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Study on challenges faced by the knitwear industry of Ludhiana using elastane blends

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Abstract

The knitwear industry of India has rapidly magnified itself and is making preparations for a bigger role in the garment sector. Also, this business earns 4% of gross domestic product to the country. The sector is a major export earner and 11% of the nation's export is from this sector of which 45% is drawn by knitted products. The Ludhiana knitwear industry with a mean score of 4.75 faced high prices/ fluctuations in prices. The problem of delayed payment of dues was faced by respondents having weighted mean score 4.30 ranking. With mean score i.e. 2.93 respondents faced instability of different types of skilled labours. Problems of power supply like high cost with mean score 2.75 and scarcity with weighted mean score 1.45 were faced by manufacturers of Ludhiana. Units doing export faced lack of geographical and demographical knowledge calculated mean score 3.65. Respondents with a mean score of 4.75 believed that advanced technology machinery required for production is costly. All of the respondents were finding difficulty in local procurement of parts of machinery and raw materials during covid times and were also witnessing decrease in sales prices due to global oversupply, no increase in new clients or markets, major clients requesting lower prices and only 30% of respondents said there was decrease in orders from clients.

Keywords: Challenges faced, knitwear industry, elastane blends

1. Introduction

The knitwear industry is well-diversified and more than a century old in India. It originated in Calcutta and later spread to other parts of the country. It is believed that Khidderpur, West Bengal saw first small scale hosiery which was started in 1893. (Anonymous 1997) [1]. The knitwear industry is leading because of two reasons, primarily the fact that apparel manufacturing includes huge human resource, and secondly, in comparison to other units, the barriers to entry are relatively low and also lesser investment is required. The industry has witnessed growth and made significant contribution to the economy of the country. (Vohra 2010) [7].

Knitted fabrics holding elastane percentage provides high level of easy usage and comfort owing to the drape and elasticity attributes. In knitted apparel, original shape of garment is retained easily as it responds to every body movement so they are genuinely used in apparel manufacturing. The most crucial characteristics attained from knitted apparels containing elastane are breathability, fit wear, longevity and comfort. In the past few years, the call for more relaxing and comfortable clothing, which is more adaptable to the body and has elasticity is being preferred by customers which has led to increased demand of elastane-containing denim fabrics for casual and athletic wear (Eryuruk and Kalaoglu 2016) [5].

Bories (2019) [4] stated that in every kind of form-fitting garments, 5-10 per cent of elastane is found in casual, formal as well as sportswear categories. The popularity of elastane due to its elasticity has increased its usage in almost all kinds of apparels where performance factor is primary need i.e. for yoga outfits, bike shorts, swimwear, hiking pants and shorts as well as inner wears. Elastane is suitable for body fit garments used in intensive physical activity which provide breathability and stretch ability.

Knitted garments like t-shirts and underwear were produced using single jersey knitted fabrics. A ratio of spandex fibre which is popularly known as "Elastane" was blended with cotton fibres in order to enhance its properties and attain recovery performance of circular knit fabrics (Kaur 2009). Knit fabric can get easily deformed or stretched by compressing or elongating the

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individual stitches that form the fabric. Cotton yarns, which are not elastomeric, do not have the ability of recovery to rearrange the stitches. As a consequence, single-knit fabrics may have permanent deformation. To improve the recovery performance of circular single-knit fabrics, it is now a common practice to knit a small amount of spandex fibre or yarn with companion cotton yarn (Azim 2014)^[3].

Indian textile industry has been witnessing a big structural change, continuously reinventing and rediscovering it to meet the needs of the stringent global buyers. Indian Companies have started raising their standards and also aggressively pursuing their human resource strategies aimed at image building as well as overall growth. India is emerging to set up strong vertically integrated textile operations and aiming to become a leading source to the world for its high-end textile needs (Tandon and Reddy, 2013)^[6].

When we investigate about apparel industry in India, despite its strength in woven manufacturing, the knitwear industry in India is on a double-digit growth trajectory. The knitwear industry of India had rapidly magnified itself. This industry is making preparations for bigger role play in garment sector. India holds its strength in being the largest producer of cotton. This had fulfilled the basic requirement of industry by providing abundance of raw material to the industry. Value chain, competitive spinning sector and highly trained man power had been directly favouring the knitwear sector of India. The diverse nature of the industry aids its manufacturing facilities, apparels produced, cost, fabric needs, and the quality of its output. On the contrary, its fragmented nature, due to reservation of production for small companies, has distorted its competitiveness. Globalization is now posing a threat to the local markets, and exporters (Anonymous, 2018)^[2].

