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RECONCEIVING PRODUCTS AND MARKETS FOR THE SUSTAINABLE DEVELOPMENT OF TIRUPUR'S HOSIERY INDUSTRY

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Abstract: *The hosiery industry in Tirupur is the outcome of the sustained efforts of the entrepreneurs in Tirupur. From a humble beginning of Rs 75 crores in 1987, the town now exports around Rs25000 crores. Over the years the entrepreneurs here have kept up with the changing technology. They have streamlined their production processes to match international standards. Their focus primarily was on upgrading the quality of their products to compete in the international market and they were also quite successful in their efforts. But in the process they had caused serious environmental degradation. The entrepreneurs here are actively engaged in CSR activities for the upliftment of the society. But what is now required is a socially responsible entrepreneur who is willing to reconceive his products and markets. This can happen only by switching over to eco friendly methods of production. This article discusses the feasibility of this transition for Tirupur.*

Key words : Environmental degradation, Reconceiving products, Sustainable development

I. INTRODUCTION

Entrepreneurs across the globe are unified on the idea of contributing to the society. They do this through their Corporate Social Responsibility (CSR) initiatives which extend into a wide range of activities such as promoting education, empowering women, improving mental health, eradicating poverty, protecting environment and so on. In this way every business tries to compensate for the resources they utilise from the economy. But we have reached a stage where these activities are inadequate and the society is in need of something beyond CSR. What the society now needs is a socially responsible entrepreneur who can redefine his products and markets to achieve sustainable development. By integrating eco friendly processes and methods into production an entrepreneur can redefine his products thereby ensuring sustainable development.

This article discusses the possibility of applying this concept to the hosiery industry in Tirupur. Tirupur is a classical example for a natural cluster. The entrepreneurs in Tirupur have come a long way against odds without much support from the government. Majority of them belong to one community (Gounder) and their communal affinity has helped Tirupur to emerge into a successful knitwear export cluster. Starting with a humble beginning of just 75 crores in 1987, Tirupur now exports around 25000 crores [1] of knitwear to the rest of the world. Though the town has made remarkable achievement, it was only at the cost of its environment. Textile production is one of the highly pollutant processes in the world. The concentration of industrial activities in Tirupur has depleted and deteriorated the water resources thereby affecting the quality of life at Tirupur. This article discusses the possibility of reconceiving products and markets for Tirupur to achieve sustainable development.

II. HISTORY OF TIRUPUR

Tirupur a small town in Tamilnadu during the decades after India's independence, shot to fame after 1985 as a busy exporting town of hosiery products to most of the developed countries of the world. Not only the town has the pride of being called 'dollar town' and the 'town that never sleeps', it had the honour of being applauded as the 'town of export excellence' by the EXIM policy 2002-07 [2]. Tirupur, situated in the coimbatore district of Tamilnadu was basically an agrarian economy with the predominant crop being cotton. Being situated in a rain shadow region, the climatic condition of Tirupur was best suited for the cultivation of cotton crop. This led to the emergence of a large market for raw cotton (unginned) in Tirupur. In course of time, many cotton ginning factories were also established and actually Tirupur was basically a cotton ginning cluster before it got transformed into a hosiery cluster.

