Chapter 6

Summary, Findings, Problems and Suggestions

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Chapter 6

SUMMARY, FINDINGS, PROBLEMS AND SUGGESTIONS

6.1 Introduction

The chapter presents the concluding remarks to the total research work. It summarizes the overall Growth and Development of the Hometech Industry. After thorough investigation, the researcher brings out the major problems faced by the industry in general and also those specifically related to the selected firms during the study period. These problems call for attention. After understanding the factors that withhold the industry from its growth, the scholar tried to come out with certain suggestions that would surely contribute to the promotion of Hometech Industry in India and in improving the Financial Performance of the selected units as well.

6.2 Summary

The study examines the global and domestic scenario of Technical Textiles in detail. It highlights how the Indian textiles industry is diversifying into value-added technical textiles to meet functional demands for precision applications. Technical textile is defined as an extension of traditional textiles and products which manufactured primarily for their technical and performance properties rather than their aesthetic or decorative characteristics. Therefore, the twelve segments of technical textiles are briefly defined in the study. Moreover, historical background of technical textiles in India, Indian scenario, global scenario, technologies used for its production, its present status in India, and testing facilities for technical textiles in India have been included and discussed by the researcher.

Hometech textile is one of the largest technical textile segments comprising household textiles, furnishings and upholstered furniture industry. However, it is an emerging area for investment in developing countries like, India but its market has matured and its production has become highly competitive in many developed countries. This sector has been developing with the stable growth of both production and consumption throughout the world. Recently, scholars have shown a greater interest in exploring the status and prospects of Technical textiles in India. A number
of studies relating to various segments of Technical textiles have been found which conclude that Technical textiles are gearing the growth of Textile industry in India.

In spite of the growing studies investigating the prospects and significance of the Technical textiles in India, the Home tech segment, has received little attention in textile literature. This thesis has attempted to fill this gap in the literature by studying the growth and development of Hometech Textiles in India from 2002 to 2012. The study provides the detailed account of global and Indian overview of Hometech industry. Furthermore, the classification and application of hometech textiles, raw material and technologies used for producing hometech products have also been discussed. In addition, major obstacles for the growth of Hometech products in India, a list of Indian hometech manufactures, Government’s Initiatives for the Growth and Development of the industry in India have been included to know the present position of hometech industry in India.

A major purpose of this thesis was to investigate the growth and development of the Hometech industry in India. The growth and development in Indian Hometech industry has been measured and analyzed by the researcher in terms of four parameters i.e. Production, Export, Import and Financial performance for the period 2002-2012. For tracing the growth of the industry and to check as well whether it has improved significantly or not, the period of ten years (2002-12) is divided into two blocks i.e. 2002-07 and 2002-12. Therefore, the study involves the detailed analysis of production, export, import and financial performance in Indian hometech industry. The study has been carried out on the macro-level as well as micro-level. The macro study analyzes the growth and development of Hometech Industry in India in terms of production, export and import. For analysis and interpretation of this data, the production, export and import growth in per cent have been calculated and explained by the researcher. The data so collected are tested to analyze the hypotheses that have been formed. The researcher uses paired sample t-test to verify whether performance of the industry is improved during the years.

Moreover, the micro study examines the financial performance of the 6 selected Hometech companies which are contributing 63.46% of the total production of Hometech industry in India. This study traces out the brief profiles of the selected 6 units, their products and major events have also been discussed. In addition, the trends in financial components of the selected Hometech companies of India during the
selected years have been studied by the researcher. A study of the trends in financial components of the companies individually and collectively gives a deep and broad base for examining the financial position of the industry. The financial components that are taken into study for trend analysis are net profit, operating profit, net sales, net worth, current assets, current liabilities, long-term debt, total debt, total capitalization, equity share capital and reserves & surplus, preference share capital and long-term debt.

This thesis attempts to analyze the profitability, liquidity, solvency and turnover position of selected hometech units under study. Here the researcher has discussed meaning of profitability, liquidity, solvency, turnover and their various measurements. For analysis and interpretation of data, Net profit ratio, Return on net worth ratio, Return on net capital employed ratio, Current ratio, Debt-Equity Ratio, Funded debt to total capitalization ratio, Capital gearing ratio and Inventory turnover ratio have been calculated by the researcher. The ratios so calculated are tested to analyze the hypotheses that have been formed through paired sample t-test which determines whether financial performance of the selected units are improved during the selected years or not.

The analysis of Hometech industry shows that the production and import have increased significantly but on the other hand, export and financial performance have not improved significantly may be due to the global recession resultantly low purchasing power, appreciation of Indian Rupee against U.S. dollar and production of low quality hometech products that do not confirms the international standards in export market.

6.3 Major Findings of the Study

The major findings and conclusions of this study are narrated as under:-

1. Production: The production of Hometech industry shows a marvelous progress during 2007-12 due to infrastructure support by the government in terms of setting up of centers of excellence, fiscal policy, modification in TUFS and various other policies and schemes. It is found out that the growth rates of production were constant at 16.51 per cent during tenth plan while it increased during eleventh plan but at the fluctuating growth rates. The production of the industry was Rs. 883.39 cr. in the year 2002-03. It went up by 16.56 per cent in
the year 2003-04 and it continues to rise during 2002-07 at the constant growth rate of 16.51 per cent and reached to Rs. 1628.74 cr. in 2006-07 while, during 2007-12 it tremendously rose except in the year 2008-09. In the year 2007-08, it increased at the huge rate of 208.52 per cent. During 2008-09 it declined by 24.43 per cent but thereafter it starts moving up and reached to Rs. 7831 cr. in the year 2011-12.

The paired sample t-test indicates that the difference in production is significant at 5% level of significance, between the mean score of 2002-07 and 2007-12 in the Hometech industry. The result suggests that the production of hometech industry has significantly improved during 2002-2012.

2. **Export:** The year 2007 witnessed global turmoil, which initially started as a financial crisis, later lead to economic crisis worldwide. The Indian textile sector, which was already shaking due to rupee appreciation and rising cotton prices, was hit hard than any other sector. Textile and apparel industry in India was punched hard by heavy interest rates, less domestic consumption and cancelled export orders. Another reason for low exports is production of low quality hometech products that does not confirm the international standards in export market. Resulting in low exports in Hometech textiles industry during 2007-12. The exports of Hometech industry continuously rose during 2002-07 but at the diminishing growth rates. It was Rs. 146.52 cr. in the year 2002-03 and jumped by 953.04 per cent in 2003-04. It continued to rise and reached to Rs. 2578.16 cr. in the year 2006-07. On the other hand, it showed a decreasing trend in first half of the 2007-12 due to the recession and in the second half, it witnessed increasing trend. It was highest Rs. 3299.54 cr. in the year 2011-12 and lowest Rs. 2114.83 cr. in the year 2009-10.

