SUMMARY AND CONCLUSIONS

Globalization is a complex process identified as the increasing integration of economies around the world through trade and financial flows and, transfer of technology. The Indian textile industry is the second largest in the world-second only to China. According to a study by CRISIL (Credit Rating Information Services of India Limited), the Indian textile and apparel industry could achieve a size of US$ 85 billion by 2010, with a domestic market size of US$ 45 billion and nearly 60 percent of exports comprising of garments. This could create 12 million job opportunities, 5 million directly in the textile industry and 7 million in allied sectors.

The dismantling of the quota regime represents both an opportunity as well as a threat-an opportunity because markets will no longer be restricted; a threat because markets will no longer be guaranteed by quotas and even the domestic market will be open to competition. From 1st January 2005, therefore, all textile and clothing products would be traded internationally without quota restrictions. And this impending reality brings the issue of competitiveness to the fore for all firms in the textile and clothing sectors. It is imperative to understand the true competitiveness of Indian textile and clothing firms in order to make an assessment of what lies ahead in 2005 and beyond (Verma, 2002).

A number of studies have been conducted to estimate the impact of ATC (Agreement on Textiles and Clothing) expiry on textile trade. A few predict a substantial increase in the size of exports as a result of phasing out of quota regime while others predict a very cautious approach to be undertaken by developing countries.

The present study is an attempt to examine the impact of globalization on exports of textile industry in Punjab and its units in the districts of Amritsar and Ludhiana.

OBJECTIVES OF THE STUDY

The present study aims to:

1. examine the development of small scale textile industry in Punjab;
2. analyze the growth of textile export sector since liberalization in Punjab;
3. analyze the factors determining exports from small scale textile industry in Punjab as well as for sample units;
4. evaluate the technical efficiency of sample units of textile industry in Punjab and
5. examine various problems relating to exports of small scale textile industry in the
   era of Pre and Post Multifibre Agreement (MFA) and Agreement on Textiles and
   Clothing (ATC) and to suggest measures to promote its exports in Punjab.

DATA BASE, CONCEPTS AND METHODOLOGY

Both primary and secondary data have been used in the study. The primary data
collected spans over the period 2002 to 2010. The secondary data has been collected from
various government publications available at the central, state and district levels. Related
information was collected from the office of the Development Commissioner, Small scale
industries, Ministry of Industry, Government of India, New Delhi; Directorate of
Industries, Punjab, Chandigarh; Regional office of the Textile Commissioner, Amritsar
and Ludhiana and Apparel Export Promotion Council, Ludhiana. This study constitutes
small scale textile industry of Punjab. For the selection of small scale textile units, two
districts- Amritsar and Ludhiana were selected. These two districts contribute about 60
percent of the total textile exports from the state.

DATA COLLECTION

For collecting the primary data, a detailed questionnaire dealing with different
aspects of exports was prepared. The questionnaire was prepared after reviewing the
existing literature and detailed discussions on this subject with exporters related with
small scale industries. Convenient sampling technique has been adopted. The
questionnaires were distributed and only 45 entrepreneurs responded in case of Amritsar.
In Ludhiana, the exporting units were shortlisted and the sample size of Ludhiana
consists of 55 units. Thus the effective sample for the purpose of study consists of 100
units (45+55).

CONCEPTS

The textile items which are included for study purpose bear the following codes:
Code 51 – Wool
Code 52 – Cotton
Code 54 – Manmade Filaments
Code 55 – Man made Staple fibers
Code 58 – Special Woven fabrics, embroidery
Summary and Conclusions

Code 60 – Knitted fabrics.
Code 61 – Articles of Apparel knitted or crocheted
Code 62 - Articles of Apparel not knitted or crocheted.
Code 63 – Other made up textile articles.

The definition of Small Scale Industry in terms of investment limit, according to 2006 amendment, is up to Rs. 5 crore in Plant and Machinery.

 METHODOLOGY

The techniques which have been used in the study are:

1. **Simple percentages, year to year growth rates and compound annual growth rates** were calculated for analyzing trends in various variables related to the textile industry under study.
2. **WAS**: Weighted Average Score (WAS) was calculated by ranking various reasons in order of importance; the weights/scores were given to each reason—one for important, two for more important and so on. With the help of frequencies, WAS was computed as below:-

\[ W = \frac{1}{f_w} \sum_{w=1}^{n} w \cdot f_w \]

Where W is the weight given to a reason and \( f_w \) is the number of respondents who attached weight ‘w’ to the statement of reason.

3. The determinants of textile exports have been found in case of sample firms for Amritsar and Ludhiana separately and in Punjab collectively by using **multiple regression**. A log linear form of the model was used because it provided a better estimation for standard specifications of the model.

The analysis of determinants of textile exports have been examined by estimating the following models

**Model I**

\[ \ln \text{Tex} = a_0 + a_1 \ln S + a_2 \ln FI + a_3 \ln W + a_4 \ln A + a_5 \ln WD + a_6 \ln RP + a_7 \ln \text{REER} + \text{ATC} + \mu_1 \]

**Model II**

\[ \ln \text{Tex} = a_0 + a_1 \ln O + a_2 \ln FI + a_3 \ln W + a_4 \ln A + a_5 \ln WD + a_6 \ln RP + a_7 \ln \text{REER} + \text{ATC} + \mu_1 \]
Summary and Conclusions

where Tex-Textiles  S-Sales  W-Wage  A-Age  O-Output
WD—World Demand  RP—Relative Price  FI-Fixed Investment
REER—Real Effective Exchange Rate
ATC-Agreement on Textiles and Clothing

ATC, L are dummy variables.

ATC (2002-04) = 0 and 1 otherwise.

Location has been used as dummy variable in pooled panel data analysis (0 for Amritsar and 1 otherwise).

The estimated coefficients represent relative elasticities. It is hypothesized that $a_6$, $a_7 < 0$, while $a_1, a_2, a_3, a_4, a_5 > 0$

Panel Regression equations have been estimated for Amritsar firms and Ludhiana firms separately and in the end, the data is pooled up and again with the help of panel regression, it is checked as to which variables affect exports significantly.

4. Compound growth rates of variables during the study period have been estimated by the following semi-log model.

\[
\log Y_t = \beta_0 + \beta_1 t + \mu_t
\]  

(1)

Where $Y_t$ is the value of the dependent variable at time ‘t’ whose growth rate is to be compounded, ‘t’ represents time variable and $\mu_t$ is the stochastic disturbance term at time ‘t’ and $\beta$’s are the parameters to be estimated.