Since Tirupur was a region with scanty rainfall, agriculture often failed which made people look for secondary occupation. The strength Tirupur had in cotton breeding made people slowly engage themselves in cotton related activities. They wove cloth out of hand spun yarn known as 'Khadhi' and made their living. It was at this point of time, in the early thirties that some one brought a few hand operated knitting machines from Kolkatta, the birth place of hosiery industry and started making tubular hosiery cloth which was subsequently bleached, cut and stitched into men's vest knows as 'Banians' in local trade. Even though knitting came to Tirupur in 1920s, progress worth mentioning took place only after 1935. According to the President of Tirupur Exporters Association (TEA) the first hand operated hosiery factory was set up in the year 1935. Knitting to the city was brought by Gulam Kadar in 1937. He established 'Baby knitting industries' in Kaderpet area of Tirupur. It was followed by the establishment of second knitting unit by a woman, Chellammal in the name of 'Chellammal Knitting.' The low investment required for hand operated knitting machines and easy availability of yarn from the spinning mills in the nearby Coimbatore region helped the entrepreneurs to set up their manufacturing facilities in Tirupur. With the availability of specialised hosiery yarn and skillful labour the banians made in Tirupur were of high quality. Soon it had good demand from the northern parts of India. The high mineral content in the local water, which was the bane of agriculture, played a significant role in Tirupur's success in textiles. Cloth bleached with the local water came out whiter. This was before the arrival and extensive use of chemicals like chlorine in bleaching and that was how Tirupur made a name for itself in the grey and white briefs and vests market. The product range widened with the manufacture of bleached and dyed undergarments and within a short span of time the industry expanded and many tiny and small hosiery units sprang up to meet the growing demand. From then onwards for more than four decades, Tirupur was dominating the domestic market for knitted briefs and vests.

An important factor that has significantly contributed to Tirupur's success is the work ethics of the Gounder community. Almost 80 per cent of the exporters come from this traditionally agricultural community[3]. The men spent 12-14 hours on the farm as a matter of routine and brought this ethic to the factory. It is a fact that the Gounder community's work practices have contributed a lot to Tirupur's success. Also community connections help them substantially in business. Many exporters have been extended yarn only on the basis of a handshake and without any need to provide for guarantees. Also if someone bagged an order and was not able to execute it he passed it on to a fellow community member . Trust and hard work have helped this agricultural community's first-generation entrepreneurs to build companies worth several hundred crores.

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Although the garment manufacturers in Tirupur were bold enough to venture into international markets, the credit of introducing Tirupur knitwear to the world market goes to an Italian by name Antonio Verona[4]. He was a businessman from Italy who was based in Bombay and sourcing knitwear mainly T-Shirts from Bombay and Delhi. He heard about Tirupur and visited the place in the late 70s. He immediately realised the potential of the industry and taught banian manufacturers in Tirupur the techniques of making T-shirts out of bleached cotton. He then marketed these products abroad. He also brought dyeing technicians from Italy and taught Tirupur entrepreneurs the art of dyeing. He encouraged them to produce coloured T-shirts by giving them ready orders. He saw that there was good demand for coloured T-shirts in the world market and introduced more businessmen to trade with Tirupur. They started placing large orders with Tirupur's manufactures. From then onwards, there was an explosive growth in Tirupur's export trade. The first export was made to US and Ghana in 1972[5] by Mohan knits through a Bombay merchant exporter but it could not be sustained. However in the later years the entrepreneurial spirit and heavy competition in the domestic market forced the manufacturers to look beyond national boundaries. Thus in 1980s a few units made sustained efforts to export and also succeeded. From then onwards there was no turning back for Tirupur and today it has become the heartland of the knitwear industry in India.

III. ENVIRONMENTAL ISSUES

Tirupur started experiencing environmental degradation ever since its breakthrough into exports. The success in exports gave a huge thrust to this industry resulting in springing up of hosiery units of different sizes in the nook and corner of this town in a thoughtless manner. Several entrepreneurs enthusiastically entered into this field and made a fortune. The market grew at such a pace that it was able to accommodate everyone who entered this field. While the robust growth of this industry contributed tremendously to the economic prosperity of this town, the concentration of industrial activities in a small geographical resulted in heavy pollution.. The knitwear production process can be classified into dry and wet processes. The figure below illustrates the activities that fall under dry and wet processes.