The paired sample t-test reveals that the difference in export is not significant at 5% level of significance, between the mean score of 2002-07 and 2007-12 in the Hometech industry. The result suggests that the export of hometech industry has not significantly improved during 2002-2012.

3. **Import:** The Hometech imports witnessed an increasing trend during the selected period due to increasing consumption. During 2002-07, it registered exceptional growth rate i.e. 135.63 per cent over the previous year in 2003-04. It
continues to rise and reached to Rs. 1070.02 cr. in the year 2006-07 while, during 2007-12 it was Rs. 1346.22 cr. in the year 2007-08 with increase in the growth rate of 25.81 per cent. It kept on rising and reached to Rs. 3470.80 cr at the end of 2011-12.

The paired sample t-test shows that the difference in import is significant at 5% level of significance, between the mean score of 2002-07 and 2007-12 in the Hometech industry. The result suggests that the import of hometech industry has significantly improved during 2002-2012.

4. Financial performance evaluation through various ratios: The performance of the six selected Hometech units has been measured through various ratios. The ratios are grouped under 4 heads as stated below

(A) Profitability Ratio
(B) Liquidity Ratio
(C) Solvency Ratios
(D) Turnover Ratio

(A) Profitability Ratio: The study has measured the profitability of the companies in terms of Net profit ratio, Return on Net worth or Shareholder’s fund Ratio and Return on Net Capital Employed Ratio. The results of the profitability of the unit are given as under:

i) Net profit ratio: The profitability of the industry did not improve during 2007-12. The net profit ratio witnessed a fluctuating trend during 2002-07. It was lowest 8.98 per cent in the year 2002-03 and highest 11.42 per cent in the year 2004-05. The next five years (2002-12) depicts the declining growth rates of Net profit ratio. It was highest 14.47 per cent in the year 2007-08 and lowest 6.05 per cent in the year 2011-12. In order to increase the net profit ratio, it is suggested that the firms should try to reduce cost of production that could increase the demand and selling price of the hometech products.

The paired sample t-test reveals that the difference in net profit ratio is not significant at 5% level of significance, between the mean score of 2002-07 and 2007-12 in the Hometech industry. Hence, it is concluded that the net profit ratio of hometech industry has not significantly improved during 2002-2012.
ii) **Return on net worth ratio:** The profitability of the owner’s investment and overall efficiency of the industry seems to decrease during 2007-12. The industry exhibited the increasing trend of return on net worth ratio during 2002-07. It shows highest 18.63 per cent in the year 2006-07 and lowest 13.60 per cent in the year 2002-03. During eleventh plan, it shows highest 23.83 per cent in 2007-08 and lowest 11.86 per cent in 2009-10.

The paired sample t-test shows that the difference in return on net worth ratio is not significant at 5% level of significance, between the mean score of both blocks in the Hometech industry. **The result suggests that the return on net worth ratio of hometech industry does not differ significantly during 2002-2012.**

iii) **Return on net capital employed:** The earning capacity of the capital employed in the Hometech industry has not improved during 2007-12. This ratio was highest 29.87 per cent in the year 2006-07 and shows the lowest 19.94 per cent in the year 2002-03 during first five years of the study period which indicate the increased growth rate on return on net capital employed. During 2007-12, the year 2007-08 shows the highest ratio by 30.54 per cent and the year 2009-10 shows the lowest ratio by 18.23 per cent which indicates the decline growth rate on return on net capital employed. In the light of the above discussion, it is suggested that the homitech companies should undertake cost control measure so that increase net profit before interest and taxes of the company might enhance the return on net capital employed.

The paired sample t-test reveals that the difference in return on net capital employed is not significant at 5% level of significance, between the mean score of 2002-07 and 2007-12 in the Hometech industry. **Hence, it is concluded that the return on net capital employed ratio of hometech industry has not significantly improved during 2002-2012.**

**(B) Liquidity Ratio:** The liquidity of the companies has been measured through current ratio which result is given below:

i) **Current ratio:** The liquidity position of the industry did not improve during 2007-12. There was a slight fluctuation in the current ratios during 2002-07. The year 2002-03 shows highest ratio by 1.67 and the year 2004-5 shows lowest ratio by
1.33. While, during 2007-12 it was lowest 1.21 in the year 2008-09 and highest 1.70 in the year 2011-12.

The paired sample t-test reveals that the difference in current ratio is not significant at 5% level of significance, between the mean score of both the five year blocks in the Hometech industry. **Hence, it is concluded that the liquidity position of hometech industry has not significantly improved during 2002-2012.**

**C) Solvency Ratios:** The solvency of the firms have been measured through three ratios i.e. debt-equity ratio, funded debt to total capitalization ratio and capital gearing ratio. The results of the solvency in hometech companies are given as under:

i) **Debt-equity ratio:** It is seen that the proportion of equity share capital is increased in comparison to total debt funds during 2007-12. This ratio is highest in the year 2002-03 by 1.07 and lowest in the year 2005-06 by 0.80 during 2002-07. During 2007-12, the year 2008-09 shows highest debt-equity ratio by 0.93 and the year 2011-12 shows the lowest ratio by 0.76.

The paired sample t-test reveals that the difference in debt-equity ratio is not significant at 5% level of significance, between the mean score of both the blocks in the Hometech industry. **Hence, it is concluded that the debt-equity ratio of hometech industry has not significantly improved during 2002-2012.**

**Funded debt to total capitalization ratio:** The funded debt to total capitalization ratio seems to decline in 2007-12 because of decrease in the amount of secured and unsecured loan for the purpose of funding. The ratio was highest in the year 2002-03 by 39.71 per cent. This year onwards, it began to decline and was 30.64 per cent in the year 2006-07. During the year 2008-09 shows the highest ratio by 37.09 per cent and the year 2011-12 shows lowest ratio by 26.60 per cent. The funded debt to total capitalization ratio seems to be declined in 2007-12 because of decrease in the amount of secured and unsecured loan for the purpose of funding.