The percentage annual compound growth rate is given by the formula

\[
r = (\text{Antilog } \hat{\beta}_1 - 1) \times 100
\]  

(2)

Where $\hat{\beta}_1$ is the ordinary least squares estimator of $\beta_1$

To examine the impact of ATC on textile industry, the following semi-log model including the binary variable was used:

\[
\log Y_t = \beta_0 + \beta_1 t + \beta_2 D.t + \mu_t
\]  

(3)

Where D.t is the binary variable taking following values

D = O for Pre ATC period 1991-2004

= 1 for Post ATC period 2005-2010

The compound growth rates per annum during Pre ATC period is given by:

\[
r_1 = (\text{Antilog } \hat{\beta}_1 - 1) \times 100
\]  

(4)
Whereas that corresponding to post ATC is given by:

\[ r_2 = \frac{[\text{Antilog} (\hat{\beta}_1 + \hat{\beta}_2) - 1]}{\text{Antilog} \hat{\beta}_1} \times 100 \]  

(5)

Where \( \hat{\beta}_1 \) and \( \hat{\beta}_2 \) are OLS estimators of parameters \( \beta_1 \) and \( \beta_2 \) in equation 3.

Evidently, the increase or decrease of the growth rate of the variable under study is given by:

\[ r_2 - r_1 = \frac{[\text{Antilog} (\hat{\beta}_1 + \hat{\beta}_2) - \text{Antilog} \hat{\beta}_1]}{\text{Antilog} \hat{\beta}_1} \] \times 100

If the coefficient of Dt i.e. \( \beta_2 \) in equation 3 is significant on the basis of conventional t-test, it would mean that phase out of ATC had a significant impact on growth of textile exports in India.

5. The technical efficiency of the textile industry of 100 textile sample firms across time period of 2002-2010 from Amritsar and Ludhiana has been measured using Data Envelopment Analysis (DEA). DEA is the most appropriate method which takes into consideration multiple inputs and outputs and measures the efficiency of any decision making unit.

PLAN OF THE STUDY

The study is organized into nine chapters.

1. Introduction.
2. Review of Literature.
3. Data base, concepts and Methodology.
5. Characteristics of sample units.
6. Technical Efficiency of Sample Units of Textile Industry in Punjab
7. Exports of Textile Industry in Amritsar and Ludhiana
8. Problems of sample textile firms.

II

FINDINGS OF THE STUDY

Chapter IV deals with textile exports in Punjab.

4.1.1 There is no uniform trend in the growth of exports of different textile products during the period 2001-02 to 2009-10. Year 2002-03 witnessed sizeable growth
in the exports of all items except wool and woolen textiles over the previous year. Fluctuations, viz., rise as well as fall in the export figures, are observed. However, total textile exports show positive yearly growth rates and over the period, total textile exports grew at the rate of 9.25 percent. Compound growth rates for all the textile items emerged to be positive except for handicrafts (with -.64) during the entire period.

4.1.2 Readymade garments have been the most significant item in the basket of export goods in the textile sector. India contributes 3.6 percent share in the total world export of apparel and it is one of the top ten export items of India. Cotton yarn fabric and made ups is the 11th largest export item from India and share of India in world export is 5.2 percent. Manmade yarn fabric and made ups constitute 12th largest commodity in India’s export basket with a share of 2.02 percent. This sector has shown consistent export performance over the years, showing decline only during 2005-06.

4.1.3 India exports its textile products to major countries. CAGR was highest for China (46.27%) and minimum (6.73%) for USA. It may be because of increased imports of textile production by USA from China. On analyzing the directions of exports from 2002-03 to 2009-10, it was found that major share of textile items was demanded by USA (around 24 percent). Next to USA are European countries – UK, Germany, France, Italy and Spain (around 25 percent). And their share also remained static over the period 2002-03 to 2009-10.

4.2.1 As far as number of small scale units was concerned, they had decreased because of rising input costs and lack of subsidies in this sector. Compound growth rate of number of textile units in Punjab was only .08 percent in the period 1991-2010 and was not significant. The growth rate of employment was 1.76 percent in the same period and was significant.

4.2.2 The overall growth rate of fixed investment in the study period was 8.5 percent and significant at 1 percent level. Production increased at 12.7 percent in the period under study and showed significant value. Its trend was also irregular with maximum growth rate in 2007-08 i.e. 33.96 percent and minimum in 2005-06 i.e. .42 percent (Table 4.5).
4.2.3 The exports of SSI in Punjab had grown at the compound rate of 18.2 percent in the same period. Year to year growth rates of exports showed irregular fluctuations. In 2002-03, growth rate of exports was highest i.e. 59.29 percent and lowest in 1998-99 i.e. -13.5 percent (Table 4.5).

4.2.4 Quantitative impact of MFA (ATC) on growth of SSI in Punjab with the help of binary variable approach has been analyzed. Since 1995, MFA has been taken over by ATC (Agreement on textiles and clothing), which was to ultimately eliminate quotas by 1st January, 2005. So the period before 2005 i.e. 1991-2005 includes some years of MFA and others of ATC period. So it is called MFA and pre-ATC period and after 2005, the period is referred to as post-ATC period. A few variables have been selected for examination. Table 4.7 shows the growth rates calculated from the estimated equations 1 & 2 (given in Table 4.6), as per the formulas discussed in chapter on Data Base and Methodology. It presents the compound growth rates of different variables of SSI in Punjab for the period 1990-91 to 2009-10. Number of units of SSI in the state grew at the rate of .08 only, while employment provided by these units increased at the compound growth rate of 1.76 percent, fixed investment by 8.56 percent, production by 12.72 percent. All these resulted in commendable rate of growth of exports by these units. However, compound growth rates ($r_1$) in pre ATC period for these variables were less than those ($r_2$) in the post ATC period. While impact of MFA/ATC works out to be significant and positive in case of exports, it is not so in case of other variables.

4.2.5 ATC had significant negative impact on growth of SSI. The reason could be that the small scale textile industry had not been able to absorb the benefits of ATC phase out. Also, the overall competitiveness of textile industry had not enhanced due to lack of productivity, quality control etc. However, impact of ATC on textile exports was positive, though insignificant.

4.2.6 When analysis of small scale sector was done with large scale sector, it was seen that contribution of small scale sector was greater than that of Large and Medium (L&M) sector. Share of industrial goods exports from SSI in Punjab decreased
consecutively since 1991-92 to 1998-99 and after that the same picked up till late. Year to year growth rates have not increased consistently, rather there are irregular fluctuations. The compound annual growth rate for the said period for SSI was 18.23 percent and for L&M sector was 18.62 percent. If total small scale and L&M sector are taken together, compound growth rate was 18.35 percent for the aforesaid period.

4.2.7 It was found that India’s total exports grew at the compound rate of 17.8 percent during period 1991-2010. The year to year growth rates were however erratic. The growth rate in 2010 was only .9 percent.

4.2.8 India’s textile exports grew at the compound rate of 13.6 percent in the same period. The year to year growth rates were again irregular and negative also, at one time period i.e. 2002. Though India is one of the major producers of cotton yarn and fabric, the productivity of cotton as measured by yield had been found to be lower than many countries. The level of productivity in China, Turkey and Brazil was over 1 tonne/ha., while in India; it was only about 0.3 tonne/ha.