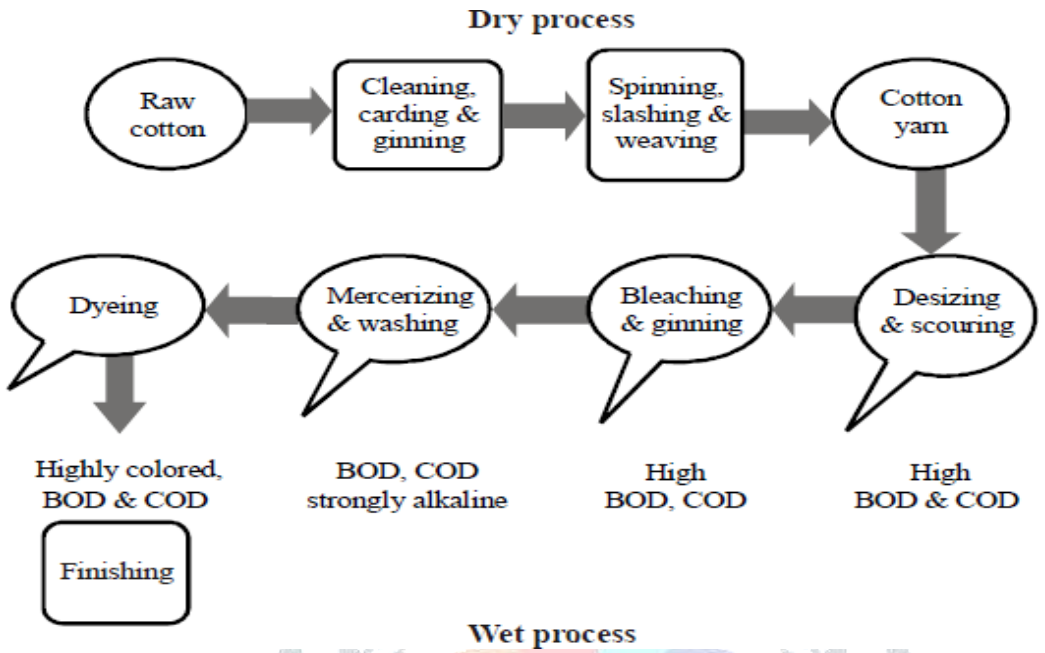

Figure 1: Cotton fabric production and associated water pollutants

Source: "Report on assessment of pollution from textile dyeing units in Tirupur, Tamilnadu and measures taken to achieve zero liquid discharge, Central Pollution Control Board, Zonal Office (South), Bengaluru.

Of all the processes mentioned above, the bleaching and dyeing are the most pollutant. Bleaching the grey colour of the knit fabric is essential for the dyeing process. This process involves mixing of bleaching powder in water through which the grey fabric is made to pass. There are various other chemicals used as well. Almost 60 percent of the bleached fabric requires dyeing and it accounts for almost 10 to 15 percent of the cost of finished garments[6]. In almost two hours of time, the dye-stuff is completely absorbed by the cloth which is then rinsed with fresh water, and treated with a few other ingredients and detergents. The quality of dyeing is also determined by the hardness of water used. The textile wet processing units (bleaching, dyeing) are the major consumers of water as well as major contributors to pollution. The discharge of salts in effluent from the dyeing factories in Tirupur has led to large-scale environmental degradation.

In Tirupur, most of the bleaching and dyeing units are located in clusters along the banks of the river Noyyal. The partially treated and untreated effluent from dyeing units was discharged into this river till 2006, which resulted in significant increase in TDS and chloride level in the Noyyal River and Orathupalayam dam located across the river. This problem reached new dimension when the High Court directed the dyeing units to install Zero Liquid Discharge (ZLD) plant and also ordered closure of dyeing units that did not comply with ZLD. Following the court order many knitwear units joined hands to installing Common Effluent Treatment Plants (CETP). These CETPs consisted of physico - chemical, biological treatment, RO plant and reject management systems to achieve ZLD. Soon individual Effluent Treatment Plants (IETP) were also set up and Tirupur became the first textile cluster in India to achieve Zero Liquid Discharge.