The paired sample t-test indicates that the difference in funded debt to total capitalization ratio is not significant at 5% level of significance, between the mean score of 2002-07 and 2007-12 in the Hometech industry. **Hence, it is concluded that the funded debt to total capitalization ratio of hometech industry has not significantly improved during 2002-2012.**

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ii) **Capital gearing ratio:** It is found out that during 2007-12 the proportion of equity capital is high in comparison to fixed cost bearing capital, which indicates the low geared capital structure with minimum risk but low profit. The capital gearing ratio was highest in the year 2006-07 by 2.27 and lowest ratio is in the year 2002-04 by 1.52. During the year 2011-12 shows highest capital gearing ratio by 2.46 and the year 2008-09 shows lowest ratio by 1.70. Therefore, researcher can conclude that in 2007-12 the proportion of fixed cost bearing capital is high in compare to equity capital.

The paired sample t-test indicates that the difference in capital gearing ratio is not significant at 5% level of significance, between the mean score of both the block of years in the Hometech industry. **Hence, it is concluded that the capital gearing ratio of hometech industry has not significantly improved during 2002-2012.**

(D) **Activity or Turnover Ratio:** The study has measured turnover of the units through Inventory turnover ratio. The result of this ratio are given as under:

**Inventory turnover ratio:** It is seen that during 2007-12 sales are greater than average inventory and comparatively higher ratio than 2002-07. The inventory turnover ratio witnessed an increasing trend in hometech companies during 2002-07. The year 2002-03 shows the highest turnover 6.06 times and shows lowest turnover 9.11 times in the year 2006-07. While it exhibits a fluctuating trend during 2007-12. The year 2008-09 shows the highest turnover 9.37 times and the year 2009-10 shows the lowest turnover 7.01 times.

The paired sample t-test indicates that the difference in inventory turnover ratio is not significant at 5% level of significance, between the mean score of 2002-07 and 2007-12 in the Hometech industry. **Hence, it is concluded that the inventory turnover ratio of hometech industry has not significantly improved during 2002-2012.**

The results suggests on the basis of testing various ratios of the firms through Paired Sample t- Test that statistically the **Financial Performance** of the hometech industry has not significantly improved during the study period. **The null hypothesis is accepted while alternate hypothesis is rejected**, proving that there is no significant difference in the Financial Performance of Hometech industry in India during 2002-2012.
6.4 Major problems faced by the Hometech industry in India

The factors responsible for the slow growth rate of Hometech textile industry in India are given below:

1. Lack of awareness

The primary reason for low consumption of Hometech Textiles in India is lack of awareness about the application of Hometech textiles and its benefits for the end product and user. Although, the Textile Commissioners Office under the Ministry of Textiles, Government of India is trying its best to create awareness about technical textiles by conducting training workshops, seminars and conferences, but it is not positively increasing the awareness about Hometech segment. Information on domestic and foreign market demand for various Hometech textiles products is not available to the investors. While the textile commissioner's office has recently published a baseline survey report on technical textiles of the domestic market but it is not sufficient to attract Indian investors towards Hometech textiles when the investment costs on European machines are very high. Hence, international market survey reports covering international market supply and demand information must be made available to the Indian Investors to create a production and market base of Hometech Textiles in India. (Marimuthu, 2010)

2. Lack of demand

There is lack of demand for Home tech textiles as it is only used as an alternative when traditional home textiles are not appropriate. This is mainly because of lack of awareness among the consumers about the benefits of using Home tech textiles. This lack of awareness is hindering the potential demand of Hometech textiles in India. Due to lack of clear cut policy on specifications and standardization of Hometech textiles, the quality benchmark for Home tech textiles technology are not available. The investors have thus no clear-cut idea about the potential growth in the sector. The promotion of Hometech textiles is essential for not only Technical textile growth, economic growth, employment generation and increasing exports but in the larger public interest for home furnishing, trendy decoration, public safety, security, hygiene and comfort. Thus, there is great need for providing proper regulatory framework to safeguard the interests of consumers. (National Council of Applied Economic Research, 2009)
3. Higher cost of raw material

The conventional home textiles are export intensive, on the contrary hometech textiles are import intensive products. Many products required as raw material for this industry are imported from the foreign countries (i.e., knitted fabric, fur fabric, filter fabric for vacuum cleaner, woven fabric etc.). The major production of this industry is providing to the domestic demand. However, the large-scale units are engaged in producing various hometech products like fiberfill, stuffed toys, non-woven wipes, floor coverings etc. but still many of the hometech textiles products that are not produced domestically in adequate quantity have to be imported to accomplish the domestic demand. This makes raw materials for hometech textiles costly in India, which is one of the main reasons for low consumption of hometech textiles. Hence, there is sharp need for easy availability of specialized raw materials for hometech textiles in the domestic market. For this, adequate fiscal measures should be taken to promote this sector. (National Council of Applied Economic Research, 2009)

4. Lack of Research and Development

A major concern related to development of hometech products is lack of indigenous research and development in the area of hometech textiles. Further, the technology required for manufacturing of most of the hometech textiles is proprietary and very expensive. High cost and low demand have also discouraged Indian players to produce hometech textiles indigenously. (National Council of Applied Economic Research, 2009)

5. Lack of skilled labor or manpower

The manpower available in India is not too skilled in their technical and managerial skill which is one of the major hurdles for the expansion of Hometech sector in India. As this is a high-tech segment and very skilled workforce is required for manufacturing hometech products. India having a large population labor that is cheaper but these people are needed to be trained and educated to conform to the specifications, the quality control and quality culture of the hometech textiles. It is noticed that the hometech textiles products with high production levels in India with considerable exports are usually commodity products that are not very Research and Development intensive. These products include stuffed toys, jute carpet backing, synthetic carpet backing, blinds etc. Hence, value addition in our hometech textiles
product is relatively much low as compared to our competitors. To get progress in hometech segment there is need for preparing a strong pool of skilled labor which is suitable for the development of a highly innovative and Research and Development intensive domestic hometech textiles industry. (National Council of Applied Economic Research, 2009)

6. Lack of regulatory norms by the Government

One of the reasons for low penetration of hometech textiles is lack of regulatory norms by the government to boost the market development of hometech in India. For example, there are no regulations in place for fire safety of Furniture and Furnishings. There are also no regulations for the use of furniture intended for private use in a dwelling, including children's furniture, beds, head-boards of beds, mattresses (of any size), sofa-beds, futons and other convertibles, nursery furniture, garden furniture which is suitable for use in a dwelling etc. which do not mandate the use of hometech textile products but encourages the use of these products as home tech products are produced to meet these standards. There are also no set Flammability Test Procedure for Seating Furniture for Use in Public Occupancies etc. which mandate the use of hometech products meeting the set standards, resistance requirements etc. (Office of the Textile Commissioner, 2009).