4.2.9 Punjab’s total exports grew at a compound rate of 16 percent in the aforesaid period. The year to year growth rates did not show any upward or downward consistency rather was unstable. The highest growth rate was in year 1994 i.e. 49.45 percent. Similarly, the textile exports of Punjab grew at compound growth rate of 19 percent in the same period. The year to year growth rates showed irregular fluctuations. In Punjab, albeit India, very few exporters have integrated production facility. Unavailability of adequate road connectivity, inadequacies in port facilities and other export infrastructure had affected the competitiveness of Punjab textiles sector.

4.2.10 India’s and Punjab’s textiles exports also decreased post-ATC as compared to pre-ATC. India’s textile exports decreased by 3.8 percent and Punjab’s decreased by 11.2 percent respectively. As far as India’s total exports were concerned, they increased by .7 percent in post-ATC period as compared to pre-ATC period; but Punjab’s exports decreased by 2.1 percent in the same period.

4.2.11 Year to year growth rates of Cotton manmade fibre textile mills was highest in 2008-09 i.e. 8.43 percent and spinning mills showed erratic fluctuations. 100%
EOUs and Power loom showed stagnant growth rates. CAGR of Cotton manmade fibre textile mills, spinning mills (SSI), 100% EOUs and Power looms is significant at 1 percent level.

4.2.12 Capacity installed in textile industry for different units of Punjab over the period 2001-02 to 2009-10 was analyzed. It was found that year to year growth rates of Looms was highest in 2005-06 i.e. 26.47 percent and lowest in 2004-05 i.e -15.51 percent. Power looms followed a stagnant growth rate for most of the years, with CAGR of only .28 over the period 2002-2010. The growth of manmade fibre was 35.93 percent in 2004-05 and then, more or less, followed stagnant growth rate. It bore the highest compound growth rates amongst other variables in the model. It was due to lower base in 2001-02 as against 173.61 in 2009-2010. Manmade filament showed growth rate of 37.78 percent in 2006-07 and then showed a stagnant growth for most of the years. The CAGR was significant for manmade fibre and manmade filament at 1 percent level and for the number of power looms; it was significant at 10 percent level.

4.2.13 The employment pool of the textile industry in Punjab showed that the industry was not in good health. It was evidenced by low or negative yearly growth rates of workers on rolls of the industry and in many cases like (Amritsar), the units had been closed.

4.2.14 Year to year growth rate of production of fibres of raw cotton was highest in 2004-05 i.e. 59.42 percent and lowest in 2002-03 i.e. -18.92 percent. Production of manmade fibre was highest in 2004-05 i.e. 26.21 percent and lowest in 2008-09 i.e. -20.87 percent. CAGR of raw cotton was 10.45 percent and was significant at 5 percent level and for manmade fibre, it is was 2.66 percent and was significant at 10 percent level. Manmade sector has unlimited potential as compared to cotton textiles. This sector boasts of vertically integrated complete production change starting with production of raw material to exquisite fabrics and made ups.

4.2.15 The performance of the textile industry in Punjab in terms of production of yarn related to different categories was analyzed. It was found that Cotton yarn grew positively over 2001-02 to 2009-10, though not consistently, so also total spun yarn. Other categories of the yarn – blended yarn, non-cotton yarn and manmade
Summary and Conclusions

Filament yarn have shown erratic behavior in terms of yearly growth rates. Manmade yarn has experienced negative compound growth rate of 2.08 percent during the aforesaid period.

4.3.1 The share of exports of yarn and textiles in total exports of Punjab was highest in 2005-06. In 1990-91, it was 3.82 percent. It declined in the next two years and increased from 1993-94 onwards till 1998-99. It showed fluctuating trend for six years. Maximum growth was recorded in 2005-06; the share of exports further declined in 2006-07 and 2007-08. Again it increased to 26.45 percent in 2008-09.

4.3.2 Year to year growth rate of exports of yarn and textiles had experienced fluctuations. It was highest in 1996-97, i.e. 319.93 percent and decreased to lowest in year 1991-92 i.e.-47.18 percent. The exports increased up to 1996-97 and then slowed down and were negative for the following three years. It remained positive from 2000-01 to 2005-06. For following two years, it declined, then again increased in the year 2008-09. CAGR of exports of yarn & textiles experienced steep deceleration from 60.73 percent in immediate post liberalization period to 11.01 percent in post liberalization period. The reason for this could be attributed to unfavorable attitude of the government towards textile industry in Punjab which had compelled the manufacturers to shift their base to other states especially Himachal Pradesh as they enjoyed much more tax exemptions as compared to Punjab. The overall CAGR remained at 28.19 percent.

4.3.3 Different variables which affected the textile industry in Punjab had been identified. Various variables like domestic demand, world demand, Fixed Investment, Employment, Relative Price (RP) and Real effective exchange rate (REER) were taken into account. Multiple regression analysis was applied and it was found that world demand and employment were largely insignificant in influencing textile exports. Domestic demand, REER and RP had some marginal influence. The fixed investment had considerable influence on textile exports. The coefficient of employment was negative which meant more employment opportunities had to be created if supplies of exports were to be increased. Then only textile exporters would be able to meet the changing demand from its user industries.
CHAPTER V deals with characteristics of the sample units.

5.1 The distribution of sample textile units reveals that in majority of small scale units in Amritsar and Ludhiana, there was individual proprietorship. 38 percent in Amritsar and 55 percent in Ludhiana had individual proprietorship. Partnership exists but is more frequent within the family than with others. It was observed that most of the small scale sample units in Amritsar and Ludhiana i.e. 36 percent in Amritsar and 31 percent in Ludhiana were 10-15 years old. However, 4 to 5 percent were also 45-50 years old. As far as investment was concerned, there was presence of units in all types of categories. 29 sample units had investment limit ranging from Rs.1 Crore to Rs.2 Crore and 21 units had investment ranging from Rs.4 Crore to Rs.5 Crore.

5.2 It was found that 56 percent of the entrepreneurs of sample units in Amritsar and 69 percent in Ludhiana were graduates and there was acute shortage of technically skilled labour. Only 4 percent in Amritsar and 10 percent in Ludhiana were technically skilled. Most of the entrepreneurs of the sample units were from business background (73 percent in Amritsar and 69 percent in Ludhiana) and very few were from Agriculture, Services or Technical background.

5.3 The analysis of the sample units revealed that 42 percent of the units in Amritsar were located in industrial area because of the infrastructure present there. However, in case of Ludhiana, 40 percent of the sample units were located in commercial area. The reason was that Ludhiana industry has been operating for quite a number of years in commercial area. Also, market economies can be availed of in commercial area.

5.4 The most important factor regarding decision of location in Amritsar and Ludhiana was “clustering” of other business establishments and the primary reason for establishing the units both in case of Amritsar and Ludhiana was same i.e. “profits” made by similar units as WAS score of Amritsar and Ludhiana were 2.31 and 2.63 respectively.