But despite all this, the effluents still manage to find their way into the Noyyal river. Particularly on rainy days the effluents are discharged with the hope that the increased waterflow in the river would dilute the effluents. In Tirupur besides the registered dyeing units there are so many unregistered dyeing units also that stealthily discharge into Noyyal.[7]. Besides this there is also also heavy depletion of underground water resources in Tirupur. Both bleaching

and dyeing processes require large quantities of water. Tirupur is in a dry, water-scarce region, the typical water consumption in Tirupur is around 200 to 400 litres/kg of finished product, compared with the international norm of 120 to 150 litres/kg[8]. The city does not have a reliable piped water supply, and private water suppliers extract ground water and supply it to the textile industry using tankers. Ground water in neighbouring areas is also decreasing and becoming contaminated. This has forced the tankers to travel even further distances to draw water.

At present more than 8000 knitwear related units are functioning in Tirupur[9]. The textile wet processing units (bleaching, dyeing) are the major consumers of water as well as major contributors to pollution. One of the most significant challenges for the Tirupur textile industry today is water. Textile production, particularly dyeing and bleaching, can be water intensive and can generate large quantities of effluent., and the rapid expansion of the textile industry has taken place in an unplanned manner, with no associated development of supporting infrastructure or institutional capacity. As a result, the growth has led to the depletion of groundwater reserves and a serious deterioration in environmental quality of both surface and ground water.

IV. DISCUSSION AND SUGGESTIONS

For decades the cluster has been specializing in producing cotton knitwear products for the international market as well as the domestic market. The production process and its polluting effect on the environment have already been discussed. Reports on the knitwear production process shows that the entire production process can be carried out in a natural way without affecting the environment and in fact researches show that before chemicals were used, clothes were actually manufactured by adopting natural methods. It is high time the entrepreneurs at Tirupur adopt eco friendly methods to stop further deterioration of natural resources.

The entrepreneurs in Tirupur can reconceive their products and markets by

1. Cultivating and sourcing organic cotton.
2. Adopting natural bleaching and dying processes.
3. Exploring new markets for organic textiles.

Report [10] on Tirupur's readiness to adopt sustainable methods of production reveal the following:

1. Expensive: Many eco-friendly raw materials are more expensive, e.g. organic cotton and approved colours. It is estimated that an Ecolabel t-shirt will be 15% more expensive to produce. This extra cost cannot be managed by the small and medium sized entrepreneurs in Tirupur
2. Lack of demand. There is less demand for eco-friendly products and companies are not really committed until the demand is there.
3. Lack of market knowledge: Local companies are not familiar with the market for green products and do not know the potentials of such products.
4. Lack of supplier push. Suppliers are not willing to invest to obtain demands from new markets and they don't think in long-term perspectives. They are not very keen on implementing new marketing strategies. They primarily rely on following the demand.
5. Lack of transparency: Companies wanting to obtain ecolabel certification for their products need a lot of transparency with business partners in other parts of the chain. But, they are afraid that sub-suppliers of dyeing processes etc. will not disclose details about the products they use, as it may be seen as disclosure of sensitive information that can be used for calculating the sub supplier's costs

The entrepreneurs in Tirupur are in favour of adopting eco friendly practices. But they are concerned about the high cost of production which might eventually result in low demand for the product. They are also in need of training as to the adoption of natural methods of knitwear production. The entrepreneurs here are used to working with popular brands such as Mothercare, Marks and Spencer, Marco polo and they produce garments that are in compliance with international regulations. But still they are in need of assistance in obtaining eco label certifications.

The hosiery industry in Tirupur operates as a cluster. The entrepreneurs here have strong network and communal bonding. They are many powerful associations such as Tirupur Exporters Association (TEA) and South India Hosiery Manufacturers Association (SIHMA) to represent and address the grievances of entrepreneurs here. Besides there are also separate associations to represent the entrepreneurs engaged in key processes such as Tirupur Bleachers Association, Tirupur Dyers Association, Tirupur Screen Printing Association, Tirupur Steam Calendaring Association and so on. Many entrepreneurships in Tirupur are small in size and switching over to new methods of production may

not be viable. They may also do not have the resources to explore new markets for their new products. To overcome such barriers the associations, have to play a proactive role. By jointly undertaking the activities mentioned in the below diagram, the cluster can be gradually driven towards manufacturing eco-friendly knitwear.