7. Lack of Processes, machineries and equipments

Production of hometech textiles needs conventional as well as state-of-the-art equipments depending on the application, desirable quality parameters, fulfillment of functional parameters, when one considers that hometech textiles cover common applications like floor coverings, jute carpet backings etc. to complex applications like fire retardant furniture seating, synthetic carpet backings, filter fabrics etc. For the production of Hometech textiles, degree of accuracy required for the end use requirement and rigidity of the leading specifications, the product processes, machinery and equipments are to be selected. However, it is observed that for large areas of home textiles application, India has a quite good infrastructure of spinning, weaving, knitting, wet-processing, impregnation and lamination etc. but it is not adequate for producing the varieties of Hometech Textiles. Existing raw materials, machinery and know-how are needed to be geared to produce certain range of
hometech textiles in India and to ensure adequate impact in globalization. (Ministry of Textiles, 1999)

8. Lack of Technology and Know-how

The share of unorganized sector in production of the hometech textiles in the country is around 40 per cent in which scale of operation is limited and technology is relatively outdated. The major obstacle for expansion of the sector is low demand, which clarifies the high share of operations in small-scale sector in order to meet the skinny demand spread all over the country. This is also the cause for huge technological gap between technology used in competitor countries and that used in India. There is great need of massive technology upgradation in the sector and government should play a major role in it by providing technology / consultancy support to manufacturers for development of hometech textiles. Moreover, there is vast requirement to encourage modernization in this sector by providing priority or additional incentives for hometech under Technology Upgradation Fund Scheme (TUFS). (Ministry of Textiles, 1999)

9. Lack of Testing facilities

One important feature in both development activities and production of hometech textiles is devotion to certain specified standards for dependable and sustained performance of such products for intended purpose. The international standards for most of the common products have been laid down by agencies like ASTM, BS, EN, Deutsche Industries norm (DIN), GHOST etc. (Ministry of Textiles, 1999). Because of wide varieties of products using technical textiles, the centralized test laboratories are not paying attention towards hometech segment to cater all such testing services and performance evaluation. It is, therefore, vigilant on the part of the producers of home tech textiles to set up the essential testing rigs and equipments to keep a strict control over the quality. As far as India is concerned, small and medium scale units are not able to afford very expensive cost of such equipments, centralized test facilities which are required to be created in strategic locations.

10. Lack of Quality assurance

The products of hometech textiles are ruled by much stricter tolerance of parameters and will, therefore, have little value, if they do not match to the rigid specifications. Therefore, it must be ensured that the quality assurance system
incorporated by the manufacturers of hometech textiles is grounded on quality management based on zero-defect concept. Unfortunately, Indian hometech manufacturers, particularly medium and small scale are not able to afford the in-built quality assurance system for producing hometech products because of the very high cost. (Ministry of Textiles, 1999)

11. Bottlenecks for Entrepreneurs

In order to promote the production of hometech textiles, the primary need would be to catch the attention of entrepreneurs in the field of hometech textiles. Entrepreneurs are still keeping away from the hometech textiles in view of the following hindrances (Rakshit, Hira, and Gangopadhyay, 2007):

(i) The aspects of Hometech textile and marketing are highly multifaceted and Indian entrepreneurs in textiles have not exposed with this difficult situation therefore, they have genuine doubts and anxieties about success in such ventures;

(ii) Hometech textiles demand specific raw materials, machinery and equipment, which are mostly imported and therefore, requiring huge capital towards the project cost;

(iii) Hometech textiles being at a growing stage in India, innovation of technology for product development and establishing specific markets with enough volumes require huge working capital for a minimum period of 5 years, so the entrepreneur could anticipate fruits of high value addition usually associated with hometech textiles. Moreover, market development will require continuous promotional efforts, which need considerable investments as well as lead time:

(iv) The developed countries have achieved a saturation point in mass of the hometech textiles and they are moving towards developing countries including India in a competitive manner in globalized markets. They are well-experienced in various aspects of hometech textiles and financial strength, while Indian entrepreneurs have little or no experience or knowledge in this direction;

(v) The existing norms and mandatory requirements of hometech textiles in India are either outdated or non-existing that makes difficult task for entrepreneurs of
launching home tech textiles to end users in the Indian market. (Rakshit, Hira, and Gangopadhyay, 2007)

12. Absence of Centers of Excellence for Home tech Textiles

The field of Technical Textiles is so vast that, unlike conventional textile materials, it would not be possible to provide support services for all fields from one organization. Therefore, it would be appropriate that numbers of centers should be opened across the country to integrate overall development of the field (Rakshit, Hira and Gangopadhyay, 2007). Though, there are number of IITs/Textiles Institutes and eight Centers of Excellences (COEs) present in India i.e. Geotech(BTRA), Agrotech (SASMIRA), Meditech (SITRA) & Protech (NITRA), Composite (ATIRA), Non-Woven (DKTE), Indutech (PSG College) and Sportech which are providing latest testing facilities national / international accreditation, information centre, facilities for training, prototype development facilities etc. but unfortunately, there is no single center of excellence for Hometech Textiles in India.

6.5 Problems faced by the selected Hometech companies during the study period

After collecting the qualitative data and personal interview the researcher discovered some detrimental factors that badly affect the financial performance of the selected companies during the study period. They are as follows:

6.5.1 Ginni Filaments Limited

Ginni Filaments Limited is engaged in producing yarn, knitted fabric, garment, hometech textile (nonwoven fabric) and consumer products (wipes) made out of nonwoven fabrics segment. The segment of the company, which makes consumer products with spun lace fabric, is very small. The textiles business is a major segment of company involving home tech textiles, which have been performing well over the years. The company expects that the Home tech Textile sector would grow both in domestic and export markets and prospects of the same are likely to improve. The company is in progress in fastening up this business with global brand that may expand Indian market. (Ginni filaments ltd, 2012) Following are the factors that adversely affected the financial performance of the Ginni filaments during 2002-2012:
1. Quota regime for exports of textile/clothing

The quota regimes for exports of textile/clothing (Multi fiber agreement) adversely affected the performance of the company during the years 2002-03 and 2003-04 by restricting exports and its abolition by 2005 provided big opportunity for the company to expand its growth both in exports and domestic market (Ginni filaments ltd, 2004). Since 2006, the raw material i.e. manmade fiber, cotton and viscose the was easy available for the company due to the abolition of quantitative restrictions under MFA and the positive fiscal changes made by the Government which allowed company moving towards consolidation, expansion and restructuring (Ginni filaments ltd, 2006).