Knitting factory in Ludhiana holds expertise in offering knitted fabric to their esteemed clients. A wide collection of knitted garments and fabrics had different sizes with unique patterns in different colours. Garment manufacturers of the knitwear sector of India had to make sure that they meet the quality of the products that they had ensured their customers. Production houses having intentions to enter export were carefully and effectively following the international standards making sure they would follow them religiously. Units producing garments had prioritised quality standards and various other factors related to quality manufacturing of products were standardized. These production houses had capability of offering high quality knitted fabrics to their customers in bulk amounts catering to both international as well as domestic markets.

2. Research Methods

The locale of the current investigation was Ludhiana city and various units using elastane yarn for manufacturing knitwear products were selected. For this purpose a questionnaire was prepared for collecting data and 40 units were selected for conducting the research using random sampling technique as it was considered to be the most appropriate method. Therefore the respondents were questioned about problems faced by respondents in relation to labour. Percentages, frequency and weighted mean score of the data were calculated.

3. Research findings and Results

The results of challenges faced by knitwear units of Ludhiana using elastane blends obtained from the present investigation as well as relevant discussion have been summarised under

the following heads:

1. Financial structure of units
2. Problems related to raw material
3. Finance related problems
4. Labour related problems
5. Electricity related problems
6. Problems faced in export
7. Problems in production process

The results of the investigation done on knitwear units of Ludhiana using elastane blends obtained have been summarised below:

3.1 Financial structure of units

Financial structure refers to the combination of debt, equity and liability which contributes in financing assets of any business entity. As per revised classification, units having investment in plant and machinery below rupees 1, 00, 00,000 are categorised under micro enterprises provided that turnover is below rupees 5, 00, 00,000. Manufacturing firms having investment in plant and machinery or equipment less than rupees 10,00,00,000 with turnover not more than rupees 50,00,00,000 are classified under small enterprises and medium scale enterprise are enterprises with investment in plant and machinery which is below Rs.50,00,00,000 and turnover does not exceeds rupees 250,00,00,000 (Anonymous, 2020).

Out of 40 surveyed units manufacturing elastane blended products it was found that 32.50 per cent of units were micro followed by 37.50 small scale enterprises and only thirty per cent of production houses were categorized under medium scale units.

Table 1: Classification of the units on the basis of size

n=40		
Size of unit	f	%
Micro scale units	13	32.50
Small scale units	15	37.50
Medium scale units	12	30.00

f – Frequency % - percentage

3.2 Problems related to raw material

Thapar, 2014 revealed in his study that high cost of raw material had been responsible in making Indian knitwear industry lose advantage to the small neighbours.

It was seen that majority of the respondents with mean score of 4.75 faced high prices/ fluctuations in prices followed by mean score 4.13 of units which faced scarcity of raw material because of covid crisis followed by mean score of 2.55 which believed that there was problem in transportation and only 1.83 mean score units believed material delivered to them was of poor or low quality of raw material was delivered to them.

Table 2: Problems of manufacturing units related to raw material

n=40		
Problems related to Raw material	Mean Score	Rank
High prices / fluctuation in prices	4.75	I
Poor / Low quality	1.83	IV
Problem of transport	2.55	III
Scarcity	4.13	II

3.3 Finance related problems

The businesses are run on finances. For manufacturing unit, it is important to track their finances regularly in order to keep record of profits and losses. Kiranpreet (2021) in her study

stated that the major business-related issues faced by entrepreneurs due to COVID-19 include the radical effect on the working capital of the business and on future marketing campaigns to seek new orders.

Therefore the problems faced by the manufacturing units were recorded and ranked. The problem of delayed payment of dues was rated highest among all having weighted mean score 4.30 which was followed by high rate of interest ranked second, scoring 2.73 weighted mean. Shortage of finances was ranked fourth (weighted mean score 2.70) followed by procedural difficulties which was ranked fifth scoring weighted mean score 1.70. The improper allocation of funds (weighted mean score 1.63) followed by lack of collateral security for guarantee (weighted mean score 1.55) and shortage of funds (weighted mean score 1.53) were ranked least.