5.5 The sample units consisted of manufacturers of different products like Tweed, Blazer, Shawls, Suiting, Shirting, blankets etc. and they comprised 80 percent in
Amritsar and 61 percent in Ludhiana (in which knitted cloth manufacturers were also present). In Ludhiana 22 percent were dealing with readymade garments.

5.6 The analysis regarding marketing tests by manufacturers of sample units revealed that 73 percent of the sample units in Amritsar and only 38 percent in Ludhiana were test marketing their products. On enquiring, the reason for test marketing, it was found that the most important reason for it in both Amritsar and Ludhiana was “knowledge of product demand” (WAS 2.48 for Amritsar and 2.40 for Ludhiana) respectively.

5.7 Regarding the volume of exports of sample units, it was seen that in Amritsar; 60 percent of the sample units were exporting less than Rs.50 Lakh and 20 percent between Rs.1 Crore and Rs.5 Crore whereas in Ludhiana, it was 35 percent for both the limits respectively. The analysis further revealed that the driving force affecting exports in these two places was the “manufacturing facilities” (WAS 2.17 for Amritsar sample units and 2.38 for Ludhiana sample units).

5.8 As far as addition of new products was concerned since 1991, it was seen that addition was done in suiting, shirting and embroidery. The entrepreneurs had low cost machines and they shifted to modern computerized technology and started making diversified fabrics. 28.8 percent in Amritsar and 36.3 percent in Ludhiana had gone in for diversification. The primary reason for adding new products was “to meet market demand” as WAS for Amritsar units was 2.62 and for Ludhiana units, it was 2.60.

5.9 The analysis revealed that in Amritsar, 38 percent of the firms were operating in 70% - 80% capacity whereas in Ludhiana, 40 percent were operating in this group. 27 percent in Amritsar and 33 percent in Ludhiana were operating in 80% and above capacity. The units were not operating at full capacity because of various reasons. The main reason for under utilization in the sample units was low demand of the product. However, the second most important reason in case of Amritsar units was inadequate finance whereas in Ludhiana, it was trend changes which led to under utilization.

5.10 The surveyed units were analyzed regarding packaging of their product and it was seen that only those units which manufactured garments, shawls and blankets
packaged their products. The other units manufacturing suiting, shirting, knitted cloth etc. did not require packaging because these are inputs for garment industry or other industries and no consumer is required to see the packaging. Only 44 percent in Amritsar and 38 percent in Ludhiana packaged their products.

5.11 On enquiring about the use of brand names, it was found that units manufacturing garments, shawls and blankets were using brand names and the most important reason for using brand name was “identification with the brand” or brand loyalty as WAS for Amritsar sample firms was 2.17 and for Ludhiana firms was 2.66. Only 50 percent of the sample was using brand names. Regarding the authorization of use of brand name, they admitted that foreign buyer authorized them to put the brand name at the time of giving the purchase order.

5.12 The entrepreneurs were enquired about factors governing pricing policy and the most important factor which governed their pricing policy was “negotiated price” as WAS for Ludhiana sample firms was 2.64 and for Amritsar, it was 2.17. On being asked about the areas in which the competitors (foreign country entrepreneurs) had advantage over them, they replied that the competitors had “use of better technology “as the most important reason (WAS of Amritsar sample firms 2.2 and for Ludhiana sample firms 2.3). The reasons for competitors’ advantage were enquired and it was found that foreign competitors had less trade and tariff barriers as compared to their domestic counterparts. Also, the foreign competitors had access to cheap financing and they had low cost on account of labour, raw material and better technology.

5.13 Regarding problems in adopting modern technology, the most important in case of Amritsar firms was lack of capital goods (WAS 2.42) and in case of Ludhiana firms, it was lack of basic infrastructure amenities (WAS 2.30). The analysis further revealed that the method of selling the product in both Amritsar and Ludhiana was through middlemen. Out of the total sample firms, 96 percent in Amritsar and 87 percent in Ludhiana were selling through middlemen. The consideration which was made by them while selecting a middleman was their “contacts” with the foreign customers (WAS 2.06 for Amritsar and 2.38 for Ludhiana).
5.14 The duration of credit period allowed to buyers was analyzed and it was found that 33 percent in Amritsar and 30 percent in Ludhiana gave the reply “payable when able.” This type of attitude by buyers has distorted the market mechanism of textile industry to a great extent.

5.15 The study revealed that 80 percent of sample units in Amritsar and 85 percent of sample units in Ludhiana had taken loan. The source of capital of those who had taken loan was from banks (75 percent) and from self and family members (25 percent). The rate of Interest which was paid by entrepreneurs at that time who had taken loan was 8 to 12 percent per annum. However, the same has increased now to 13 to 15 percent per annum.

5.16 It was found that all the entrepreneurs were aware of commercial banks. 80 percent in Amritsar and 75% in Ludhiana were aware of PFC (Punjab Financial Corporation). 84 percent in Amritsar and 80 percent in Ludhiana were aware of SIDBI (Small Industrial Development Bank of India). However, they were not aware of other agencies like IFCI (Industrial Finance Corporation of India), IDBI (Industrial Development Bank of India), SISI (Small Industries Service Institute) etc.

5.17 It was found that all the entrepreneurs were aware of export assistance schemes. However, only 71 percent in Amritsar and 78 percent in Ludhiana were making use of such schemes. These schemes were DEPB (Duty Entitlement Pass Book), Duty Drawback, EPCG (Export Promotion Capital Goods) and Advance License. 29 percent in Amritsar and 22 percent in Ludhiana were not making use of these schemes. Reasons were illegal gratification and complexity of labour involved in these schemes. Though all units (100 percent) were aware of export assistance schemes; only 71 percent in Amritsar and 78 percent in Ludhiana made use of these schemes.

5.18 The most important reason of dissatisfaction regarding different financial assistance schemes was that proper information regarding the schemes was lacking and also the assistance provided was inadequate. Regarding the manpower quality, 85 percent was semi skilled labour. Technical labour was not present in Amritsar firms and in Ludhiana, it was only 3 percent.
5.19 The cost component of the products which were manufactured by the sample units was analyzed on a broader level. Labour and power constituted 20 percent whereas packing and overheads constituted 10 percent of the cost in both Amritsar and Ludhiana sample units.

5.20 95 percent of the sample units in Amritsar and 93 percent in Ludhiana were not satisfied with current level of growth and the reasons of dissatisfaction were enquired. 95 percent in Amritsar and 93 percent in Ludhiana cited inadequate “infrastructure” as a basic problem which hindered their growth, followed by erratic “power” supply and lack of “labour”.

5.21 In Amritsar, 95 percent of the entrepreneurs wanted to diversify and in Ludhiana, it was 93 percent. The diversification was desired in real estate only as the investment was considered to be safe and progressive in that sector. Also, the legal complications were comparatively less. Further bank Assistance was available against LAP (Loan Against Property) in that sector.