2. Fluctuations in cotton/cotton yarn prices

Cotton as an agricultural product and raw material for the company, witnessed fall in production during 2002-03 causing spurt in prices due to the adverse weather conditions. The performance of the company during the year 2005 under review were affected mainly due to higher cost of cotton procured in the previous cotton season and thereafter steep fall in cotton and cotton yarn prices resulting into huge stock losses. Procurement of cotton during the season is necessitated to ensure consistency in the quality of yarn demanded by the valued overseas customers. Despite the higher world production of cotton during the crop year 2004-05, the yarn prices of the company witnessed a significant downward trend (Ginni filaments ltd, 2005). Though, the industry was in critical position during the year 2008 due to the unprecedented increase in cotton but in 2011–12 there were wild fluctuation in prices of cotton and cotton yarn. Hence, the year under review was not healthy for cotton yarn business during first three quarters. The fluctuation in the prices of raw cotton due to global scenario and government's policies regarding export regulations of cotton and cotton yarn were remain a major threat area for textile industry. The company procured cotton during peck cotton season to maintain the quality of cotton yarn as company is predominantly export oriented. However, the subsequent steep fall in cotton and cotton yarn prices resulted into substantial stock losses (Ginni filaments ltd, 2012).
3. Increase in fuel prices

Although, the company achieved better performance despite steep increase in fuel prices during the years 2006 and 2007 but it resulted into increase in cost of power generation in the captive power plant of the company, which partially affected the margin of textile units with captive power generation (Ginni filaments ltd, 2006). Therefore, the company was in critical position during 2007-08 due to the extraordinary increase in fuel prices.

4. Depreciation of US dollar

The company hardly hit by the rapid and sharp appreciation of Indian rupee against US dollar and the increase in interest rates from the beginning of 2007 because it is highly export oriented industry which eroded its cost competitiveness (Ginni filaments ltd, 2008).

5. Global recession

During the year 2008-09, the global economic slowdown and the lack of demand in the domestic economy affected the company's performance adversely. However, because of timely action of the government and increase in demand from both export and domestic markets the situation started improving in the next year i.e. 2009-10 which resulted in escalation of prices in recent months and helped in retrieving some lost ground. But, export of the company got down during this year due to the demand contraction in the global markets (Ginni filaments ltd, 2010). Because of global recession in the years 2007-08 and 2008-09 the inventory level of the company reduced substantially but demand started improving during the year 2011.

6.5.2 Arora Fibres Limited

Arora Fibres Limited is engaged in the business of manufacturing and marketing polyester staple fiber. The company offers products like polyester staple fiber, hollow polyester staple fiber, polyester chip, nylon chips and polypropylene fiber. The working of the company is improving due to increase in production and sale. The company fully absorbs the technology obtained from Mijung Ind. Co. Ltd., Korea and continuously taking steps to improve the product and process technology
(Arora fibres ltd, 2012). Following are the factors that adversely affected the financial performance of the Arora Fibres during 2002-2012:

1. **Excess supply vis-a-vis demand**

   The company is facing difficult situation with supply surpassing the limited demand because the international market is also flooded with supply from other countries at better rates (Arora fibres ltd, 2006). This consequently resulted into losses and erosion of net worth to the company during the years 2004, 2005, 2007, 2008, 2009 and 2012.

2. **Unhealthy competition from unorganized sector**

   Most of the small scale units still use natural materials such as coir, sisal, wool, cotton, kapok, glass and horsehair as filling materials for upholstered furniture and other applications which create unhealthy competition resulting reduce demand and profit of the Arora fibres limited.

3. **Entry of new units**

   Several manufacturing units have come up in recent times in various specified areas enjoying exemption from Excise Duty, Sales Tax, Concessional Power Tariff, Capital Subsidy etc. offering the fiber at low prices making the company less competitive (Arora fibres ltd, 2007).

4. **Absence of Research and Development**

   There is no activity on Research and development, which is a major reason of low demand and production of the polyester staple fiber for the company.

5. **Global Recession**

   “During the year 2011-12, the Indian economy found itself in the heart of incompatible demands of managing growth amidst price stability. Aggressive hikes in policy rate in a bid to clamp down inflation, high crude oil prices, rising interest rates, lack of domestic policy traction and a worsening global economic environment, saw GDP growth slippage successively on a quarterly basis throughout 2011-12.” The global economic meltdown put the company into difficult economic situation, where competition and input costs was rising enormously due to the inflationary conditions. As the interest rate was witnessing rising trend, the cost of fund also had trend higher therefore, in June 2010, union budget imposed excise duty. The company’s excise
liability estimated at Rs.302.46 lakhs during 2012, which can be heavy burden on the company in future. The company attained sales turnover of Rs. 2341.90 lakhs during 2012 as compared to Rs. 2538.86 lakhs of the previous year. The company registered a net loss of Rs. 600.94 lakhs over the profit of previous year Rs. 42.54 lakhs (Arora fibres ltd, 2012, p. 3).

6.5.3 Hanung Toys and Textiles Limited

The company is engaged in manufacturing and exporting of soft or stuffed toys and cushions since 1990, with a technical collaboration from South Korea. It is the leading producer, exporter and leading brand of soft toys in India, besides the company has expanded its business into the Hometech Textiles Segment in 2002. The company is a preferred supplier to many major importers, retailers and wholesalers in the global market. It has penetrated its Home Furnishings area, with its soft toys in all major western markets. The company is a valued supplier to retailers and wholesalers or importers of shaped cushions, soft toys, sheet and duvet sets, sofa covers, decorative cushions, etc (Hanung toys and textiles ltd, 2012).

