



## Tirupur Exporters and Their Strength

Dr. R. KARUPPUSAMY

Associate Professor in Commerce, Tagore Arts College, Government of Puducherry, Puducherry. Pin Code – 605 008

**ABSTRACT**

*The present study highlights the strength factors of Tirupur exporters. The researcher shows that the knitwear industry is poised for a giant leap and it would be the prime driver of garment industry in India. Tracing the history of the knitwear industry in Tirupur, the researcher presents the scope and importance of the study. The objectives of the study range from performance, trends, problems, export and suggestions for the future development of the knitwear industry. From the existing exporting units, a total population of 168 units is identified and these are sole proprietorship, partnership, private and public limited companies. The researcher also gives a clear picture of how the primary and secondary data are collected. The limitations of the study are also highlighted. Statistical tools like Trend Analysis, Kruskal Wallis Analysis, ANOVA, Mann-Whitney U Test, H Value and F Test and Chi-square test are used to arrive at clear results from the collected data.*

**KEYWORDS:****Introduction**

India has been exporting garments from time immemorial and has established a distinct position in the world clothing market. India is habitually known as a country producing low cost products as well as fashion garments of good quality, which facilitate to keep hold on market at the international level and act as the major supplier of garments in the world market as well. Indian apparels have now reached all the leading markets in the European Union (EU), the United States of America (USA), Japan and so on. Garments were exported from India under the Multi-Fibre arrangement (MFA) based on the quota system. The United States of America and the European Countries are the largest customers for garments from India.

Coupled with this, knitwear products in India is fast emerging as a very big potential market and the way things are shaping at the moment, it would be no exaggeration or out of place to predict that knitwear would be the prime driver of Garment industry in days to come not only in India but elsewhere as well. Knitwear Industry in India is poised for a huge leap if the current indicators are to be believed. In fact, the trend in India from 1980 onwards has been very much encouraging. The knitwear industry provides one of the basic needs of the civilized man kind to a larger extent. The desires and emergence of fashion among the different segments of customers drive the industry to make an effort to produce variety of knitwear garments to satisfy them. The steady increase in demand led the industry's growth particularly in the past three decades.

In spite of this situation, the Post – liberalisation era has put a path for a healthy competition in the knitwear garment industry and hence faces new, hectic challenges as well as opportunities. The transition from quantitative restriction era (Pre-Quota period) to free trade era (Post-Quota period) has forced the industry to cope with the challenges in all the areas of its management. Indian well equipped dynamic exporters are capitalising the opportunities in the course of catching up the world export market.

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**Knitwear Exports from Tirupur**

Tirupur, a well developed town ship has already acquired a land mark status and established its prominence in the world knitwear market. Tirupur is one of the largest foreign exchange earners in India and also provides ample employment opportunities to about half a million people either directly or indirectly. Majority of the workers have migrated from the nearby villages, districts and states as well.

Tirupur is the district head quarters which was established in the year 2009 and is famous for apparel production in the state of Tamil Nadu. In fact it is one of the towns known for its hosiery products in India. Nearly 10,750 units are engaged in the production of garments for both inland as well as export sales which include fabrication or knitting units, dyeing units, bleaching units, fabric painting units, garment making, embroidery, compacting, raising, and calendaring.

During 70's this city was mainly producing undergarments such as vests and briefs for domestic market consumption. Fortunately, dramatic turn in the early 1980's took place when Tirupur woke up to launch its entry into its export arena mainly due to the timely delivery of quality products with a cheaper price in the international market. During this period Tirupur exporters were concentrating on T- shirts made in small quantities. In the middle of 80's exports of other items gained momentum.

In the late 80's the knitwear industry diversified very quickly and took up manufacture and export of other outer garments viz., Cardigans, Jerseys, Pullovers, women blouses, Skirts, Trousers, Night wears, Sportswears and even Industrial wears. With this impressive growth over a period of about two decades, Tirupur has emerged as the country's highest knitwear exporting centre of India in terms of quantity and achieved a parallel growth pattern having exported 172.1 lakh pieces in the year 1985, and 3,831 lakh pieces in 2001. The number of pieces exported during the year 2007-08 improved to a gigantic figure of more than 5,973.82 lakh pieces which contributes around 60 per cent to the total knitted garment exports from India.

The dramatic change of Tirupur from a centre producing garments for the domestic market to a significant international market is attributed to the fact that most of the western countries started disbanding their garment manufacturing units due to pollution and high labour cost. Concurrently the Asian Tigers like, Japan, Hong Kong, Taiwan and South Korea dominated the knitted garments market in 80s, started moving to high tech areas like electronics and communication, automobile technology and the like enabling Tirupur to capitalise the opportunity for penetrating in to the European market. Besides knitwear units catering to the exports and local markets there are a large number of other ancillary and supporting industrial units operating for manufacture of elastic tapes, cartons, printing of labels, polythene bags, and other packaging materials. The extraordinary growth rate in the export of knitwear items from Tirupur is because of the following reasons:

- Easy availability of raw materials
- Availability of cheap rural labour
- Flexible attitude of entrepreneurs
- Infrastructural facilities
- Supports extended by the export promotional agencies like Apparel Export Promotion Council (AEP), Tirupur Exports, Association (TEA), National Institute of Fashion Technology (NIFT) and New Tirupur Area Development Corporation limited (NTADCL) and the like.

## Review of literature

Malleswaran (2002) in his study entitled "A Study on Garment Industry with Special Reference to Tirupur" stated that the garment industry is the potential industry which generates employment opportunities in all related sectors. The study revealed that majority of the units in partnership firm, employed own capital and are manufacturer exporter. Almost all the exporters are aware of the publications of the WTO on the hosiery industry and geared upto meet the challenges. The author recommends that the Govt. should take steps to improve the basic infrastructural facilities like water, affluent disposal recycling plants and the like to enhance the quality of the garments, the raw materials should be liberally allowed to be imported at a subsidized rate, and existing promotional incentives are to be continued. It is concluded that to modernize the existing units the Govt. should extend required funds through the financial institutions at concessional rate of interest and skilled workers are to be motivated by monetary and non monetary benefits to increase the productivity

Safil Ali (2004) in his article on "Export Performance of Tirupur" is a place traditionally famous for knitwear and popularly known as "knitwear capital" of India. The study reveals that the labour production may be improved by the knitwear manufacturers. It is also evident that the survival and success of knitwear industry in the post MFA phase out period depends on the ability to modernize, improve quality and productivity. The man power development needs to be paid attention, especially, developing the knowledge and skills of the work force.

Sanjay Gupta (2006) in his article on "Textile Enterprises in Digital Age" brings light on the transformation from Analog to digital technology. The most important development that has been influenced by digital technology in textile sector is the globalization of the textile trade. Globalization led by the phase out of the MFA the global movements towards the liberalization of the trade and the entry of China into the WTO has completely changed the way the textile companies do business.

The author also states that, looking at the adoption trends for digital technologies and towards modular machines and control systems. Although the implementation of the advanced fully integrated process control strategies are still some time away, the current level of integration is sufficient to optimize the information flow throughout the entire supply chain. Data connecting through Ethernet, TCP/IP Protocol or lately 802.11b wireless technology is facilitating bi-directional communication of data. Electronic data inter change has made accessibility of data possible between machines within a plant, between plant and enterprise or more importantly between supplies and customers. The power of internet can be harnessed to facilitate advance co-operation among partners, suppliers and customers with the concept of "extended company".

Knitting Views (2007) has made a study that "Tirupur aims at 25,000 crores export turnover by the 11th plan end". Mr. A Sakthivel president of Tirupur Exporters' Association foresees an export target of Rs.25,000 crores for the knitwear town by the end of the 11th plan. He says that Tirupur's export performance was Rs.10 crores in 1985 and it has achieved Rs.11,000 crores in the financial year 2007 despite all odds. This achievement was possible due to hard work, sincerity and dedication put forth by exporters and they are always in the forefront in the introducing new technology and adopting latest concepts and systems. Tirupur knitwear units are employing 3,50,000 workers directly and 1,50,000 workers indirectly. The report also reveals that the latest developments are the Nethaji Apparel Park, the NIFT-TEA Knitwear Fashion Institute (which provides training to rural youth in the area of knitwear production). There are 52 units existing in the Nethaji Apparel Park, out of which 49 units are operational and functioning well. The individual investments of the units vary from Rs.4 crore to 6 crores. The quantum of exports in the year 2006-07 from the Nethaji Apparel Park was Rs.1,500 crores.

