



Assessment of Attributes of Supply Value Chain in Circular Knitwear Industry of Ludhiana

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ABSTRACT

The knitwear industry has been neglected in terms of supply chain management research. There have been major changes in the industry, particularly with global sourcing and high levels of price competition. This research assesses the various attributes of supply chain to understand the level of support available to the knitwear industry of Ludhiana and to identify the areas where there is dire requirement for improvement. Interview schedule method was used to collect data from twelve knitwear manufacturing firms regarding the status of support services available in the knitwear cluster. It was revealed that the support services in the field of finance, technology and quality management are abundantly available in the knitwear cluster of Ludhiana and there is healthy competition among stakeholders who have good understanding of market and its ever changing status. The major areas of concern were the factors affecting pricing policies like import duties on raw material, cost of power, labour cost in terms of gross salaries and the manpower quality in terms of skilled workmen, competent managers and the training facilities for skill up gradation of employees.

Key Words: Knitwear, Supply Chain, Industry, Pricing, Skill.

INTRODUCTION

The knitwear industry has, in a remarkably short period of time, emerged as a prominent industrial sector in India. This industry contributes more than 50 per cent in terms of volume and around 35 per cent in terms of value of our total garment exports (Vohra, 2010). It is the only sector which is growing at a faster rate than any other segment in textiles & given the trend for casual dressing with greater thrust on comfort, the knits sector holds immense potential for growth in future as well. The major production centres of knitwear are Ludhiana in Punjab, Tirupur (Tamil Nadu), Delhi, Bengaluru, Mumbai and Kolkata (Dar, 2011).

Ludhiana is mainly famous for acrylic and woollen knitwear. Most of the units in Ludhiana are based in the residential areas converted into commercial places. Only a few big units have their production units in the Government promoted industrial estates in Ludhiana district (Kapila, 2013). The industry has unique market characteristics, such as short product lifecycle,

high volatility, low predictability, and a high level of impulse purchase. In order to survive and stay ahead in today's competitive world, companies are expanded to their limits in search for organizational skills and technologies. (Halim and Kabir, 2011). Most of the international market remains untapped by manufacturers in Ludhiana as this city is not currently a large exporter of knitwear garments; rather the cluster focuses on domestic market.

The industry is largely in an unorganized format and manufacturers are not big enough to go for retailing at their own cost. Hence, the rapid gains made by this industry may prove to be transient in the face of changing trade regimes and the dynamics of global competition. There is tremendous scope in the growing knitting industry but in spite of their capability and intentions to enter and tap world market, the manufacturers are not able to produce excellent results (Tiwari, 1999). This weakness of the Ludhiana industry is leveraged by their competitors who have a much supportive supply chain management. Whether

the benefits generated by the knitwear industry can be sustained in the long-run depends on cluster's ability to address a number of challenges and constraints. (Shanmugasundaran and Panchnatham, 2011). The present study tries to identify the current status of various support services available in the cluster so that the weaker links can be identified and steps can be taken to strengthen the same.

The main objective of the investigation is to assess the level of quality of support services in the knitwear cluster of Ludhiana. The scope of the study was limited to the knitwear industry of Ludhiana involved in manufacturing knitted apparels from circular knit fabrics.

MATERIALS AND METHODS

The knitwear units were selected after mapping of the Ludhiana knitwear industry and identifying the areas of knitwear manufacturing in Ludhiana. With the help of the data available with District Industries Centre and local industry association, twelve circular knitwear manufacturing firms were selected using simple random sampling technique. A questionnaire was prepared to assess status of various support services available in the cluster. These firms were asked to rate various attributes of the supply chain process like availability of finance, technology status, nature of competition among firms, quality of available man power, quality management procedures followed with in firms, pricing structure and market status as well as understanding of the market on a ten point scale. Scores were then calculated as simple average and data were analyzed to identify the status of different attributes in the circular knitwear manufacturing supply chain.

RESULTS AND DISCUSSION

Results were analyzed to identify the level and quality of support services available in the knitwear cluster of Ludhiana.

Status of availability of Finance for knitwear industries

Data in Table 1 depicts that availability of funds from the financial institutions was not considered a major issue by the manufacturers though the rate of interest on credit has been rated as the problem area with an average score of 5.7

which has been a major factor in bringing down the overall score of finance availability in the cluster. According to the manufactures, the funds are available but the rates of interest charged by funding organizations are very high.

Status of Technology adoption in knitwear industries

This support function was well rated by all the manufacturers. They were quite satisfied with the existing technology and the production processes. Information technology usage was also well adopted by the manufacturers. They were moving ahead with automatic and computerized machines so as to reduce their dependence on the labour due to the lack of availability of skilled as well as unskilled manpower. The only issue under technology adoption was that of technology appropriateness with respect to global markets that has an average rating of 4.4 and was considered an area of concern by the manufacturers. A reason cited by manufacturers for this issue was high import duties levied on the machines due to which manufacturers were reluctant to go for a lot of imported technologies (Ghosh, 2011).