Following are the factors that adversely affected the financial performance of the Hanung Toys and Textiles during 2002-2012:

Global recession

The second half of the year 2008-09 was a very complex year because of the global recession. As the global economy was facing a difficult phase resultantly, the company was also facing tough situation in its business. The adverse effects of global recession, which was not good for the health of company, were high food prices, exceptional increases in the prices of raw cotton and major fluctuations in currency. At the same time, the company recognized these challenges and took steps for enhancing productivity, diminishing waste and adopted sustainable marketing strategy. Furthermore, the company also attempted to keep their customers by well-organized cost management and offering better prices to the customers. Thus, there was marginal growth in bottom line and a reasonable growth in the top line (Hanung toys and textiles ltd, 2009).

During 2009-10, the world economies were coming out from the face of recession but it was not very easy task because the customers were cutting down on inventory level and making pricing competitive that was making the business
environment very challenging to cope up this situation. The company increased its productivity standard at low operative cost with the help of modern technology and automated machinery, which facilitated in supplying great value products to the customer at competitive pricing. As the recession was vanishing at this time, the company expected that there will be lots of opportunity in the years to come because the government also announced a stimulus packages in last union budget specially by way of pumping almost Rs. 4500 crore through Technology Up-gradation Fund Scheme (TUF) in textile sector (Hanung toys and textiles ltd, 2010).

During the year 2011-12, the company was able to grow its business and retain its customers resultantly it achieved a steady growth in both the top and bottom line. This became possible due to the steps taken by the company in preceding years i.e. reducing waste, increasing productivity & servicing customer’s needs on time & quality. The company also installed a modern machinery in Roorkee Plant in order to expanded its capacity and capability which facilitates in supplying quality products to its customers at more competitive pricing (Hanung toys and textiles ltd, 2012).

6.5.4 Uniproducts (India) Limited

The Company is engaged in producing wall-to-wall carpets, interlinings, molded carpets, noise vibration and harshness (NVH) insulation parts, roof liner fabrics and heat shields. Besides, it also trades in laminated floorings, carpet tiles, engineered wood, loop pile carpets, decorative grass and similar products. The company is continuously pursuing "customer delight" through manufacture of excellent products at competitive prices. This is reflected in the slogan "Customer is King", and to achieve this aim, the company has executed Total Productivity Management (TPM) techniques in production. It follows lean manufacturing industriously for improving efficiencies, productivity and yield. The company has identified product diversification and new product development as thrust areas and has launched several greens, recyclable and lighter products over the years which now contribute gradually to the company's turnover and profits (Uniproducts India ltd, 2012). Following are the factors that adversely affected the financial performance of the Uniproducts (India) Limited during 2002-2012:
1. Unhealthy competition in Unorganized sector

The manufacturing units of the company, which are engaged in producing needle punch wall-to-wall carpets, are mostly located in unorganized sector that causes quality compromises while offering attractive prices by the company. This has damaged customer confidence in nonwoven needle punch carpets. The company’s philosophy is to attain high level of customer satisfaction therefore; they have had to cut prices for meeting competition and maintaining quality product to the consumer. The company is importing loop pile carpets to meet customer desires in this product category and to enhance the declining revenue per unit of sale, which also offers higher value addition to the company (Uniproducs India ltd, 2003).

2. Low value imports from other Asian and South East Asian countries

However, the company is the only indigenous producer of Thermo bond interlinings, but it is facing severe competition from low value imports from other Asian and South East Asian countries. Thus, the company finalized sources for import of certain grades of thermo bond interlinings not being manufactured by them as a measure to supplement the range and to boost the revenues for upholding the dominance in this segment (Uniproducs India ltd, 2003).

The interlinings and cover stocks are imported at cheaper prices in India, which badly affects the demand of these products manufactured by the company. Therefore, the company is importing interlinings for meeting market demand and supplementing this range produced by them (Uniproducs India ltd, 2004).

3. Global recession

During the year 2008-09, there was global recession which resulted into contraction in demand for automobiles after several years of impressive growth and rose input costs during the first half of the year but the company earned a net profit and sales declined by 2% over the previous year. The overall economic slowdown during the year, which was extremely challenging business environment, resulted into decline in demand for cars that ultimately declined the demand for automotive carpets of the company. These posted a sale of Rs. 11468.61 lakhs during the year, which was a decline of 4% over the previous year. This happened because the automotive sector and the passenger car segment faced a decline in demand after several years of growth due to the slowdown in the Indian economy but the company kept its leadership
position in the market of its product range in the car interiors. “Inflationary conditions which persisted through the first half of the year also adversely affected the profitability.” (Uniproducts India ltd, 2009, p. 14)

There was healthy growth in volumes in the automotive sector during 2009-10 while the realty sector could not be come out from a slowdown in demand. The government introduced various stimulus measures, which have led to a lift up in industrial activity in most sectors, which is expected to continue in the coming years (Uniproducts India ltd, 2010).

4. Increase in raw material prices

During 2011 and 2012, the profitability and capacity utilization of the company were seems to be declined because of the steep increase in raw material prices, high interest costs, increase in interest rates and high manpower cost. To improve profitability and increase capacity utilization, the company initiated various steps for reducing costs, improving efficiencies, tapping new business opportunities, diversifying its product portfolio and enhancing value addition to its customer base. (Uniproducts India ltd, 2011).

5. Tsunami in Japan-2011

During 2011-12, the performance of the company affected adversely because of some unwanted events. The supply chains of Honda Motors and Toyota Motors in India were badly affected due to the tsunami in Japan 2011 and resultantly the vehicle production of these companies was very low in the first quarter. Moreover, some car producers like Hyundai Motors, and specially Maruti, were affected because of labor unrest, which was heavy load for their production and sales. Besides, the production of Honda Motors affected adversely during the year because of floods in Thailand that resulted non-availability of components. As the Uniproducts is a supplier of car carpets to all these car manufactures and that is why sales of the company were impacted during the financial year 2011-12. Furthermore, some of the car that was going to launch in 2011 was postponed for 2012 due to this disorder, which further affected the sales of the company. In addition, profitability of the company also declined due to the high interest as a result company maintained its manpower for the predictable capacity and bear the salary cost because these conditions could not be projected (Uniproducts India ltd, 2012).
6.5.5 Premier Poly films Limited

The company is engaged in the production of sheeting, vinyl flooring and artificial leather cloth. The products of the company are used for a variety of industrial and consumer applications. The image of the company in product quality of the product is very strong which is considered as its strength. The company is the quality leader in the vinyl flooring market and has a significant share of the vinyl flooring, sheeting and artificial leather cloth market. Its overall growth rate of the market size is 5 % to 10% annually (Premier poly films ltd, 2012). Following are the factors that adversely affected the financial performance of the Premier poly films during 2002-2012:

1. Cheaper imported goods

During 2005, the company witnessed low profit due to the stiff competition from indigenous manufacturers and cheap imported goods (Premier poly films ltd, 2005). During 2011, dumping of imported material in the market and detrimental competition from domestic producers due to over capacity were the main factors of low profit margins and sales (Premier poly films ltd, 2011). During 2012, the company could not increase price of its products in dependently because of the domestic and imported products competition (Premier poly films ltd, 2012).