Mini Pant (June 2007), in her article "India Inspires" reports that the recently staged India Knit Fair at out skirts of Tirupur, (India), now boasts its own convention centre reflects the industry's rapid growth in the country. But a weak of dollar and lack of marketing prowess mean exhibiting companies are not reaching their full potential. The study also emphasises the present situation of apparel industry in India. The knitwear industry in India is on an upswing. Growth records a steady 25 per cent per annum in the last three years with export turnover of

Rs.5,000 crores in 2004 to 11,000 crores in 2007.(The Indian textile industry as a whole, records 8 to 10 per cent growth per annum) Tirupur described as the 'Town of Export Excellence', in the Export Import Policy of India accounts for a 56 per cent chunk of this foreign exchange earnings. With industry projections of 20 to 25 per cent growth for the next three years. Tirupur is the significant destination for the foreign buyers, justifying the two annual events of spring/summer and autumn/winter collections organized by the India Knit Fair Association (IKFA).

Asian Textile Journal (2007), in its Indian news pages present that the "textile and apparel companies from Tirupur which flourished on exports for years are now turning their focus homewards", due to appreciation of rupee leading to increase their reach within domestic shores. The key factors which are driving the domestic demand are, growing youth population, rising house hold income, increasing consumer spending and rapid growth in organized retailing. The exporters who had initially visualized retailing to be just an additional line of revenue contributing less than 10 per cent of turnover are now reaping good revenue through an increasing domestic demand.

Zhao Heming and Luo Bin (2008), report that there are tougher times for China after a period of unprecedented growth. Factors such as exchange rates, regulation and the US down turn are filtering through the Chinese knitting industry. The Chinese knitting industry faced many challenges like the continuous currency appreciation, decline of export rebate and implementation of Labour Contract Law to name a few. The environmental factors, pricing credit crisis are also play a vital role in the export of Knitwear products. The report also states that there are 22 knitting clusters in China, organised and appointed by the China National Textile and Apparel Council (CNTAC). In 2007, the productive value of these 22 clusters came to be more than 100 billion Yuan. One of the clusters, Yiwu in Zhejiang Province is ranked number one in China. It has about 1500 sock manufacturers, 10 lace manufacturers, 230 zip manufacturers and 400 tape manufacturers. From raw material supply, weaving, dyeing and printing to garment making, sewage treatment and logistic, a complete industry chain has formed in the industrial clusters. The Chinese Government set up an integrated supply chain for the uninterrupted production, the manufacturers in China capitalizes the opportunity and made a permanent place in the international market for their textiles and the knitwear products. But still, the china is encountered the problems like its currency appreciation, major changes in the labour policies, decline in the rebate rate etc. causes the modest reduction in the exports.

Rajesh Chhabara, (Jan.2008) in his article on "Building Credibility of Indian Supply Chain" observed that, India has remained one of the favoured destinations for apparel in the post-quota years. Low labour cost is a prime reason and sewing skills, quality, hand skills, fabrics, competitive pricing, relatively peaceful industrial relations are the other reasons for capturing the global market. The apparel exports still a key driver of economic activity includes foreign exchange earnings and employment opportunities for the masses. The author also states that social accountability plays a key role in deciding who can and who cannot manufacture the particular brand. Price and quality are no more deciding factors, but it is the brand that plays a vital role because it works towards minimizing such risk by employing factory audits and monitoring for code violations.

Panthaki (2008), in his article on "knits overtakes woven, good portents for future" states that a favourable development is that both the USA and the EU are inclined to offer India a Zero-for-Zero tariff and although the modalities are yet to be worked out, implementation of this should help move a couple of notches up in the WTO ladder. The year 2006-07 was a disappointing year for garment exports. Exports increased barely three per cent over the previous year from \$ 8.61 billion, on the back of 39 per cent increase in the first year after the end of the Agreement on Textile and Clothing (ATC). The basic reason for this was the massive 10 per cent appreciation of the rupee against the US \$, whereas the currency of competing Asian suppliers depreciated or at least appreciated to much less extent.

The review of earlier studies provides an extensive focus on the Indian apparel industry and also the knitwear industry in Tirupur to a larger extent. The views, ideas, outlook, and criticism of the adepts at national and international level were more concerned about production, marketing, management, technology and other aspects of export related problems in the apparel industry.

Even though some of the studies have concentrated on the problems of knitwear industry in India, more particularly in Tirupur, and some researchers have analysed the prospects for the knitwear exporters from Tirupur, nobody have attempted systematically to study the trends in the growth of knitwear industry products, their problems and prospects and also a SWOT analysis for the knitwear exports from Tirupur. This potential gap is sought to be filled in this piece of research.

### Statement of the Problem

The Indian garment industry records the momentous growth over the past three and half decades. India being the world's tenth largest exporter of apparel relies heavily on its exports to sustain its identity. The reason behind this may be unchanging increase in demand in international market for garments, particularly knitted garments from India. Though the knitwear garment industry caters to the needs of the consumers in international market, this industry is not an exception to problems. It faces many critical problems such as labour, finance, production, market, infrastructure, Government regulations, archaic technology, competition and the like. As a result of which the overall performance of the knitwear industry is affected. In addition to this, the implications of the phasing out of the Multi Fibre Arrangement (MFA) and removal of quota under the WTO's Agreement on Textiles and Clothing in global textile market, forced the exporting units to equip themselves to meet the competition and develop competitiveness. Due to the removal of quota system the industry lost its assured market and has to struggle hard to capture a place in the competitive market.

### Problems due to Change in Policy

Before the abolition of the Quota system, the Multi-fibre Arrangement (MFA) was in force. Under the MFA the quota was determined for the importing country and every importing country had the limit for their import of garments from India. With the abolition of the Quota System (w.e.f.1.1.2005) under the WTO's Agreement on Textiles and Clothing (ATC), the assured market for the Indian garment exporters was lost and the competition from the developing countries like China, Bangladesh, Taiwan, Pakistan and Sri Lanka and the like started increasing. As a result of this and being unable to quickly adjust to the technological and other changes, many of the exporting units from Tirupur closed their business. These problems pose serious threat to the knitwear industry and hence it is very important to analyse the problems arising out of it and ensure the remedial measures.

Further, in Tirupur, the exporters are producing their products according to the tastes, preferences and requirements of the foreign buyers. The Tirupur exporters produce the goods under the brand name of the foreign buyers (importers) as such the exporters have only "Business to Business" (B to B) contact, and not "Business to Customers" (B to C) Contact. This is because most of the exporting units are managed by the families and are classified as proprietorship, firms and private limited companies. The net result is that most of the exporters have not maintained their own brand name in the international market which is a major setback to the exporters of Tirupur.

Therefore, it would be more relevant to make an attempt to study the problems and prospects of knitwear exports from Tirupur and to find out the effective ways and means to enhance the knitwear garment exports.

### Objectives of the Study

The following are the major objectives that prompted the study.

- To evaluate the export performance of the Knitwear units in Tirupur and their contribution to the total Knitted garment exports from the country.
- To investigate the trends in the export of the knitwear garments towards different destination and also to examine the role of the Export Promotional Organisations.
- To identify the exporter's problems in respect of Raw Materials, Production, Finance, Marketing, Competition, Labour and changes in the textile policy and the like and to study the recent developments that have taken place in this regard to meet these problems.
- To analyse the export performance in the Pre-Quota period, the impact of the removal of the Quota System on exports and its prospects.
- To offer suggestions on the basis of the findings of the study.

### Methodology

The study depends on both the primary (by way of issue of question-

naire) and secondary data, adopting the following sampling design. The study refers to Tirupur, which is famous for knitted garment manufacturing and exporting. It is recently established as a separate district by the Government of Tamil Nadu. The bustling town is situated 50 kms east of Coimbatore city in Tamil Nadu, with a population of over 7 lakhs. The municipal area of the town is spread over 32.50 sq. kms.

### Sampling design

Tirupur Knitwear garment exporting units are classified into two categories. One is registered and another is unregistered. The total number of registered knitwear units as per the Tirupur Exporters' Association (TEA) records is 672. More than 600 unregistered knitwear units are functioning either by concentrating on exports or on domestic sales. Out of the 672 registered knitwear garment exporting units, the sample units are selected by adopting a convenient random sampling method from the cluster of organisations like Sole Proprietorship, Partnership Firms, Private Limited Companies and Public Limited Companies.

To make the research more scientific, the primary data are collected from 1/4th of the total population i.e. 168 units out of 672 exporting units from each cluster for the detailed analysis. In this process the selected sampling units are as follows.