Status and nature of competition among manufacturers

As there was a good geographic concentration of the similar firms which helped them in getting raw materials and other basic inputs within the cluster, there was healthy competition among manufacturers in terms of pooling of resources for research and development but high dependence on large units for raw material that is backward linkage had been an issue for a majority of them with an overall score of 4.5.

Status of Manpower Quality in knitwear industries

The data in table 1 depicts that the issue of manpower quality has received a very high score and was a major area of concern in the cluster. There was acute shortage of skilled and unskilled manpower either at workman level or at managerial level and the labour productivity or unit cost per employee was very high with a score of 7.3. An ever increasing demand with low supply of trained manpower further presented a number of challenges like unjustified demands

Attributes of Supply Value Chain in Knitwear Industry

Table 1. Status of various attributes of supply chain in knitwear industries.

Sr.No	Attribute	Score	
1	Finance	Cost of Capital	5.7
		Availability of credit	4.7
		Access to start up funds	4.0
		Ease and quality of funding	3.4
2	Technology adoption	Technology appropriateness with respect to global markets	4.4
		Production Processes	3.9
		Innovation management and new product development	3.9
		Quality of existing plant and machinery	3.7
3	Nature of competition	Information technology usage for business application	2.9
		Dependence on large units for raw material	4.5
		Level of trust and information sharing	4.0
		Cooperation among competitors for marketing	3.9
4	Manpower quality	Competency of trade associations	3.8
		Pooling of R and D resources	3.4
		Availability of skilled workmen	8.0
		Availability of competent managers	7.3
5	Quality management	Labour productivity	7.3
		Employee skill up gradation and training	6.3
		Product standards followed	3.3
		Process standards followed	3.1
6	Pricing policies	Final product/quality consciousness	3.1
		International certification on quality and management	2.1
		Import duty on raw material	9.2
		Labour cost	7.3
7.	Market status and its understanding	Cost of power from utility	6.9
		Transportation cost	6.6
		Input cost in comparison to competitors	6.2
		Threat due to shift in consumer preference	5.4
		Cost of developing brand	4.5
		Growth in domestic market	4.4
		Growth in export market	3.9

from labour, frequent shifts of the trained labour for higher payouts, frauds etc (Chatterjee, 2010). It also increased the labour cost per unit thereby increasing the overall input cost and reduced the productivity levels (Clayes and Brachet, 2008)

Status of Quality Management in knitwear industries

The manufacturers were confident that they were following best quality management practices and most of the products and process standards required were followed by the firms. They had the required certifications, both National and International, and were aware of the required quality of final product by the ultimate customer.

Status of pricing policies in knitwear industries

In Ludhiana knitwear industry, import duty

on machines that comes out to be around 19 per cent had been rated highest on the problem intensity with a score of 9.2 while the other neighbouring countries like Bangladesh and China had imposed import duty at 2-3 per cent. Hence these countries were able to purchase goods from better technological machines at much lower prices and were giving a fierce competition to local manufacturers in the international market. High salaries being paid by the manufacturers to retain the labour was also an area of concern with a score of 7.3. Cost of labour was comparatively higher which increased total cost of production due to high demand and low supply situation. As per the manufacturers, the dependence of industry on grid power was very high and power availability was very low in the cluster. This not only hindered the production to be completed on time but also

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increased the cost of manufacturing due to high usage of generators and other power sources. This problem was a major hindrance in the smooth working of the manufacturing units with an overall score of 6.9. Transportation cost had also been rated high with a score of 6.6, which was directly affecting the pricing structure. The availability of raw material was not an issue but the price fluctuations within the industry and dependence on large units for raw material was a major challenge faced by the industry with an overall score of 6.2. Due to fluctuations in the prices of raw material the manufacturers were not able to make big and long term deals which was again affecting the profitability of their manufacturing process (Bakht and Salimullah, 2008).

Market Status and its Understanding in knitwear industries

The demand situation in exports as well as domestic market had been showing an increase generally, so the market was quite developing. Data in table 1 depicts that frequent changes in the consumer preferences and tastes created a fear in the minds of the manufacturers and had been considered an area of concern with a score of 5.4. Knitwear industry had a booming market but again dearth of marketing professionals and consultants in the field was giving a setback to the industry.

CONCLUSION

The competitiveness of any industry is very important to improve cost efficiencies in a highly competitive world trade environment and Knitwear industry of Ludhiana is no exception. In order to be globally competitive, the industry is being forced to improve its cost efficiencies by working on all the factors affecting the productivity of the industry. It is important to identify the areas of supply chain where serious intervention is required by the stock holders. It becomes imperative that the factors affecting pricing policies are handled with utmost priority and manpower quality is improved in the knitwear

cluster of Ludhiana, then only the industry can fulfil its dream of capturing a substantial share in the global market

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