2. Recession

During 2011, there was sharp decline in the exports of the company due to global economic recession. During 2012, the company became able to achieve higher capacity utilization but only for depressed demand of the products, which was due to economic recession both in domestic and foreign markets (Premier poly films ltd, 2012).

3. Increasing cost of raw material

"During 2005 and 2012, the company was operating on paper thin margins. The cost of raw material in the end product was 73-75%. With ever increasing cost elements of manufacturing there was very little the company can do to increase profits" (Premier poly films ltd, 2012, p. 19).
4. Old plant and machinery

The plant and machinery of the company has become very old which requires replacements or major overhauling of almost all the essential machines but the company is not able to bear such huge expenses of its own resources and if company borrows loan from the bank it will increase the burden of interest with this thin margin. The break downs in the plant and machinery of the company have impacted its production capacity harmfully. In the view of such bad situation, the company’s board of directors is thinking about changing or adding some new business activity in the interest of the company and shareholders. Thus, the company is expected to approach shareholders for reconstruction or restructuring of the company at suitable time in future (Premier poly films ltd, 2012).

6.5.6 Reliance Industries Limited

Reliance Industries Limited (RIL) is one of the largest private sector corporations in India who have 500 companies with business in the energy and materials value chain. It is the largest producer of Polyester Fiber and Yarn, 5th largest producer of Para xylene (PX) and Polypropylene (PP) and 8th largest producer of Purified Terephthalic Acid (PTA) and Mono Ethylene Glycol (MEG). The company is continuously augmenting its market in Hometech products. RIL developed PET resins that improved shelf life of perishable goods by providing fence for oxygen and carbon dioxide exchange through container surface. The company has also developed hygiene products, such as hydrophilic spun lace fiber, which has better moisture absorbability and is used for high absorbent hygiene products, micro spun lace fibers for extra soft hygiene applications and trifocal spun-lace fibers. It has also launched a specialized pillow for relief from neck pain while sleeping. RIL has developed a specialized thread for embroidery applications; Recron Bind and a product that increases knitted fabric structure strength (Reliance Industries ltd, 2012). Following are the factors that adversely affected the financial performance of the Reliance industries during 2002-2012:

1. Multi fiber agreement (MFA)

The quotas were fixed by developed countries, which curtailed growth of exports from Reliance during 2002-03 and 2003-04. Reliance as an integrated producer of polyester was strong enough to strengthen its position as the second
largest producer of the polyester (fiber and yarn) and was able to take advantage from the opportunities that lie ahead. (Reliance Industries ltd, 2003). The much-awaited abolition of the textile quota by the US, the EU and Canada was applied from January 2005, which provided big opportunity for the industry to have access to global textile market.

2. Rising crude oil prices

The year 2006-07, 2007-08 was a challenging one for the polyester industry. Rising crude oil prices caused increase in the cost of raw materials therefore, profitability of Reliance in polyester decreased during these years (Reliance Industries ltd, 2007).

3. Foreign exchange fluctuations and interest rate risk

The earnings of Reliance industries in all businesses are connected with US dollars. The company purchases crude oil (key input) in US dollars, their export revenues are in foreign currency and even local prices are based on import parity prices, they also have a large portion of the debt in foreign currency for which company take on liability management transactions and structured derivatives on an ongoing basis (Reliance Industries ltd, 2007). In addition, a majority of the RIL’s borrowings is floating rate debt and hence is exposed to upward movement in interest rates (Reliance Industries ltd, 2012). Therefore, changes in the exchange rate between the US Dollar and the Indian rupee and interest rate risk adversely affected Reliance’s results of operations and financial condition during the years 2007, 2008, 2009, 2010, 2011 and 2012.

6.6 Suggestions for the promotion of Hometech textiles in India

In the light of the analysis and findings, following suggestions are reproduced for the development of hometech sector in India:-

1. Hometech textiles consume both types of fibers i.e. natural as well as manmade. India is a traditional producer of many natural fibers like jute, cotton, coir etc. and manmade fibers like Nylon, polyethylene, polyester, fiberglass etc. It is suggested that the producers should try to use these indigenously available fibers for the production of Hometech products. However, other specialized fibers or yarns, which are not produced indigenously and they are very expensive, should
be permitted to be imported at concessional customs duty of 5 percent and should also be exempted from Countervailing Duty (CVD).

2. A completed at abase of home tech textiles units in the country is necessary for making policy decisions. Therefore, a base line survey of home tech textiles units should be carried out to get the information on the number of units, type of units, type of products produced, investment, turnover etc.

3. Most of the hometech textiles machineries are not produced in the country therefore; the units are compelled to import the same. Some of the technical textile machineries are already covered under the concessional customs duty of 5 percent. It is suggested that the focusing on hometech segment a complete list of hometech textile machinery should be covered under the concessional customs duty list and should be exempted from Countervailing Duty (CVD).

4. The specific rate of duty has been levied on fabrics, garments and made-ups to protect the interest of the indigenous industry from cheap imports. In order to protect the interest of the indigenous home tech textiles industry which would invest in large-scale projects, it is suggested that the duty should be levied on the specific rate of duty or advalorem duty, whichever is higher basis, to protect such units from cheap imports of hometech products.

5. There is a wide spread import of substandard or non-specification hometech textiles products into India such as stuffed toys, blinds, carpet etc. This is also affecting the growth of hometech manufacturing in India, as Indian manufacturers have to compete against these false and sub-standard products at low prices. Thus, it is suggested that the imports of hometech products should be regulated and establish standards for the same.

6. For the encouragement of hometech textiles industry in India, it is necessary that numbers of centers of excellence should be opened for hometech items in India on the lines of such centers in U.K. Such centers can be set up to provide infrastructure support at one place for the convenience of the producers of hometech textiles. It is suggested that 3 centers of excellence for hometech segment should be set up during the Twelfth Five year plan period. The centre of excellence should have the following facilities:
(i) Facilities for testing and evaluation of hometech textiles with national and international accreditation;

(ii) Development of resource centre, equipped with technical literature, reference material, books, a sample bank, standards, testing procedures etc.;

(iii) Facilities for training of core personnel;

(iv) Facilities for training of personnel from industry.