**Table 1**  
Distribution of sample units

Form	Number of Units	Percentage
Sole Proprietorship	56	33.33
Partnership	100	59.53
Private Limited Companies	8	4.76
Public Limited Company	4	2.38
Total	168	100

Source: Primary Data

From the above table it is clear that, majority of the respondents are from partnership firms as a hosiery unit needs a huge capital investment.

### Primary Data

The primary data are collected through the discussion with the executives of the bodies like the Apparel Export Promotion Council (AEPCC), the Tirupur Exporters' Association (TEA), the South India Hosiery Manufacturers' Association (SIHMA). Tirupur and also through the issue of a questionnaire to elicit the data from the 168 respondents.

### Secondary Data

The primary data are supplemented by the secondary data. The secondary data is also collected from the records maintained by the AEPCC Tirupur, the TEA, the SIHMA in Tirupur, Ministry of Textiles in New Delhi. The secondary source was also collected by visiting to the leading libraries of the South India Mills Association (SIMA) Coimbatore and the Department of Tamil Nadu Industrial Guidance and Export Promotion Bureau, Chennai.

The secondary data were also collected from the leading journals and publications on hosiery exports, like, the Apparel Views, the Textile Progress, the Knitting Views, the Knitting International, the Textile Asia, the Apparel Online, the Textile Magazine, the Hand Book of Export Statistics (published by the AEPCC), the Asian Textile journal, the Apparel Times, the New Cloth Market, the Cloths Line, the Cotton Textile Report, the Statistical Year Book of All India Hosiery Promotion Council and the South India Textiles Research Association (SITRA) Library, Coimbatore.

### Limitations of the Study

One of the major limitations of the study is that the exports are carried out to a larger extent from different parts of the country like Mumbai, Ludhiana, Delhi, and Bangalore and the like whereas this study is restricted to Tirupur town alone. The researcher tried to attain cent percent accuracy while collecting data from the respondents. But it may vary due to the lesser number of respondents selected for data collection instead of the entire population.

**Table 2**  
Level of Agreement with Various factors of Strengths of Knitwear Exporters – All Sample

Particulars	Mean	SD	Z Value
Availability of Raw Materials	4.08	0.53	26.52***
Cost of Raw Materials	3.57	0.64	11.51***

Labour Cost Advantage	3.59	0.59	12.89***
Skilled Labour Availability	3.13	0.84	2.03**
Availability of Designers	3.43	0.73	7.60***
The Smallness of Units	3.68	0.61	14.53***
The Ability to Supply in Small Units or Quantities	4.14	0.68	21.88***
Capability in Product Development and / or Adaptation	3.89	0.85	13.51***
The Infrastructure	3.33	0.59	7.14***
The Institutional Frame Work	3.28	0.52	6.92***
The Incentives	3.22	0.79	3.60***
English Speaking Entrepreneurs /Executives	4.29	0.76	22.00***
Delivery in Small Quantity	4.22	0.76	20.77***

\*\*Significant at 5% level; \*\*\*Significant at 1% level.

From the table, it is found that the mean scores, which ranged between 3.13 (Skilled Labour Availability) and 4.29 (English speaking people) are more than '3' (the value for neutral level). Further Z values for all strength factors are significant. This shows that the entire sample respondents have agreed with all strength factors. Further, from the

mean values, it is evident that "English speaking entrepreneurs and executives" (Mean = 4.29) is the major strength followed by "delivery even in small quantity" (Mean = 4.22), "The ability to supply even in small units or quantities" (Mean = 4.14), "availability of raw materials" (Mean = 4.08) and "Capability in product development and / or adaptation" (Mean = 3.89) for knitwear exporters in Tirupur are the major factors of strength for the exporters. The degree of strength relating to "skilled labour availability" (Mean = 3.13), "the incentives" (Mean = 3.22), "the institutional frame work" (Mean = 3.28) and "the infrastructure" (Mean = 3.33) is not up to the mark. The other strength factors listed in the table are found to be at moderate level.

The level of agreement with various aspects of strength is compared across respondent groups by the types of organizations using one-way ANOVA which is presented in table 3 for analysis.

**Table 3**  
**Level of Agreement with Strengths of Knitwear Exporters of Tirupur – Comparison by Types of Organizations**

Various Aspects of Strength	Types of Organizations				F Value
	Public Limited	Private Limited	Sole Proprietorship	Partnership	
Availability of Raw Materials	3.75 (0.50)	4.25 (0.46)	4.02 (0.49)	4.12 (0.56)	1.24
Cost of Raw Materials	4.25 (0.50)	3.75 (0.46)	3.75 (0.44)	3.43 (0.71)	5.08***
Labour Cost Advantage	4.00 (0.82)	3.63 (0.52)	3.52 (0.50)	3.61 (0.63)	0.96
Skilled Labour Availability	3.00 (1.15)	3.75 (0.71)	3.39 (0.53)	2.94 (0.92)	5.45***
Availability of Designers	2.75 (0.96)	3.63 (0.74)	3.63 (0.49)	3.33 (0.80)	3.44***
The Smallness of Units	3.50 (0.58)	3.63 (0.52)	3.71 (0.49)	3.68 (0.68)	0.19
The Ability to Supply in Small Units or Quantities	3.50 (1.00)	3.88 (0.99)	4.39 (0.59)	4.05 (0.64)	5.15***
Capability in Product Development and / or Adaptation	4.00 (0.00)	4.00 (0.76)	4.09 (0.77)	3.76 (0.90)	1.90
The Infrastructure	3.25 (0.96)	3.50 (0.53)	3.34 (0.48)	3.31 (0.65)	0.28
The Institutional Frame Work	3.50 (0.58)	3.25 (0.46)	3.27 (0.45)	3.28 (0.57)	0.25
The Incentives	3.50 (0.58)	3.25 (0.46)	3.34 (1.12)	3.14 (0.57)	0.93
English Speaking Entrepreneurs and Executives	4.75 (0.50)	4.13 (0.83)	4.59 (0.50)	4.12 (0.83)	5.59***
Delivery in Small Quantity	3.25 (0.96)	4.00 (0.93)	4.36 (0.64)	4.20 (0.78)	3.13***

Figures in parentheses are standard deviation; \*\*\*Significant at 1% level.

From the analysis it is observed that the mean values vary from 2.75 (Availability of Designers) to 4.75 (English speaking entrepreneurs and executives) for Public limited companies, 3.25 (The institutional frame work) to 4.25 (Availability of Raw Materials) for Private limited companies, 3.27 (The institutional frame work) to 4.59 (English speaking entrepreneurs and executives) for Sole proprietorship and from 2.94 (Skilled Labour Availability) to 4.20 (Delivery in small quantity) for partnership firms.

The F values, obtained from one-way ANOVA for the differences in group means are insignificant for all strength factors except "Skilled Labour Availability" (F value = 5.45, p < 0.01) and "Availability of Designers" (F value = 3.44, p < 0.05). The mean perception is found to be in the neutral level in respect of "Skilled labour availability" (Mean = 3.03) for Public limited companies.

The comparison of level of agreement with strength factors across exporter groups by types organizations, is found that all factors except "skilled labour availability" for public limited companies and partnership firms and "availability of designers" for public limited companies are found to be the strength factors, whereas in the private limited companies and in sole proprietorship concerns, all the factors are strength factors.

The comparison of the strength of knitwear exporters were analyzed by category wise in the table 4.

Table shows that "skilled labour availability" with mean value of 3.00 is not the strength. The F value for this factor is not significant, in turn indicating that the group means are almost equal. Hence, it can be concluded that "skilled labour availability" for all the types of exporters is not the strength. The F value is significant for "cost of raw materials" (F Value = 4.51, p < 0.01), "Capability in product development and / or adaptation" (F Value = 2.63, p < 0.10), "The institutional frame work" (F value = 6.83, p < 0.01) implies that those factors are found not that much strength to the respondents under firm category.