CHAPTER-VI measures the technical efficiency of the sample units of textile industry in Punjab using Data Envelopment Analysis (DEA). The study is based on primary data of 100 textile sample firms from Amritsar and Ludhiana across time period of 2002-2010. The model is based on two inputs and one output. The inputs are number of employees and fixed investment and the output variable is the sales of the firm. Fixed investment and sales have been deflated by WPI (wholesale price index) with base (2004=100).

6.1 The descriptive statistics of the variables of Amritsar and Ludhiana sample firms are listed in Tables 6.1 and 6.2. In general, the Amritsar sample firms had shown erratic fluctuation in terms of fixed investment. Employment showed a continuous increase but declined in 2008 and again increased in 2009 and 2010. Sales increased from 2002-2009 but declined in 2010. In case of Ludhiana firms, fixed investment decreased in 2003 and 2004, then increased in 2005 and remained more or less constant up till 2009 and declined in 2010. Employment and sales showed irregular fluctuations in the period under study. On average, the sample firms of Amritsar and Ludhiana showed slight fluctuations in terms of fixed investment, employment and sales.
6.2 The mean efficiency score of Amritsar sample firms ranged from .03 to 1. Firm manufacturing garments (No.19) had turned out to be least efficient with mean efficiency score 0.026 and firm manufacturing shawls and shirting cloth (No. 5) had been identified by DEA as a benchmark for all firms (shown by its ability to achieve the highest efficiency score in every period). Over the entire study period, only 9 firms had registered efficiency which was greater than 0.5.

6.3 Amritsar sample firms were technically inefficient as Pure Technical efficiency (PTE) of all firms was less than one. However, the efficiency of firm No. 1 (manufacturing processed woolen fabrics, tweed, blazer) and firm No. 30 (manufacturing corduroy) was very close to 1. Firm No.5 (manufacturing shawls and shirting cloth) and firm No.21 (which deals with manufacturing and finishing of blankets), had been identified as a benchmark for other industries. The firm dealing with suiting (No.25) had shown lowest level of PTE score.

6.4 The scale efficiency scores of Amritsar sample firms showed that only one firm i.e. Firm No.5 had been found to be operating at the most productive scale size (MPSS). Most of the firms were operating at increasing returns to scale. However, Firm No.5 was operating at CRS and Firm No.10 at DRS.

6.5 As far as OTE, PTE and scale efficiency of Amritsar sample firms were concerned, it was found that during pre ATC(Agreement on Textiles and Clothing) period i.e. from (2002-04), the OTE, PTE and SE were .277, .543 and .543 respectively. This indicates that the level of overall technical inefficiency was of the order of about 72 percent, and Pure Technical and scale inefficiency was 46 percent. This shows that during Pre ATC period, technical inefficiency was driven both by inefficient operation and scale inefficiency.

6.6 During Post-ATC period, the OTE, PTE and SE of Amritsar sample firms were .351, .574 and .638 respectively. The results indicated that levels of overall technical inefficiency, pure technical inefficiency and scale inefficiency were 65 percent, 43 percent and 36 percent respectively. This suggested that in Post-ATC period, the inefficient operation was more of a culprit in explaining overall technical efficiency as compared to working on sub-optimal scale.
6.7 The comparative analysis of averages of TE scores between Pre and Post ATC periods of Amritsar sample firms revealed that the overall TE score was less in Pre-ATC (0.277) as compared to Post-ATC (.351). The average of pure technical efficiency which depicts the ability of management to convert inputs into outputs remained more or less the same during Pre and Post ATC (.543 and .574) respectively. The average scale efficiency improved during Post-ATC (.638) as compared to Pre ATC period (.543) which implies that managerial ability improved and at the same time, the movement of the firms was towards most productive scale size.

6.8 The results implied that by adopting best practice, the sample firms of Amritsar could have reduced inputs of labour and capital by about 67 percent. Also, about 39 percent of technical inefficiency had been observed due to operation of the firms at sub optimal scale. The extent of managerial inefficiency which was depicted by pure technical inefficiency had been observed to be about 44 percent. The sample firms were found operating in zone of increasing returns to scale. This showed that efficiency of firms could further be enhanced by increasing their scale of operations.

6.9 The mean TE of Ludhiana sample firms ranges between 0.012 to 1. Firm No.21 which manufactures knitted cloth has least efficiency score and firm No.54 which also manufactures knitted fabric has the highest efficiency score and is the benchmark for other firms. Nineteen firms have registered efficiency score which is greater than .5.

6.10 PTE scores indicate how efficiently the inputs are converted into outputs. Firm Nos.2, 14 and 54 of Ludhiana are identified as benchmark for other firms as their average score is 1. These firms manufacture suiting and knitted cloth. There were seven other firms whose average PTE was very close to 1. The lowest score was of firm No.33 (0.27) which indicated that firm was 73 percent inefficient in converting inputs to outputs.

6.11 The scale efficiency scores of Ludhiana showed that only 1 firm i.e. firm No.54 was found to be operating at the most productive scale size (MPSS). Most of the firms were operating at increasing returns to scale.
6.12 The year wise estimates of OTE, PTE and SE of Ludhiana sample firms showed that during Pre ATC period, OTE, PTE and SE were .344, .653 and .505 respectively. This suggested that the level of overall technical inefficiency was 66 percent, pure technical inefficiency was 35 percent and scale inefficiency was 49 percent. This meant that during Pre ATC period, technical inefficiency was driven more by scale inefficiency as compared to inefficient operations.

6.13 During Post ATC period, OTE, PTE and SE of Ludhiana sample firms were .426, .713 and .584 respectively. This meant that overall inefficiency, pure technical inefficiency and scale inefficiency were 57 percent, 29 percent and 42 percent respectively. This indicated that, again, sub optimal scale size was more responsible in explaining overall technical inefficiency than the inefficient operations.

6.14 Comparative analysis of averages of TE scores of Ludhiana sample firms in Pre and Post ATC period revealed that the overall mean was less in Pre ATC (0.344) as compared to that of in Post ATC (0.426). The average PTE scores in Post ATC works out to 0.713 as compared to 0.653 during Pre ATC. The average scale efficiency remained more or less the same during Pre and Post ATC as 0.505 and 0.584 respectively. The results suggest that the sample firms of Ludhiana had tendency to reduce inputs by about 60 percent by adopting best practice techniques. Further, 44 percent technical inefficiency was due to operation of the firms at sub optimal scale. The extent of managerial inefficiency was 31 percent. These firms were also found to be operating at increasing returns to scale.

6.15 It had been found that textile industry of Punjab was technically inefficient. Also, the inefficiency was both on account of pure technical inefficiency as well as scale inefficiency. In case of both Amritsar and Ludhiana firms, managerial inefficiency and sub optimal scale were responsible for overall technical inefficiencies. During post ATC; OTE, PTE and SE had increased though marginally.It was also found that on an average, the textile industry operated in increasing returns to scale. This indicated that textile industry in Punjab has potential to improve the efficiency. The results also lead us to conclude that any expansions of the textile industry by increasing the scale of operations would
decrease operational inefficiency and improve the competitiveness of cost which would help the textile industry to face stiff global competition in post ATC period.