(v) Facilities for product development.

The Centre of Excellence could be recognized based on open tender inviting quotations from all the IITs, TRAs and other engineering institutes. It is estimated that fund requirement for setting up of the Centre of Excellence would be approximately Rs. 15 crore for each centre. Thus, the total financial outlay for setting up 3 centers for these centers would be Rs.45 crore during the Twelfth Five Year Plan.

7. There is shortage of qualified personnel in the hometech textiles sector in the country. This is one of the reasons for the slow growth of hometech textiles. To encourage setting up of the hometech textiles units, it is suggested that a pool of home tech textiles experts should be created in the country. The hometech textiles institutes should be set up in private – public partnership for facilitating training in different aspects of manufacturing of home tech textiles items, particularly furniture fabric, which is one of the most important segments of the hometech textiles industry.

8. For the purpose of creating awareness among the entrepreneurs in the field of technical textiles SASMIRA has been organizing seminars and workshops in various segments of technical textiles for the past one decade but a single workshop has not been planned for hometech segment. Therefore, it is suggested to organize seminars and workshops on Hometech textiles.

9. Home textile producers venturing into the area of hometech textiles should look at the level of their domestic technologies, know-how and competence and should try to modify them to the extent possible to the requisite level. If it is unavoidable to import technology for the production of hometech textiles, it
is suggested that efforts should be aimed at acquiring modern technology as far as possible and be prepared to invest, assimilate, innovate and improve the technology.

10. It is observed that the policies for technical textiles formulated from time to time have made no reference to hometech textiles. This is also a major factor of absence of entrepreneurs in Hometech segments. Therefore, the researcher suggested that a serious, practical and integrated approach should be adopted and supportive policy for hometech should be formulated and implemented by the government.

11. It is suggested that the hometech textiles should be included in the existing curriculum of different branches of textile and apparel technology courses that would enables Textile Engineers to know about hometech textiles.

12. It is appropriate on the part of the producers of hometech textiles to install the essential testing rigs and equipments to keep a strict control over the quality. However, it is not possible for the small and medium scale units due to very high cost of such equipments. Therefore, it is suggested that the government should take initiative for this and execute an urgent action plan for creation of testing facilities in the appropriate textile research association's (TRA's) laboratories in a planned manner.

13. It is suggested that the hometech manufacturers should plan an integral quality assurance system for the plant manufacturing home tech textiles.

14. In order to encourage the production of hometech textiles, the initial need would be to attract entrepreneurs in the field of hometech textiles. Following are the issues, which are necessary for boosting investments in hometech sector in India.

i) Emphasis on the marketing knowhow of hometech textiles;

ii) Creation of hometech sectors in India that needs to spread more awareness on the importance of creating home tech sector base in India for the technical textile industry;
iii) Need for an Indian trade delegation to US and Europe as a measure to make tie-up between international trade bodies related to hometech textiles and

iv) Distribution of information on how to develop useable hometech textile products from raw materials such as fibers and fabrics involving different processing methods such as spinning, weaving, knitting and nonwovens.

v) Need for creating domestic machinery manufacturers for hometech textiles

6.7 Suggestions for Improving the Financial Position of Selected Hometech Companies

Based on analysis, the researcher has found the following suggestions for the betterment of the selected hometech companies:

1. In order to get economies of large-scale production, the home tech companies should try to increase the production. It will help in raising the rate of return on capital employed.

2. In order to increase the financial effectiveness of the companies, it is suggested to control the cost of goods sold and operating expenses.

3. The management should try to adopt cost reduction techniques in their companies to increase the demand and selling price of the hometech products.

4. In order to enjoy better operational efficiency of the assets and capital employed, it is suggested to improve the quantum of sales.

5. To reduce power and fuel cost, it is suggested that the companies should find out other alternatives for this.

6. The selected hometech companies should try to match the amount of working with the sales trends. For this purpose, where there is a deficit of working capital, they should try to build on adequate amount of working capital while, if there is an excessive working capital, it should be invested either in trade securities or should be used to repay borrowings.
7. In order to reduce factory overheads and to utilize their fixed assets properly, it is suggested that the companies should try to utilize their production capacity fully.

8. The burden of interest has produced a worsening effect and reduced the percentage of net profit. It is suggested that the companies should try to increase the owner's fund to reduce the interest burden gradually.

9. To strengthen the financial performance of the companies, long-term funds have to be used to finance core current assets and a part of temporary current assets. The companies should try to reduce the over sized short-term loans and advances and get rid of the risk by arranging finance regularly.

10. The policy of borrowed financing in selected home tech companies under study was not proper. Therefore, the companies are suggested to use widely the borrowed funds and should try to reduce the fixed charges burden gradually by decreasing borrowed funds and by enhancing the owner's fund. For this purpose, companies should expand their equity share capital by issuing new equity shares.

11. The government should improve the infrastructure facilities for regular supply of raw materials and the final product.

12. The government is suggested to minimize the subsidy and encourage the capital market for the hometech companies.

### 6.8 Future Research Directions of the Study

This study is not an end itself with its concluding results. In fact its results, with their entrenched limitations, involve many more inferences, possible contributions to theories and practice and future research opportunities. At the end, the researcher tries to convey the message that this thesis is not an end, but a starting point for an educational journey.

It is challenging to open out and list all the possibilities for a future research agenda since so many research opportunities have arisen from this study. The present study has analyzed the growth and development of Hometech industry in India. In view of the gaps in the present study, further research can be undertaken to with reference to following areas of Technical Textiles:
1. Growth and development of Technical Textile in India can also be analyzed with the addition of some other parameters such as investment and employment;

2. Studies could also examine the growth and development in other segments of Technical Textiles e.g. Meditech, Geotect, etc. in India;

3. Further, financial analysis of Technical Textiles industry in India can be investigated to judge the financial position of the Industry;

4. Financial Analysis in other segments of Technical Textiles industry in India can be studied to judge the financial position of the selected segment;

5. Competitiveness of Indian Hometech sector in global market can be undertaken for study;

6. Furthermore, growth and development or financial analysis of the Technical Textiles or any selected segment can be evaluated in comparison to other countries.
6.9 References