**Table 4**  
**Level of Agreement with Various Strengths of Knitwear Exporters – Comparison by Category of Firms**

Various Aspects of Strength	Category of Firms			F Value
	Manufacturer Exporter	Merchant Exporter	Manufacturer / Merchant Exporter	

Availability of Raw Materials	4.08 (0.52)	-	4.11 (0.66)	0.06
Cost of Raw Materials	3.55 (0.66)	-	3.95 (0.40)	4.51***
Labour Cost Advantage	3.58 (0.57)	3.71 (0.59)	3.58 (0.77)	0.36
Skilled Labour Availability	3.13 (0.80)	-	3.26 (0.87)	0.44
Availability of Designers	3.41 (0.70)	-	3.58 (0.84)	0.45
The Smallness of Units	3.67 (0.61)	3.94 (0.66)	3.58 (0.51)	1.86
The Ability to Supply in Small Units or Quantities	4.17 (0.68)	4.06 (0.66)	4.05 (0.71)	0.38
Capability in Product Development and / or Adaptation	3.86 (0.85)	-	4.26 (0.56)	2.63*
The Infrastructure	3.32 (0.58)	3.24 (0.56)	3.47 (0.70)	0.79
The Institutional Frame Work	3.23 (0.47)	3.24 (0.56)	3.68 (0.67)	6.83***
The Incentives	3.18 (0.78)	3.24 (0.83)	3.47 (0.84)	1.13
English Speaking People	4.30 (0.73)	4.12 (0.93)	4.42 (0.84)	0.72
Delivery in Small Quantity	4.22 (0.76)	4.29 (0.77)	4.16 (0.76)	0.14

Figures in parentheses are standard deviation  
\*Significant at 10% level. \*\*\*Significant at 1% level

Regarding other strength factors, the mean values are in the “agreeable” range (above ‘3’, the neutral value) for all the three exporter groups, the differences in group means are insignificant. Even for the factors with significant differences in group means, the mean perception scores are well above neutral level except “The institutional frame work” for manufacturer (Mean = 3.23) exporters and hence it is concluded that except “skilled labour availability” “the institutional frame Work” the other factors are the strength factors for the exporters. (since, the merchant exporters are not engaged in production of garments, the factors like skilled labour availability, cost of raw materials, availability of designers and capability in product development and / or adaptation will not apply to them).

This level of agreement of the exporters of Tirupur for the various strength factors- a comparison by business experience is presented in table 1.4 for analysis.

The table 5 presents the results of one way ANOVA (F value) along with mean and standard deviation. The mean scores have been at minimum level for all the three types of respondents under business experience groups. The “skilled labour availability” (Mean = 3.17, 3.05 and 3.18 for respondents less than 10 years, 10-15 years and above 15 years of business experience respectively). The differences in mean values across groups are found to be significant at 5 per cent and 10 per cent level for “Labour Cost Advantage” and “Availability of Designers” respectively. Except for these two factors, the differences in group means are insignificant for the remaining factors, which are indicative of the fact that the level of agreement remains the same for all business experience groups of exporters.

**Table 5**  
**Level of Agreement with Various Strengths of Knitwear Exporters – Comparison by Business Experience**

Various Aspects of Strength	Business Experience			F Value
	Below 10 Years	10-15 Years	Above 15 Years	
Availability of Raw Materials	3.98 (0.60)	4.14 (0.51)	4.14 (0.45)	1.68
Cost of Raw Materials	3.60 (0.62)	3.53 (0.68)	3.58 (0.64)	0.16
Labour Cost Advantage	3.45 (0.65)	3.60 (0.56)	3.74 (0.53)	3.38***
Skilled Labour Availability	3.17 (0.74)	3.05 (0.94)	3.18 (0.83)	0.40
Availability of Designers	3.60 (0.69)	3.33 (0.85)	3.34 (0.59)	2.62*

The Smallness of Units	3.60 (0.59)	3.81 (0.58)	3.64 (0.66)	1.96
The Ability to Supply in Small Units or Quantities	4.13 (0.68)	4.14 (0.76)	4.16 (0.58)	0.02
Capability in Product Development And / Or Adaptation	3.82 (0.81)	3.90 (1.05)	3.96 (0.60)	0.39
The Infrastructure	3.38 (0.61)	3.26 (0.61)	3.34 (0.56)	0.66
The Institutional Frame Work	3.27 (0.55)	3.21 (0.52)	3.38 (0.49)	1.50
The Incentives	3.22 (0.83)	3.19 (0.93)	3.26 (0.56)	0.11
English Speaking Entrepreneurs and Executives	4.28 (0.80)	4.34 (0.69)	4.24 (0.80)	0.26
Delivery In Small Quantity	4.28 (0.74)	4.24 (0.76)	4.12 (0.80)	0.66

Figures in Parentheses are Standard Deviation  
\*Significant at 10% level. \*\*\*Significant at 1% level

Hence the comparison of level of agreement across groups by business experience, it is evident that all the factors, except “skilled labour availability” are strength factors for knitwear exporters in Tirupur.

**The Weakness Factors of the Tirupur Exporters**

The level of agreement with the factors related to weakness of knitwear exporters are evaluated from the opinion of the total respondents and the results of analysis are presented in table 6.

**Table 6**  
**Level of Agreement with Various Factors of Weaknesses of Knitwear Exporters – All Sample**

Various Aspects of Weakness	Mean	SD	Z Value
Cost of Finance	3.27	0.72	4.91***
Fluctuating Prices of Raw Materials	3.36	0.69	6.75***
Cotton Orientations	3.25	0.57	5.73***
Road Transportation	3.86	1.08	10.38***
Ports	3.48	0.67	9.39***
Communication	2.95	0.70	-0.99
Energy	3.15	0.66	3.06***
Water	3.07	0.57	1.49
Logistics	3.08	0.65	1.55
Small Scale Nature of Industry	3.01	0.71	0.11
Obsolete Technology	3.97	0.91	13.79***
Absence of International Branding	3.29	0.90	4.13***
Reduction in Incentives	3.15	0.64	3.14***
Pollution Control Measure by the Govt/ Courts	3.08	0.64	1.57
Lack of Professionalism	3.28	0.64	5.69***
Fabric Production System Contribute to Delay in Delivery	3.30	0.66	5.93***
Less Investment in Technology Up-Gradation	3.66	0.60	14.33***
Delay in Delivery	3.70	0.81	11.26***

\*\*\*Significant at 1% level.

From the observation of the table, it is obvious that, the minimum and maximum mean value is 2.95 (Communication) and 3.86 (road transportation), and the mean values are not in the agreeable level for “water” (Mean = 3.07, Z value = 1.49, insignificant), “logistics” (Mean = 3.08 with insignificant Z value of 1.55), “Small scale nature of industry” (Mean = 3.01, Z value is trivial), “Pollution control measure by the Government / Courts” (Mean = 3.08, Z = 1.57, p > 0.10, not significant) in addition to “communication” means that the exporters in Tirupur have not perceived the ‘water’ as a major weakness.

It is concluded that from mean scores of respondents of all segments the factors listed in the table are the major weakness of the exporters in Tirupur.

The table 7 presents the level of agreements among the types of organizations in respect of the weakness. Public limited companies reported that “communication” (Mean = 2.75), “water” (Mean = 2.75), “logistics” (Mean = 2.75), “small scale nature of industry” (Mean = 3.00) as not of their weakness. The partnership and private limited companies respondents also expressed the similar opinion with regard to those factors (The exception is that level of agreement for exporters of

sole proprietorship concern in respect of “communication” and “water” against which the mean score is 3.18 and 3.21 and differ significantly at 5 per cent and 10 per cent level from that of other groups respectively). The sole proprietors have strongly agreed that “ports” as weakness factor and differ significantly from other two types of organisation (Mean = 3.71, F value = 3.63, p < 0.01).