CHAPTER-VII deals with exports of sample units of textile industry in Amritsar and Ludhiana. Comparative analysis of determinants of exports of Amritsar and Ludhiana firms has been done by making use of panel regression analysis.

7.1.1 The distribution of SSI and Large and Medium industry in Amritsar and Ludhiana was analyzed. It was found that number of industry in Ludhiana (both SSI and L&M) is far more than Amritsar though their corresponding number decreased in 2009 vis-a-vis 2000. Employment marginally increased in 2009 as compared to 2000 in SSI of both Amritsar and Ludhiana. In case of L&M industry, employment actually decreased in case of Amritsar. As far as investment and production were concerned, they decreased in 2009 as compared to 2000 both for Amritsar and Ludhiana.

7.1.2 The analysis of district wise exports revealed that percentage share of Ludhiana exports in Punjab was much higher than percentage share of Amritsar exports. From period 1996-97 to 2009-10, share of Ludhiana exports in Punjab was highest in 2006-07 i.e. 70.24 percent whereas share of Amritsar exports was highest in 2000-01 i.e. 18.49 percent. Since 70 percent of exports in Punjab are from Ludhiana, this shows export concentration which is a structural characteristic of underdeveloped economies. Year to year growth rates of both districts show that Amritsar exports were highest in 2008-09 i.e. 49.6 percent and Ludhiana exports were highest in 2003-04 i.e. 55.17 percent. This may be because the merchandise exports had accelerated since 2003, largely due to rise in oil and commodity prices.

7.1.3 The compound growth rate of Amritsar in Post-ATC or after quota abolition was more i.e. 25.21 percent whereas in pre-ATC period, it was 6.45 percent. t-value was also significant meaning thereby that quota abolition had helped to increase exports in Amritsar. In case of Ludhiana, the growth in post-ATC was only 8.72 percent whereas in pre-ATC, it was 13.23 percent; which means that quota removal had decreased the growth rate of exports. However the overall growth
rate for the whole period was 9.69 percent and 15.57 percent for Amritsar and Ludhiana respectively.

7.1.4 Textile exports of both Amritsar and Ludhiana for 2004-05 to 2009-10 were analyzed. It was seen that both these districts showed negative growth rates in 2006-07 and 2007-08. This might be due to biased policy of the government. As far as percentage share was concerned, it could be seen that share of Ludhiana textile export in total export of Punjab was around 50-60%. The compound growth rate of textile exports in Amritsar was negative, but for Ludhiana textile exports, it was positive. However, their t-values were not significant.

7.1.5 The share of Amritsar textile exports in its total exports ranged from 5 percent to 14 percent whereas Ludhiana textile exports in its total exports ranged from 30 percent to 46 percent in the period from 2004-05 to 2009-10. This is true as dominating product in Ludhiana exports is textiles.

7.2.1 The analysis of determinants of textile exports have been examined by estimating the following models

**Model I**

\[
\ln \text{Tex} = \alpha_0 + \alpha_1 \ln S + \alpha_2 \ln FI + \alpha_3 \ln W + \alpha_4 \ln A + \alpha_5 \ln WD + \alpha_6 \ln RP + \alpha_7 \ln REER + \alpha_8 \ln ATC + \mu_1
\]

**Model II**

\[
\ln \text{Tex} = \alpha_0 + \alpha_1 \ln O + \alpha_2 \ln FI + \alpha_3 \ln W + \alpha_4 \ln A + \alpha_5 \ln WD + \alpha_6 \ln RP + \alpha_7 \ln REER + \alpha_8 \ln ATC + \mu_1
\]

Where

- \(S\) Sales
- \(O\) Output
- \(W\) Wage
- \(A\) Age
- \(ATC\) Agreement of Textile & Clothing
- \(L\) Location

ATC, L are dummy variables. ATC (2002-04) = 0 and 1 otherwise.

**Location** has been used as dummy variable in pooled panel data analysis (0 for Amritsar and 1) otherwise.
7.2.2 The examination of variables, world demand, Sales, Fixed Investments, Age, REER, RP, Wage, output and ATC were analyzed in case of Amritsar and Ludhiana firms separately. In case of Amritsar, it was found that in both models, elasticity of sales and output were significant for Amritsar textile firms. The coefficient of both sales and output showed that 10 percent increase in sales and output would lead to 12 percent increase in exports. All the coefficients bear hypothesized signs. The coefficient of fixed investment was negative but not significant. However, coefficient of wage was negative but significant. This could be attributed to the fact that exporters in Amritsar were mainly labour intensive, low technology manufacturing firms, which actually did not need skilled or highly educated labour force. The coefficient of RP is significant at 5 percent level. ATC did not have significant impact on exports of textiles in Amritsar for the time period as indicated by the non significant coefficient of the differential coefficient of ATC in case of both the models. This indicated that quota phase out did not have any impact on the textile exports of Amritsar firms. The variables included in Model-I and Model-II explained 89 and 88 percent of the variation respectively in the textile exports of the sample firms in Amritsar.

7.2.3 Panel Regression estimates of exports in case of textile units in Ludhiana were also analyzed. In Model-I, sales and wage were both significant and bore expected signs. The coefficient of wage indicated that firms in Ludhiana hired more skilled and technical labour as compared to Amritsar. Age turned out to be a significant factor in Ludhiana firms. It showed that experience affected export propensity positively. The differential coefficient of ATC in case of Ludhiana sample units implied that removal of quota restrictions had not put any significant impact on its textile exports as shown by non significant coefficient. The model was able to explain 78 percent of the variation. The results of Model-II do not show much difference as far as the significance of the variables was concerned.

7.2.4 When the data was pooled up, Model-I showed that sales were significant at 1 percent level. The coefficient of wage was negative but not significant. Fixed investment showed positive and significant relationship with exports. Coefficient of RP bore negative sign as hypothesized and was significant. It meant if elasticity
of relative export price to domestic price decreased, there was increase in exports. Age was also significant at 5 percent level. Location was used as dummy to capture its effect on the firms in Amritsar and Ludhiana. Its coefficient was negative and significant. It indicated that firms located in Amritsar and Ludhiana were significantly different from each other. This is because exports of Ludhiana during said time period suffered a lot and its textile industry had become stagnant in its growth over the past few years. The coefficient of ATC was significant at 10 percent level indicating that quota phase out had a positive and significant impact on exports of textile units of both Amritsar and Ludhiana when the sample units were pooled up. The DW statistic in all these cases also fell between lower and upper critical values at 1 percent level. Therefore, no conclusive inference could be drawn with respect to serial correlation of the error term.