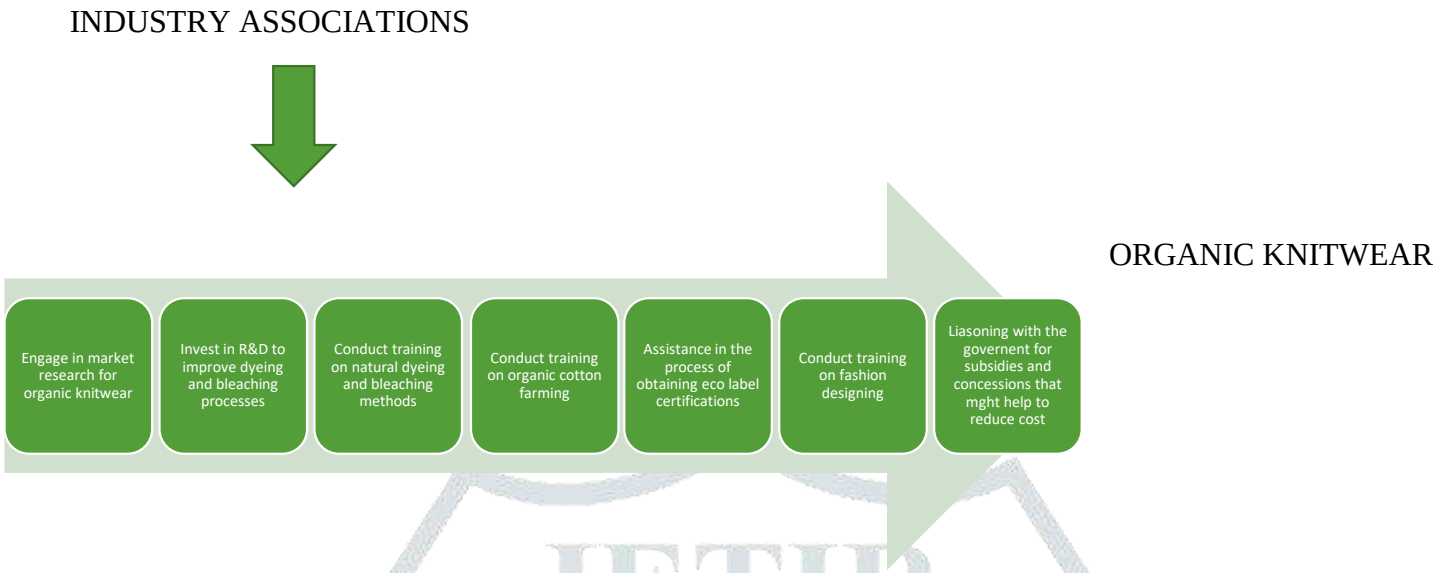

Figure 2: Activities to be undertaken by clusters for manufacturing Eco-friendly knitwear

V. CONCLUSION

Businesses have the potential to be more effective than governments and NGOs in finding solutions to community problems. New needs and new markets create opportunities to innovate, and grow. Customers across the globe are increasingly becoming conscious of environmental degradation and are willing to switch over to eco friendly products. The textile production processes have created huge environmental pollution and customers are mindful of this. Eventually there is a growing demand for sustainable fashion products across the globe. The entrepreneurs in Tirupur can capitalise on this provided they are ready to put in consistent efforts to adopt eco friendly methods of production. This is a major transition and requires changes in supply chain and marketing strategies. The role of industry associations would be crucial in this as they can be the catalyst in driving entrepreneurs towards this pragmatic change

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