**Table 7**  
**Level of Agreement with Weaknesses of Knitwear Exporters – Comparison by Types of Organizations**

Various Aspects of Weakness	Types of Organizations				F Value
	Public Limited	Private Limited	Sole Proprietorship	Partnership	
Cost of Finance	3.25 (0.96)	3.38 (0.52)	3.30 (0.63)	3.25 (0.78)	0.12
Fluctuating Prices of Raw Materials	3.50 (0.58)	3.38 (0.74)	3.45 (0.60)	3.30 (0.73)	0.60
Cotton Orientations	3.25 (0.50)	3.38 (0.74)	3.38 (0.65)	3.17 (0.49)	1.73
Road	3.75 (1.50)	4.13 (0.83)	4.09 (0.94)	3.72 (1.14)	1.60
Ports	3.50 (0.58)	3.38 (0.52)	3.71 (0.80)	3.36 (0.56)	3.63***
Communication	2.75 (0.96)	3.00 (0.93)	3.18 (0.64)	2.82 (0.69)	3.37**
Energy	3.25 (0.50)	3.13 (0.64)	3.13 (0.66)	3.17 (0.67)	0.09
Water	2.75 (0.96)	2.88 (0.64)	3.21 (0.65)	3.01 (0.48)	2.35*
Logistics	2.75 (1.26)	2.88 (0.64)	3.21 (0.65)	3.03 (0.61)	1.63
Small Scale Nature of Industry	3.00 (0.00)	3.13 (0.35)	2.98 (0.67)	3.01 (0.77)	0.09
Obsolete Technology	4.00 (0.82)	4.13 (0.64)	3.86 (1.05)	4.02 (0.85)	0.46
Absence of International Branding	3.75 (0.50)	3.63 (0.74)	3.34 (0.94)	3.21 (0.89)	1.04
Reduction in Incentives	3.75 (0.50)	3.38 (0.52)	3.00 (0.57)	3.20 (0.67)	2.83**
Pollution Control Measure by the Govt / Courts	3.75 (0.50)	3.38 (0.52)	2.95 (0.44)	3.10 (0.72)	2.99**
Lack of Professionalism	3.75 (0.50)	3.13 (0.35)	3.23 (0.57)	3.30 (0.69)	1.02
The System of Fabric Production Contribute to the Delays in Delivery	3.50 (0.58)	3.13 (0.35)	3.18 (0.51)	3.38 (0.75)	1.43
Less Investment in Technology Upgradation	3.75 (0.50)	3.38 (0.52)	3.59 (0.56)	3.72 (0.62)	1.24
Delay in Delivery	3.50 (0.58)	3.25 (0.46)	3.73 (0.84)	3.73 (0.81)	0.98

Figures in parentheses are standard deviation  
\*Significant at 10% level. \*\*Significant at 5% level

Further, the sole proprietorship concern showed least interest about “Reduction in incentives” (Mean = 3.00, F value = 2.83, p < 0.05) and “Pollution control measure by the Government / Courts” (Mean = 2.95, F value = 2.99, p < 0.05). Hence “Reduction in incentives”, “Pollution control measure by the Government / Courts”, are not the weakness perceived by the sole proprietors since opinions of the exporter are differing significantly from the other groups.

It is evident from the analysis remaining mean values across respondents under types of organizations the factors other than “communication”, “water”, “logistics” and “small scale nature of industry” are weakness for knitwear exporters in Tirupur.

Table 8 presents the level of agreement with various factors relating to weakness of knitwear exporters across firm category of exporters.

The analysis of the table shows that the mean score is either below or near to ‘3’ for manufacturer exporters in terms of “communication” (Mean = 2.88), “energy” (Mean = 3.09), “water” (Mean = 3.05), logistics (Mean = 3.07), “small scale nature of industry” (Mean = 2.98), “reduction in incentives” (Mean = 3.14) and “Pollution control measure by the Government / Courts” (Mean = 3.05).

**Table 8**  
**Level of Agreement with reference to Factors of Weaknesses of Knitwear Exporters – Comparison by Firm category**

Aspects of Weakness	Firm Category			F - Value
	Manufacturer Exporter	Merchant Exporter	Manufacturer / Merchant Exporter	
Cost of finance	3.27 (0.69)	3.18 (0.81)	3.42 (0.90)	0.55
Fluctuating Prices of Raw Materials	3.35 (0.68)	3.24 (0.83)	3.53 (0.61)	0.86
Cotton Orientations	3.22 (0.54)	3.29 (0.69)	3.42 (0.61)	1.11
Road	3.87 (1.12)	3.65 (1.00)	4.00 (0.82)	0.50
Ports	3.48 (0.67)	3.24 (0.44)	3.68 (0.75)	2.07
Communication	2.88 (0.69)	3.18 (0.88)	3.21 (0.54)	2.93**
Energy	3.09 (0.66)	3.29 (0.69)	3.47 (0.51)	3.34**
Water	3.05 (0.58)	3.18 (0.39)	3.11 (0.66)	0.45
Logistics	3.07 (0.61)	3.12 (0.70)	3.11 (0.88)	0.06
Small Scale Nature of Industry	2.98 (0.70)	3.12 (0.60)	3.11 (0.88)	0.50
Obsolete Technology	3.94 (0.93)	3.88 (0.93)	4.26 (0.73)	1.14
Absence of International Branding	3.29 (0.90)	3.29 (1.16)	3.26 (0.56)	0.01
Reduction in Incentives	3.14 (0.62)	3.12 (0.93)	3.26 (0.45)	0.32
Pollution Control Measure by the Govt / Courts	3.05 (0.62)	3.06 (0.83)	3.26 (0.56)	0.91
Lack of Professionalism	3.27 (0.63)	3.12 (0.70)	3.47 (0.61)	1.44
The System of Fabric Production Contribute to the Delays in Delivery	3.30 (0.64)	3.12 (0.70)	3.53 (0.77)	1.76
Less Investment in Technology upgradation	3.67 (0.56)	3.35 (0.70)	3.89 (0.66)	3.84**
Delay in Delivery	3.73 (0.80)	3.35 (0.86)	3.84 (0.76)	1.96

Figures in parentheses are standard deviation;  
\*\*Significant at 5% level.

In respect of “communication” (F value = 2.93, p < 0.10) and “energy” (F value = 3.34, p < 0.05), the manufacturer exporters’ mean opinion score, which was not in the “agreeable” level, differ significantly from that of merchant exporters category (Mean = 3.18 and 3.29 for communication and energy) and manufacturer-cum- merchant exporters (Mean = 3.21 and 3.47) category. But the difference in group means is only at marginal level for communication. At the same time, for “water”, “logistics”, “small scale nature of industry”, “reduction in incentives” and “Pollution control measure by the Government / Courts”, there is no difference in group means. This indicates that all the three exporter groups did not felt those factors as weakness. For the rest of the factors, the mean scores are in the agreeable level for all the three category of exporters; in turn indicate that those factors are weakness factors. Though F value is significant for “Less investment in Technology up gradation” (F = 3.84, p < 0.05), the mean scores are in the “agreeable” level for all the three types of exporters in this category. Hence in can be concluded that all the factors except ‘communication’, ‘water’, ‘logistics’, ‘small scale nature of the industry’, ‘reduction in incentives’ and ‘pollution control measures by the govt./ courts’, all are the weakness factors for the exporters of Tirupur.

The weakness factors perceived by the exporters of Tirupur are analyzed based on the experience of exporters in the business in the following table 9.

**Table 9**  
**Level of Agreement with reference to the Weakness Factors of Knitwear Exporters – Comparison by Business Experience**

Various Aspects of Weakness	Business Experience			F Value
	Below 10 Years	10 – 15 Years	Above 15 Years	
Cost of finance	3.37 (0.64)	3.14 (0.87)	3.32 (0.62)	1.63
Fluctuating Prices of Raw Materials	3.30 (0.72)	3.33 (0.76)	3.46 (0.54)	0.82
Cotton Orientations	3.28 (0.61)	3.33 (0.60)	3.12 (0.44)	1.99
Road	4.02 (1.08)	3.76 (1.13)	3.80 (1.01)	0.97
Ports	3.45 (0.75)	3.57 (0.62)	3.42 (0.61)	0.78
Communication	2.93 (0.71)	3.16 (0.70)	2.72 (0.64)	5.44***
Energy	3.13 (0.65)	3.22 (0.68)	3.10 (0.65)	0.53
Water	3.08 (0.62)	3.16 (0.56)	2.94 (0.51)	1.98
Logistics	3.05 (0.67)	3.16 (0.70)	3.02 (0.55)	0.67
Small Scale Nature of Industry	3.02 (0.81)	3.10 (0.64)	2.88 (0.66)	1.33
Obsolete Technology	4.10 (0.80)	3.84 (0.99)	3.96 (0.95)	1.16
Absence of International Branding	3.30 (0.87)	3.36 (1.02)	3.18 (0.77)	0.56
Reduction in Incentives	3.22 (0.61)	3.12 (0.75)	3.12 (0.52)	0.44
Pollution Control Measure by the Govt / Courts	3.05 (0.62)	3.02 (0.76)	3.18 (0.48)	0.96
Lack of Professionalism	3.33 (0.66)	3.36 (0.67)	3.12 (0.56)	2.30*
The System of Fabric Production Contribute to the Delays in Delivery	3.37 (0.76)	3.29 (0.59)	3.24 (0.62)	0.51
Less Investment in Technology upgradation	3.73 (0.71)	3.66 (0.51)	3.58 (0.54)	0.90
Delay in Delivery	3.67 (0.73)	3.81 (0.87)	3.62 (0.83)	0.83

Figures in parentheses are standard deviation  
\*Significant at 10% level. \*\*\*Significant at 1% level.