7.2.5 The empirical results showed that the exports of textiles in Punjab in post-ATC era had not been commensurate with its expectations by any reasonable yardstick. Main factors responsible for this were that Punjab’s textile had not been able to rise up to the occasion and its poor capabilities and resources had inhibited it from moving beyond the level of other competing developing countries. Also, the vision of Punjab textiles and clothing was very myopic about the post-quota gains whereas they expected the gains to accrue to them even as they did very little to ensure them. In order to ensure deserving success in future, Government support was badly required by small scale sectors.

CHAPTER VIII discusses the problems of sample textile units – their solutions and Government policies related with SSI.

8.1.1 It was found during the course of survey, that 80 percent of sample units in Amritsar and 85 percent in Ludhiana had taken loan. The loan was taken either from Commercial Banks, Punjab Financial Corporation or Small Industrial Development Bank of India. The entrepreneurs were found to be not aware of other institutional credit agencies like Cooperative Banks, National Small Industries Corporation, Small Industries Service Institute, etc.

8.1.2 Market borrowing was another problem as was seen in Shawl manufacturing industry. In this industry, the finances are controlled by seasonal demand. The
retailer sells the products during October-March whereas the products are manufactured during April-November. Thus the finances are required during April-November. However, the payments are received when actual sales are made to customers. Thus, there is gap of approximately six months in the manufacture and sale of product. The seasonal uncertainties i.e. delay in onset of winter also adds to their financial burden. To generate more finances, the industry resorts to market borrowing and extended credit from supplier in addition to conventional sources of credit i.e. financial institutions. Though the suppliers extend the credit, the same is at a higher rate that adds to the cost of the product and results in lesser profit.

8.1.3 The policy of reservation had also led to production of low quality products without giving much importance to research and development. The scale of production is very small and SSI is highly protected, and so standardization and quality checks are not of much importance. During the course of sample survey, the entrepreneurs were enquired about Quality Control measures and they replied that quality control was the fourth driving force, the other three being Manufacturing facilities, Competition from China and Foreign buyer’s requirement. This shows that quality standards and quality control are not in the priority list of the entrepreneurs of the sample firms which are small scale units.

8.1.4 In the present study, it was found that 96 percent of the sample units in Amritsar and 87 percent of those in Ludhiana were selling through middle men. Only 4 percent in Amritsar and 13 percent in Ludhiana were directly selling to foreign buyers. So there is a lot of cut throat competition. Also, lack of advertisement due to paucity of funds has added to their marketing problem.

8.1.5 The working conditions of dyeing and finishing units were found to be in very pitiable state as the processing area is covered by water and chemicals and is very dirty and unhygienic. Further, the chemicals are handled without proper protection from fumes etc. The heated chambers, steam pipes, hot oil pipes and electrical heaters are all being maintained, handled and used by unskilled and semi-skilled workers. This results in accidents, leakage of boilers, spillage of acids and other minor and major accidents.
8.1.6 It was also found that the speed of knitting machines i.e. RPM (Revolution Per Minute) is very high. After a small breakdown, the protective barriers are not reaffixed resulting in damage to workers by high speed appliances. Certain sophisticated machines i.e. design and garment machines require specific temperature and humidity for optimum functioning. To have specific temperature and humidity; dehumidifier, air conditioners and heaters are required. These equipments are expensive as far as their installation and running expenses are concerned. The industry is using discretion with regard to installation as well as for running these appliances. This accounts for expensive economy and deterioration in quality and consequently impacts selling price and decreases profit.

8.1.7 The city of Ludhiana as well as Amritsar is approximately 1000 kms away from Bombay port which is nearest gateway to the world. The dry port at Ludhiana requires movement of goods (inputs) from Mumbai to Ludhiana by train or road. The movement is being undertaken by containerized cargo through CONCOR (Container Corporation of India) and so the exports result in additional cost, time and energy.

8.1.8 The irregular supply of power results in stoppage of machines and loss of quality as well as quantity in production. When electricity is restored or generator is started, some time is lost by the machine to come to optimum production. The cost of generating the electricity from generator is very high. Also, it is not able to run the total unit resulting in partial running of the factory. The government is ensuring uninterrupted and steady supply of power to agriculture whereas there is no such commitment in case of industry. In fact, agriculture is getting electricity free of cost whereas the burden is being shifted to industry. This adversely affects the quality, quantity and production planning of enterprises.

8.1.9 The major ingredient for textile industry is polyester yarn. The polyester is either imported from China or is being supplied by RIL (Reliance Industries Ltd). RIL has its own priority and systems for supply of polyester which results in either storage of raw material by industrialist or short supply of yarn in the market affecting the production in a significant manner. The supply from China is also to
the tune of a minimum quantity of 10 metric tons (one container) and it takes approximately 30-40 days from China to reach India. Accordingly no planning with regard to production can be done on short term basis. Thus the supply of major raw material is very irregular and insufficient. During the present survey, the entrepreneurs were asked about the advantages which foreign competitors had vis-a-vis India and they cited low cost of raw material as second important reason (both in Amritsar and Ludhiana) which was of advantage to foreign competitors (given in Table 5.25).

8.1.10 The government policy for giving the unemployment compensation under NREGA and MNREGA is resulting in lesser availability of labour. Further, the agriculture sector absorbs a huge quantity of labour during harvesting and sowing season. In case of garment industry, the garment is prepared on the flat knitting machine. Fixing of buttons, eyelets and other small embellishments and designs, etc. followed by washing, pressing, folding and packing is done with human intervention. The same systems are seriously affected as the labour is not available and if available, they have an attitude. So the industry is to manage both lack of labour and attitude of labour. Even in case of blanket manufacturing industry, the work starts from converting waste to yarn, yarn to woven blankets, woven blankets to processed blankets and finally cutting and packing and then putting it into bales. Though a lot of work is done by machines, however, at every stage, labour is essentially required and it is not available.

8.1.11 Underutilization of capital asset is a drain on the capital of any nation and it also affects the capital formation process of less developed countries. 65 percent units in Ludhiana and 73 percent units in Amritsar were found to be operating at less than full capacity. Analysis revealed that only 27 percent in Amritsar and 33 percent in Ludhiana were utilizing 80 percent capacity or more. The rest were under utilizing the capacity ( Table 5.18).

8.1.12 In the textile sector, export incentives are Duty Drawback Scheme, DEPB (Duty Entitlement Pass Book) scheme, Advance Licence Scheme and EPCG (Export Promotion Capital Goods) scheme. It was observed that 29 percent entrepreneurs in Amritsar and 22 percent in Ludhiana were not availing these schemes (Table
5.32). Reasons which were given by them were lack of complete and detailed information regarding these schemes and there were many procedural formalities in executing these schemes.

8.1.13 The timeline for granting change in land use for setting up industrial units is very long as far as Punjab is concerned. Most industrialists rue that it takes several months to get various clearances for change in land use, unlike in other states like Madhya Pradesh and Gujarat. Due to these bureaucratic hurdles, Punjab has not attracted any large industrial investment for over few years.

