furthermore it was found, implementation of basic Cost of Quality (COQ) systems i.e. Prevention-Appraisal-Failure (PAF) or Activity Based Costing (ABC) etc. is very weak to non-existent. Statistical analysis conducted through MINITAB 16 software on data collected from 30 textile firms was analyzed revealing following results.

- There exist a significant correlation between quality and financial returns of textile industry of Pakistan. The Pearson correlation coefficient is 0.78 with p-value of 0.001.
- Z-tests conducted for improvement of Return on Quality (RoQ), revealed that prevention costs are more significant for RoQ than other cost elements. Variances were found unequal.
- External and supply chain issues are more significant than internal issues.
- There is strong positive relationship between performance of textile industry and economic growth (indicator selected was GDP Growth rate) of Pakistan.

The above mentioned findings have answered the research questions of this paper. This adds to the academic knowledge about the topic as the analysis provides a launching platform for single firm case studies and also may provide managerial levers to owners and managers administrating the textile industry of Pakistan.

10) CONCLUSION

In above discussion, we observed some major quality issues resulting in decline in growth of Textile Industry of Pakistan. To increase the value added export instead of raw export, the government and entrepreneurs have to struggle to increase the manufacturing capacities and investors have to invest on state- of-the-art and latest technology machinery and equipment instead of investments of high value imports. After implementing these strategies, government can forcibly reduce the amount of raw cotton export. These strategies can be fruitful to

completely turning over raw export to value-added products export, resulting in making of large profit margins.

By promoting textile educational institutes all over the country, the literate workers and managers can be prepared which can better work and plan to reduce cost and time. By dedication and time given to trainings of workers and better equipment put into operations the labor productivity can be increased.
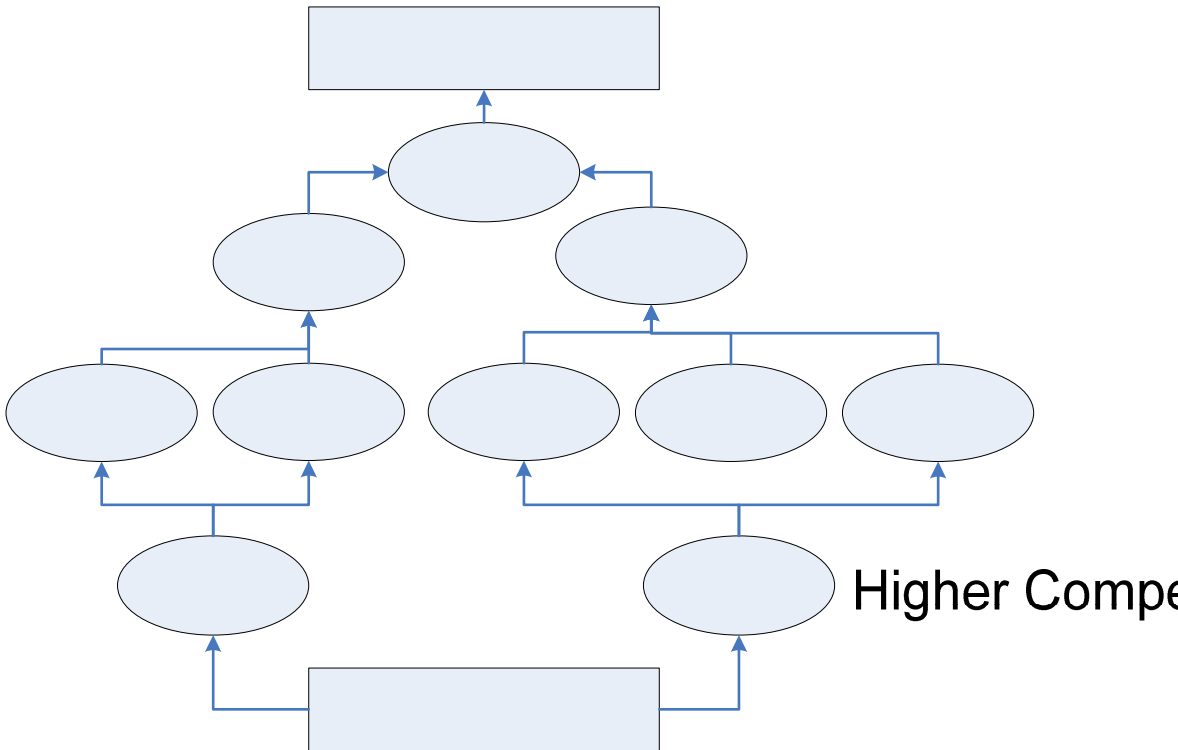

Figure 5: Quality–Competitiveness Relationship Strategy Map

Above shown diagram displays the link between improved quality practices to the ultimate desire of increased returns, profitability and ultimate goal of increased national competitiveness.

It is recognized that with the ever increase in the price of fuel, there is a serious need to monitor in real time the energy consumption of each process so as to make the integrated process of wet processing as energy efficient as possible. The ultimate aim should be to minimize cost and increase value in production.

The Textile Industry has not been able to restructure itself in face of the mounting global competition by improving quality and cutting down production costs at all levels. Present quality strategies have not contributed significantly in this set objective. New opportunities for further cost savings are to be explored and quality should be seen as something tangible which produces bottom line results and not as a mere concept or an obligation.

This study provides a major academic and managerial contribution as no previous direct correlation study of quality input versus financial outcomes was found in scholarly literature. It provides a foreground for making management decisions and also may guide the policy formulation at firm as well as national level. However further focused studies may be undertaken to differentiate between various supply chain levels; large firms, SMEs and cottage industries as there exist a significant gap between the practices of these.

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