The comparison of mean values across the respondent groups by business experience, shows that the opinion of the exporters with less than 10 years of experience did not “agree” that the ‘communication’ (Mean = 2.93), ‘water’ (Mean = 3.08), ‘logistics’ (Mean = 3.05), ‘Small scale nature of industry’ (Mean = 3.02) and ‘Pollution control measure by the Government / Courts’ (Mean = 3.05) as factors of weakness for the exporters of Tirupur.

The exporters of above 15 years of business experience have not agreed that there is “lack of professionalism” and they differ significantly in this view from other two groups (F value = 2.30,  $p < 0.10$ ) at marginal level. The significant difference in the opinion about communication across groups can also be observed (F value = 5.44,  $p < 0.01$ ). But mean scores for all three groups are not in the agreeable level. For the remaining factors, the mean scores are in the “agreeable” range for all three business experience groups.

Hence, from the aforesaid, it can be concluded that, the exporters from Tirupur perceived that “Road”, “Obsolete Technology”, “Less Investments in Technological Up gradation”, “Delay in Delivery” are the major weaknesses.

### Opportunities

Post-quota removal opened up innumerable opportunities to the exporters of Tirupur to establish their business to find a permanent place in the world trade. Moreover, the falling share of garment manufacturing of the industrialized countries, increasing demand for Indian knitted garments particularly from Tirupur for the supply of variety of designer garments for different types of customers. In the light of this, the views of the exporters with regard to the opportunities, the relevant data were collected and presented for analysis.

The opinion scores ranging from “strongly disagree” to “strongly agree” with various opportunity factors are presented for entire sample and the results are shown in table 10 for analysis.

**Table 10**  
**Levels of Agreement with the Opportunities for Knitwear Exports from Tirupur – All Sample**

Aspects of Opportunities	Mean	SD	Z Value
Removal of Quota Restrictions under WTO	4.49	0.55	35.39***
Falling Share of Garment Manufacturing of the Industrialized Countries	4.04	0.54	25.00***
Buyers Preference for Indian Garments over Others	4.02	0.60	22.16***
Increasing Wages / Labour Cost of Competing Countries	3.52	0.90	7.53***
Cluster Approach Gaining Momentum in Tirupur	3.50	0.57	11.40***
Trade Fairs / Common Brand Development Programmes	3.61	0.73	10.72***
Strength of Trade Association	3.53	0.66	10.33***

\*\*\*Significant at 1% level.

The observation of the table indicates that the mean opinion scores, vary between 3.50 and 4.49, is significantly higher than ‘3’, the value for neutral level, i.e. the mean values are in “agreeable” level for all the factors as opportunities.

Hence, it clear that “Removal of quota restrictions under WTO”, “Falling share of garment manufacturing of the industrialized countries” and “Buyers preference of Indian Garments over others” are the best opportunities for knitwear exporters from Tirupur for improving their export business.

In the same way, the opportunities are analyzed based on the opinions of the exporters types of the organization category and business experience category and the results are presented in the table 11.

**Table 11**  
**Level of Agreement with Various Opportunities for Knitwear Exporters – Comparison by Types of Organizations**

Various Aspects of Opportunities	Types of Organizations				F Value
	Public Limited	Private Limited	Sole Proprietorship	Partnership	
Removal of Quota Restrictions under WTO w.e.f 1.1.2005	4.75 (0.50)	4.38 (0.52)	4.52 (0.50)	4.48 (0.58)	0.47
Falling Share of Garment Mfg of the Industrialized Countries	4.25 (0.50)	3.88 (0.35)	4.02 (0.67)	4.06 (0.47)	0.52
Buyers Preference of Indian Garments over others	4.00 (0.00)	4.00 (0.53)	3.96 (0.63)	4.06 (0.60)	0.31
Increasing Wages / Labour Cost of Competing Countries	3.25 (0.96)	4.13 (0.35)	3.68 (0.66)	3.40 (1.02)	2.55*
Cluster Approach Gaining Momentum	3.50 (0.58)	3.88 (0.35)	3.25 (0.58)	3.61 (0.53)	6.62***
Trade Fairs / Common Brand Development Programmes	4.00 (0.00)	3.88 (0.35)	3.48 (0.79)	3.64 (0.73)	1.35
Strength of Trade Association	4.00 (0.00)	3.75 (0.46)	3.25 (0.67)	3.65 (0.64)	5.82***

Figures in Parentheses are Standard Deviation  
\*Significant at 10% level. \*\*Significant at 5% level.

Table 11, reveals that the mean values for the first three opportunity factors ranges between 3.88 (Falling share of garment manufacturing of the industrialized countries for private limited companies) and 4.75 (Removal of quota restrictions under WTO for public limited companies). The mean value, 3.25 for private limited companies in respect of “Increasing wages / labour cost of competing countries” (F value = 2.55,  $p < 0.10$ ), 3.25 for sole proprietorship concerns against “Cluster approach gaining momentum” (F value = 6.62,  $p < 0.01$ ) as well as against “Strength of Trade Association” (F value = 5.85,  $p < 0.01$ ) is significantly less compared to that of other groups.

Regarding “Trade fairs / Common brand development programmes”, there is a significant difference in ‘group means’, which vary from 3.48 to

4.00. From the analysis it is understood that "Removal of quota restrictions under WTO", "Falling share of garment manufacturing of the industrialized countries", "Buyers preference of Indian Garments over others" and "Trade fairs / Common brand development programmes" are the best opportunities reported by the exporters of public and private limited companies, sole proprietorship concerns and partnership firms.

Table 12 presents the mean values with F values for the difference in means across the firm category of exporters. The respondents of this category have perceived all the factors as opportunities. This is because the mean values are much above neutral level and they are in "agreeable" range for all groups in respect of first three opportunity factors. For manufacturer exporters, mean opinion scores, 3.45, 3.47, 3.58 and 3.50 for the last four factors, are less than that of those in merchant and manufacturer-cum- merchant exporter groups.

**Table 12**  
**Level of Agreement with Various Opportunities for Knitwear Exporters – Comparison by Firm Category**

Various Aspects of Opportunities	Firm Category			F Value
	Manufacturer Exporter	Merchant Exporter	Manufacturer / Merchant Exporter	
Removal of Quota Restrictions under WTO w.e.f 1.1.2005	4.48 (0.55)	4.41 (0.62)	4.63 (0.50)	0.81
Falling Share of Garment Mfg of the Industrialized Countries	4.04 (0.56)	4.12 (0.60)	4.00 (0.33)	0.23
Buyers Preference of Indian Garments Over Others	4.02 (0.62)	4.18 (0.53)	3.95 (0.52)	0.72
Increasing Wages / Labour Cost of Competing Countries	3.45 (0.90)	3.65 (1.06)	3.89 (0.66)	2.18
Cluster Approach Gaining Momentum	3.47 (0.57)	3.53 (0.62)	3.68 (0.48)	1.21
Trade Fairs / Common Brand Development Programmes	3.58 (0.74)	3.59 (0.94)	3.84 (0.37)	1.10
Strength of Trade Association	3.50 (0.66)	3.53 (0.62)	3.74 (0.73)	1.05

Figures in parentheses are standard deviation.

Though, the mean perception of manufacturer exporter group is less when compared to other two category of exporters, the difference in group means are not significant at required level, in turn revealing that the group means are almost same and existing small differences are just due to chance. So, based on the level of agreement among exporters of manufacturer, merchant and manufacturing-cum-merchant category, it is inferred that "Removal of quota restrictions under WTO", "Falling share of garment of the industrialized countries" and "Buyers preference for Indian Garments over others" are the top most opportunities available for knitwear exporters from Tirupur.

The mean perception of the respondents across the respondents by business experience, as shown in Table 13, it is evident that the "Removal of quota restrictions under the WTO" is ample opportunity for knit-wear exporters as all three business experience groups have given high level of agreement with the above factor (Mean value is 4.52, 4.45 and 4.52 for all groups i.e. less than 10years, 10-15 years and above 15 years of business experience).

Followed by the mean values between 4.00 and 4.08, indicates that "Falling share of garment manufacturing of the industrialized countries" and "Buyers preference for Indian Garments over others" are the other two opportunities for exporters from Tirupur.