8.1.14 Amritsar being the border district has witnessed a decline in industry as well as a fear psychosis. The government is also not giving a boost to establishing any big industry. The industrial town of Goindwal has failed to take off and majority of units are lying closed. The Thermal Power plant is only on paper without any execution. The SEZ (Special Economic Zone) of Amritsar is only for announcement and hoardings without actual implementation. The Wagah border is hardly used by the industry for export to Pakistan due to various political reasons which are unknown to industry.

SUGGESTIONS

8.2.1 The problems can be solved by availability of easy finance and at low rate of interest. Further, the institution of “Buyer – Credit”, i.e. foreign financing should also be popularized in which the finance is available for six months to one year for procuring raw material at interest rate of 3-4 percent per annum as against 12-15 percent per annum in domestic country. The availability of finance on capital goods in case of foreign financing is at concessional rates and is for three to five years. This would lower the cost of operations and make the product cost competitive in world as well as domestic market.

8.2.2 The availability of power can be managed with the installation of Atomic Power Plants. If these power plants are installed, availability of power without any cuts and load shedding would be available which would result in efficient usage of production inputs and optimizing output. In-house training should be given to workers with proper promotions and incentives. Pollution norms should be more realistic with less formalities and single window system should be adopted.
Moreover, similar units should be given a localized area and develop as cluster units so that they may be allowed to grow as a small unit with benefits of large enterprise.

8.2.3 In sectors like Readymade garments, Manmade yarn, etc., hundred percent depreciation should be allowed on capital expenditure on textile machinery for tax purposes so that new investment is encouraged. The high custom tariffs in the importing countries are an important limiting factor in expansion of exports. The tariff ranges from 18 to 35 percent in many of the important regions of the world like Latin American, Egypt and Russia. It is required to reduce the tariff structure by negotiating with these countries. Capital goods which are supplied indigenously should be exempted under the EPCG scheme from Terminal Excise Duty (TED). More potential markets like Brazil, Vietnam, and Egypt etc. should be explored. Spinning and power loom sectors should be modernized.

8.2.4 The government should develop SEZ and EOU (Export Oriented Unit) for facilitating the exports. In these SEZs, the state can invite any industry, be it textile, IT, agro processing by allotting land at reasonable price. Industrial investors (both from outside the state and local industry looking at expansion) should also be assured of regular power supply in these SEZs. These should be done on priority basis with single window clearance system to reduce bureaucratic interference.

8.2.5 Active involvement of government is of great importance for dissemination of information on trade policy. If the export proceeds are not recovered due to any reason, the ECGC (Export Credit Guarantee Corporation) scheme should compensate the exporter on completion of certain formalities before and after exports. ECGC facility should be made available to the exporting units free of cost. Further, the compensation should be given on the declaration of the exporters without any formalities, so that the export proceeds, even if not recovered, the industry may still continue to run on cost recovery.

8.2.6 The government is providing to the agriculture sector with subsidies as well as waiving off of loans. Similar facilities should be made available to textile industry. Further, easy finance should be given with reasonable scrutiny.
Government should communicate with Pakistan, Afghanistan, Iran and finally Europe for development of land route known as “Silk Route”. This will benefit the industry of Punjab in a large way as the Gateway of India i.e. Mumbai port which is at a great distance, would be compensated with proximity to Pakistan through land route i.e. Wagah border.

**GOVERNMENT POLICY**

8.3.1 The Government of India announced new National Textile Policy (NTP) 2000, with the objective of facilitating the industry and to achieve these objectives, the policy intends to work on thrust areas like Technology Up-gradation, Enhancement of Productivity, Cluster Development and Integrated Human Resource Development.

8.3.2 Technology Up-gradation Fund Scheme (TUFS) of government of India aims at making funds available to the domestic textile industry for Technology Up-gradation of existing units and for setting up of new units with State-of-the-Art technology for enhancing their viability and competitiveness in the domestic and international markets. With effect from January, 2005, the capital ceiling for machinery under this scheme has been increased from Rs.60 lakh to Rs. 1 crore for decentralized powerloom sector. Maximum amount disbursed through TUFS was in 2006-07 followed by 2008-09.

8.3.3 The State Government has already taken up the issue with Government of India for a Textile Cluster at Ludhiana. The Textile cluster has principally been agreed upon by the government of India. In order to increase the quality of Human Resource, government will open one or two Polytechnics and four-five Industrial Training Institutes close to major textile centers. A policy called TMC (Technology Mission on Cotton) has been started whose objective is to improve productivity and quality of cotton and stabilize its prices.

8.3.4 The Government of India, in order to tackle the problem of industrial sickness, had set up a Board for Industrial and Financial Reconstruction (BIFR). Maximum mills registered with BIFR in Punjab were in 2008-09. Maximum number of mills registered with BIFR were in Tamil Nadu followed by Maharashtra and Gujarat. Punjab and West Bengal share the same position i.e. 9 as far as registration of mills with BIFR is concerned.
8.3.5 India is a promising destination for FDI in the textile sector. 100% FDI is allowed in the textile sector under the automatic route. Maximum FDI in textile sector in India was in the year 2002-03 i.e. 1.72 percent followed by 1.68 percent in 2005-06.

POLICY IMPLICATIONS

Punjab has tremendous scope for setting up cotton textile, garments, blankets and shawl industry. The growth had been phenomenal in 1990s which can be achieved in these times also if supporting measures are taken by government agencies. Amritsar and Ludhiana are the textile hubs because these cities are manufacturing all types of textiles for consumption in India as well as for exports. The industry is actually faced with constraints of labour, power, finance, know-how and if the proper support from government, coupled with suitable policies are framed; the textile industry of Punjab can prove to be Manchester of India.

The textile industry is using old technology which needs to be upgraded to a new computerized, digitized and internet based. For that purpose, either a software or IT park is required for active support of industry which would help it to produce good quality and high fashion textiles for consumption in India as well as for exports.

Close attention needs to be paid to the composition, volume and value of products as well as competitive strengths vis a vis countries like China, Sri Lanka, Bangladesh and Pakistan. The industry must try and diversify – at the level of its export composition as well as its export markets. It is important for the industry to try and find newer markets and avoid concentration in a few so as to reduce the concentration of risk. While the recession is surely a major setback in the progress of human development, it also provides for a prospect for introspection and an opportunity for reform. The aim, therefore, should not be only to restore the situation to the pre-recession scenario but, in fact, to bolster growth as well as well being to previously unattained levels.

There is need for constituting working groups and panels at centre and state levels to continuously evaluate the effect of WTO provisions, so as to suggest adequate and appropriate measures. With the lifting of quantitative restrictions, bound custom duties may have to be renegotiated to a level where foreign goods may not be able to flood Indian market. Within the bound rates, the duties have to be adjusted to protect the
interests of the producers as well as the consumers. Government will have to set up institutional mechanism to recommend appropriate duty structure and other policies to protect the interests of the producers and consumers. Institutional mechanism is also required for patent registration, copyright protection and dispute settlement. Anti-dumping institutional framework has also to be developed so as to take immediate action as and when the need arises.