**Table 13**  
**Level of Agreement with Various Opportunities for Knitwear Exporters – Comparison by Business Experience**

Various Aspects of Opportunities	Business Experience			F Value
	Below 10 Years	10 – 15 Years	Above 15 Years	
Removal of Quota Restrictions under WTO w.e.f 1.1.2005	4.52 (0.54)	4.45 (0.57)	4.52 (0.54)	0.31

Falling Share of Garment Mfg of the Industrialized Countries	4.05 (0.53)	4.00 (0.59)	4.08 (0.49)	0.30
Buyers Preference of Indian Garments Over Others	4.00 (0.66)	4.05 (0.57)	4.02 (0.55)	0.11
Increasing Wages / Labour Cost of Competing Countries	3.60 (0.92)	3.47 (0.92)	3.50 (0.86)	0.35
Cluster Approach Gaining Momentum	3.52 (0.60)	3.41 (0.59)	3.58 (0.50)	1.19
Trade Fairs / Common Brand Development Programmes	3.63 (0.76)	3.41 (0.86)	3.80 (0.45)	3.90**
Strength of Trade Association	3.45 (0.70)	3.41 (0.68)	3.76 (0.56)	4.49***

Figures in parentheses are standard deviation

\*\*Significant at 5% level. \*\*\*Significant at 1% level.

The mean values for the last four factors are also in the "agreeable" range but the level of agreement among the respondents is less compared to the first three factors. Further, the differences in group means are significant at 5 per cent level for "Trade fairs / Common brand development programmes" (F Value = 3.90, p < 0.05) and at 1 per cent level for "Strength of Trade Association" (F value = 4.49, p < 0.01). Hence it is concluded that, the "removal of quota", "falling share of garment manufacturing of the industrialized countries", and "buyers preference of Indian garments over others", are the major opportunities available for this category.

**THREAT FACTORS**

The threats which are likely for knitwear exporters of Tirupur are put forth for respondents' perception, and the scores based on their opinion of each threat factor are analyzed by calculating mean and Z value for the difference between observed and hypothetical mean (3, the value for neutral level).

**Table 14**  
**Level of Agreement with Various Threats to Knitwear Exporters – All Sample**

Aspects of Threats	Mean	SD	Z Value
Phase out of Quantitative Restriction i.e., Quota	2.14	0.99	-11.19***
Emergence of New Production Centres like Bangladesh / Vietnam, Pakistan and Sri Lanka (Asian Countries)	4.01	0.56	23.51***
Unpopularity of (Indian Garment) Brand Image	3.80	0.52	19.89***
Lack of Presence of Value Additions	3.08	0.89	1.13
Competition with Other Countries	4.04	0.49	27.35***
Government Policy Changes with Regard to Export	3.45	0.70	8.39***
Competitiveness of Units	3.40	0.80	6.57***
Pollution Problems	3.63	0.70	11.61***

\*\*\*Significant at 1% level

As shown in table, the mean value, 2.14 for "Phase out of quantitative restriction i.e., quota" (Z value = -11.19, is significantly less than 3, and very well in the "disagree" level) and 3.08 for "Lack of presence of value additions" is not in "agreeable" range (Z value is insignificant and so equal to 3'), in turn indicating that these two factors are not the threats for knitwear exporters from Tirupur.

On the other hand, from mean values between 3.40 and 4.04 for the remaining factors, it is understood that "Competition with other countries" is the major threat followed by "Emergence of new production centres like Bangladesh/ Vietnam, Pakistan and Sri Lanka (Asian Countries)" and "Pollution problems".

The same analysis conducted for the types of organizations by collecting the relevant data and the processed data is shown in the table 15.

**Table 15**  
**Level of Agreement with Various Threats to Knitwear Exporters – COMPARISON by Types of Organizations**

Various Aspects of Threats	Types of Organizations				F Value
	Public Limited	Private Limited	Sole Proprietorship	Partnership	



Phase Out of Quantitative Restriction i.e., Quota	1.25 (0.50)	2.13 (0.83)	1.98 (0.65)	2.27 (1.14)	2.16*
Emergence of New Production Centres like Bangladesh / Vietnam, Pakistan and Sri Lanka (Asian Countries)	4.50 (0.58)	4.38 (0.52)	3.75 (0.58)	4.11 (0.49)	8.24***
Unpopularity of (Indian Garment) Brand Image	4.00 (0.00)	3.88 (0.35)	3.88 (0.54)	3.74 (0.52)	1.09
Lack of Presence in the Value Added Items	4.00 (0.00)	3.75 (0.71)	2.86 (0.86)	3.11 (0.89)	4.41***
Competition with Other Countries	4.00 (0.00)	4.00 (0.53)	4.11 (0.49)	4.01 (0.50)	0.49
Government Policy Changes with Regard to Export	3.75 (0.50)	3.63 (0.74)	3.32 (0.54)	3.50 (0.77)	1.22
Competitiveness of Units	3.75 (0.50)	3.88 (0.64)	3.05 (0.75)	3.55 (0.78)	6.47***
Pollution Problems	4.00 (0.00)	4.00 (0.76)	3.61 (0.49)	3.59 (0.79)	1.26

Figures in parentheses are standard deviation  
\*Significant at 10% level. \*\*Significant at 5% level.

The observation of the table shows that public limited companies have strongly disagreed while private limited companies, sole proprietorship concerns and partnership firms have disagreed that "Phase out of quantitative restriction or quota" is a threat for their exports. The difference in group means is marginally significant (F value = 2.16, p < 0.10) but just within "disagree" range. The respondents of sole proprietorship concern perceived "Lack of presence in the value additions" (Mean = 2.86) and "competitiveness of units" are not threats (Mean = 3.05).

The respondents from partnership firms are almost in the similar perception. Further, their level of agreement with "Government policy changes with regard to export" is also less but it does not differ significantly from other groups (F value is insignificant). The F value is significant for "Emergence of new production centers like Bangladesh / Vietnam, Pakistan and Sri Lanka (Asian Countries)" for difference in group means (F value = 8.24, p < 0.01) but within agreeable range. However, F value, 4.41 for "Lack of presence in the value additions" is significant at 1 per cent level, in turn indicating that it is either threat or not differ completely between sole proprietorship concerns partnership firms and public and private limited companies.

Similarly, significant F value of 6.47 for "Competitiveness of units" at 1 per cent level indicates that the opinion of the sole proprietorship concerns significantly differ from that of other types of organization. Based on the comparison of opinion across the types of organization, it is found that "Competition with other countries" is the major threat followed by "Emergence of new production centres like Bangladesh / Vietnam, Pakistan and Sri Lanka (Asian Countries)", "Pollution problems", and "Unpopularity of (Indian Garment) Brand image" for Tirupur exporters.

Table 16 shows that the manufacturer, merchant and manufacturer-cum-merchant exporters have not agreed that "Phase out of quantitative restriction i.e., quota" as threat to their exports (Mean value vary from 2.06 and 2.26 for all three groups). The perception of the threats to Tirupur knitwear exporters is analysed by way of collecting the relevant data and the processed data is presented in the table 16.

**Table 16**  
**Level of Agreement with Various Threats to Knitwear Exporters-Comparison by Firm category**

Various Aspects of Threats	Firm category			F Value
	Manufacturer Exporter	Merchant Exporter	Manufacturer / Merchant Exporter	
Phase out of Quantitative Restriction i.e., Quota	2.14 (0.96)	2.06 (0.97)	2.26 (1.28)	0.20
Emergence of New Production Centres like Bangladesh, / Vietnam Pakistan and Sri Lanka (Asian Countries)	3.98 (0.58)	4.18 (0.53)	4.05 (0.40)	0.94
Unpopularity of (Indian Garment) Brand Image	3.80 (0.49)	3.94 (0.43)	3.68 (0.75)	1.10

Lack of Presence in the value Added Items	3.04 (0.85)	3.29 (0.99)	3.16 (1.07)	0.71
Competition with other Countries	4.04 (0.47)	3.94 (0.66)	4.16 (0.50)	0.88
Government Policy Changes with Regard to Export	3.43 (0.70)	3.47 (0.72)	3.58 (0.69)	0.37
Competitiveness of Units	3.36 (0.75)	3.41 (0.87)	3.68 (1.00)	1.34
Pollution Problems	3.61 (0.72)	3.76 (0.66)	3.58 (0.61)	0.40

Figures in parentheses are standard deviation

The manufacturer exporters perceived "Lack of presence in the value additions" in their products as not threat to them. The other two groups level of agreement with regard to this factor is higher but not differ significantly from that of manufacturer exporter group. This scenario exhibits that all the three types of exporters have perceived "Lack of presence in the value additions" as potential threat to the exporters from Tirupur.

The mean values for all the three groups in respect of other factors are "agreeable" and F values for the difference in group means are insignificant. Therefore, from the comparison of mean perception across categories by firm category of exporters, it is concluded that "Competition with the other countries" is the most potential threat, followed by "Emergence of new production centres like Vietnam / Bangladesh, Pakistan and Sri Lanka (Asian Countries)", "Unpopularity of (Indian Garment) Brand image" and "Pollution problems" for the knitwear exporters from Tirupur.

**Table 17**  
**Level of Agreement with Various Threats to Knitwear Exporters –Comparison by Business Experience**

Various Aspects of Threats	Business Experience			F Value
	Below 10 Years	10 – 15 Years	Above 15 Years	
Phase out of Quantitative Restriction i.e., Quota	2.35 (1.07)	2.02 (0.96)	2.04 (0.90)	2.06
Emergence of New Production Centres like Vietnam / Bangladesh, Pakistan and Sri Lanka (Asian Countries)	4.00 (0.64)	3.95 (0.57)	4.10 (0.42)	1.01
Unpopularity of (Indian Garment) Brand Image	3.80 (0.63)	3.76 (0.47)	3.84 (0.42)	0.33
Lack of Presence in the Value Additions	2.82 (0.81)	3.26 (0.89)	3.18 (0.92)	4.28**
Competition with Other Countries	4.05 (0.47)	4.05 (0.57)	4.02 (0.43)	0.07
Government Policy Changes with Regard to Export	3.47 (0.72)	3.48 (0.73)	3.40 (0.64)	0.21
Competitiveness of Units	3.38 (0.85)	3.40 (0.75)	3.44 (0.81)	0.07
Pollution Problems	3.65 (0.68)	3.64 (0.67)	3.58 (0.76)	0.15

Figures in parentheses are standard deviation  
\*Significant at 10% level. \*\*Significant at 5% level.

The above table presents the mean level of agreement along with F value for the significance of the differences in mean scores across exporter groups by business experience. "Phase out of quantitative restriction i.e., quota" is perceived to be not as threat by all three business experience groups (Mean values are between 2.04 and 2.35).

The exporters in the group with business experience of less than 10 years have not perceived "Lack of presence in the value additions" as threat (Mean = 2.82) and they differ significantly from other two groups (F value = 4.28, p < 0.05).

To sum up, from the analysis of threat factors across exporter groups by business experience, it is found that "Competition with other countries" is main threat and "Emergence of new production centres like Vietnam / Bangladesh, Pakistan and Sri Lanka (Asian Countries)", "Unpopularity of (Indian Garment) Brand image" and "Pollution problems" are other potential threats for knitwear exporters.

The analysis of the strength, weakness, opportunities, and threat factors for the knitwear exporters from Tirupur are further summarized in the tables 18 and 19.

**Table 18**  
**Summary of Strengths and Weaknesses of Knitwear Exporters Based on the Perception of the Entire Sample exporters**

Strength	Weakness
Availability of Raw Materials	Delay in Delivery
Cost of Raw Materials	Obsolete Technology
Labour Cost Advantage	Less Investment in Technology Upgradation
Skilled Labour Availability	Fluctuating Prices of Raw Materials
Availability of Designers	Ports
The Smallness of Units	Road
The Ability to Supply Even in Small Units or Quantities	Cotton Orientations
Capability in Product Development and / or Adaptation	The System of Fabric Production Contribute to the Delays in Delivery
The Infrastructure	Energy
The Institutional Frame Work	Absence of International Brand Image
The Incentives	Reduction in Incentives
English Speaking People	Lack of Professionalism
Delivery in Small Quantity	Cost of Finance
Communication	
Water	
Logistics	
Small Scale Nature of Industry	
Pollution Control Measure by the Govt / Courts	

From the observation of the table it is found that availability of 'raw material', 'skilled labour force', 'availability of designers', 'English speaking entrepreneurs/executives', 'capacity to deliver even in small quantity', 'communication' etc. are considered as major strength of exporters and at the same time 'delay in delivery', 'fluctuating prices of raw materials', 'obsolete technology', 'bad roads and road transportation', 'ports' and the like are the major weakness of the Tirupur exporters.

**Table 19**  
**Comparison of Opportunities and Threats to Knitwear Exporters from Tirupur based on the Perception of the Respondents (All sample)**

Opportunities	Threats
Removal of Quota Restrictions under WTO w.e.f 1.1.2005	Emergence of New Production Centres like Bangladesh / Vietnam, Pakistan and Sri Lanka (Asian Countries)
Falling Share of Garment Manufacturing of the Industrialized Countries	Unpopularity of (Indian Garment) Brand Image
Buyers Preference of Indian Garments over others	Competition with Existing Global Players like China, Korea, Hong Kong etc.
Increasing Wages / Labour Cost of Competing Countries	Government Policy Changes with Regard to Exports
Cluster Approach Gaining Momentum in Tirupur	Competitiveness of Units
Trade Fairs / Common brand Development Programmes	Pollution Problems
Strength of Trade Association	
Phase out of Quantitative Restriction / Quota	
Lack of Presence in the Value Added Items in other Countries.	

The exporters of Tirupur have in one voice expressed the "Removal of Quota System" as a major opportunity to gain a place in the global market and also put a new path to the unexplored International market

Competition from the existing global players in the knitwear exports like China, Korea, Hong Kong etc. are giving a tough fight to Tirupur exporters. Hence it is visualised as a major threat. Emergence of new production centres like Bangladesh, Vietnam, Pakistan and Sri Lanka also pose threat to Tirupur exporters.

The overall analysis shows that the Strengths of the exporters of Tirupur are many and the Weaknesses are few. (Though the weakness factors are considered few, but powerful and have cannot be taken lightly. Hence, further efforts in this area are required to solve those weaknesses). The opportunities to the Tirupur exporters are again a many when compared to the threats. In fine when the strength and the opportunities are more than the weakness and threats, the exporters of Tirupur can go a long way.

**Conclusion**

Knitwear sector in India has taken the major chunk of its share in India's textile exports. The exports of knitwear items from India has made stride and occupied more than 50 percent of its total Ready Made Garment (RMG) exports. The key centres of the knitwear exports are Tirupur, Mumbai, Delhi, Ludhiana and Bangalore. Tirupur is a place traditionally famous for knitwear and now it has come to be known as "Knitwear Capital of India" and it is able to increase its share in the export market from about 15 percent in the year 1981 to more than 58 percent in 2008. The knitwear sector in the garment industry has under gone significant changes and the gradual up gradation of technology has facilitated its growth. Hence, Tirupur has emerged as a modern exporting knitwear manufacturing industrial cluster among all the exporting centres across the world.

The major findings and attempt to offer useful suggestion for its betterment in the areas such as raw materials, labour, marketing, technology up gradation, infrastructure, product quality and the like. Both primary and secondary data have been collected and analysed by using the appropriate statistical tools such as the Trend Analysis, the Kruskal Wallis Analysis, ANOVA, the Mann-Whitney U test, H value and F test and Chi-square test and the like and arrived at the results. The study, in an overview emphasizes the knitwear exporter's performance across the country by selecting 10 major exporting centres. Among those centres Tirupur retains first position based in its continuous performance over the period of three decades. But still the exporters of the scanty town looks forward for the achievement of Rs.25000 crores export earnings by the end of the 11th plan.

Even before the industrial revolution took place in England, India seems to have obtained perfection in manufacturing fine variety muslim sarees which can be put in a match box. Tirupur seems to have been a place of cotton market. Both the hand loom weaving and manufacturing hosiery items seems to have started earlier in Tirupur. In the recent past three decades, it has achieved perfection and popularity in the manufacture of knitwear items. Enlarging the products in the recent has given the exporters from Tirupur a good chance to do so. The multi-fibre arrangement has been providing an assured market for the manufacturing hosiery items. But the removal of the quota system has thrown a challenge to the exporters from Tirupur. But the enterprising entrepreneurs have turned the challenges in to a potential opportunity for their "Survival and growth". Not only the exporters from Tirupur, but also the exporters from other places like Mumbai, New Delhi, Chennai, Kolkata, Ludhiana, etc. have performed well with the support made available by the institutions like the AEPC, the TEA and others.

The exports from Tirupur and other places have increased manifold. All the exporters from different places have faced different problems and the exporters from Tirupur have faced the problem of lack of skilled labour force, frequent power cuts, fluctuating yarn prices, poor transportation facilities, but still, it have provided large amount of employment opportunities to the people from different parts of the state and earned much needed foreign exchange to India. By and large the Tirupur exporters have surmounted the problems and identified their future prospects through the abolition of the quota system because of their entrepreneurial skills.

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