Table 3: Problems of manufacturing units related to finance

n=40		
Problems related to finance	Weighted Mean Score	Rank
Delayed payment by the buyer	4.30	I
High rate of interest	2.73	II
Improper allocation of funds	1.63	VI
Lack of collateral security for guarantee	1.55	VII
Procedural difficulties (Red - Tapism in the financial institutions)	1.70	V
Shortage of finances for working capital	2.70	III
Shortage of finance for fixed capital	2.03	IV
Shortage of funds (credit sales & delayed settlement of accounts)	1.53	VIII

3.4 Labour related problems

Human resource is crucial for any production house and industry is directly dependent on it. The COVID-19 pandemic has seriously affected the growth of textile industry. Many textile units have stopped their production. The crisis had been pushing the textile entrepreneurs for taking tough decisions such as lay-offs, introducing pay cuts, and asking employees to go on unpaid leaves. Another major business issue involved in this is that there are many migrant workers working in the industrial segment of Punjab. Owing to unemployment due of lockdown, they were forced to move to their native places. Thus, such workers will remain unemployed in the near future as well. (Kiranpreet, 2021)

Table 4: Problems of manufacturing units related to labour

n=40		
Problems related to labour	Mean Score	Rank
Absenteeism	2.10	III
Compensation for fatal accidents	1.38	VI
Instability of different types of skilled labours	2.93	I
Skilled Labour with pervasive intelligence	2.53	II
Trade Union demanding more facilities	1.65	IV
Unskilled Labours	1.43	V

Therefore the respondents were questioned about problems faced by respondents in relation to labour. Majority of units with highest mean score i.e. 2.93 faced instability of different types of skilled labours followed by Skilled Labour with pervasive intelligence (weighted mean score 2.53). Absenteeism was ranked third (weighted mean score 2.10) while Trade Union demanding more facilities were ranked fourth (weighted mean score 2.10).

3.5 Electricity related problems

The knitwear industry is highly dependent on electricity in order to complete the orders. Therefore respondents were questioned about the electric supply.

The government claimed to make the state power surplus. "Hike in power charges by the PSPCL is another reason behind the downfall of the industry. The power rates have been raised arbitrarily. Unable to bear the burden, small units had no other option, but to shut down. (The tribune, 2015).

It was found during the investigation that on comparison, High cost of electricity (mean score 2.75) and scarcity of electricity (weighted mean score 1.45) was the top most problem faced by units manufacturing elastane blended garments. Uncertainty due to power failure (weighted mean score 1.45) was ranked lowest.

Table 5: Problems of manufacturing units related to electricity supply

n=40		
Problems related to electricity	Mean Score	Rank
High cost	2.75	I
Scarcity	1.45	II
Uncertainty due to power failure	1.28	III

3.6 Problems faced in export

Export is important for any nation today across globe. Export includes sending (goods or services) to another country for sale. The knitwear units of Ludhiana and Tirupur export knitwear to various countries. (Lotika, 2019)

Table 6: Problems related to export of knitwear

n=40		
Problems related to export	Mean Score	Rank
Improper knowledge about market channels	1.80	IV
Inefficiency to generate foreign orders	2.58	III
Lack of knowledge of foreign markets	3.13	II
Lack of geographical and demographical knowledge	3.65	I

Majority of units with highest mean score i.e. 3.65 faced lack of geographical and demographical knowledge followed by lack of knowledge of foreign markets (weighted mean score 3.13) followed by inefficiency to generate foreign orders (weighted mean score 2.58) and improper knowledge about market channels (weighted mean score 1.80).

3.7 Problems in relation to production

The knitwear industry in Ludhiana is over one hundred years old and enjoys reverence and status of mother industry of Punjab. In spite of being the major revenue generator, the knitwear industry is facing several problems. It was found that majority of units with highest weighted mean score i.e. 4.75 believed that advanced technology machinery required for production is costly followed by weighted mean score 4.50 which was rated to problems of inadequate funds to construct water effluent. The problem of lack of government assistance in up gradation of technology with weighted mean score 2.30 was ranked third followed by problem of under-utilization of machines which was ranked fourth having weighted mean score 2.18.

Lack of machinery accessories was ranked fifth with weighted mean score 1.70, followed by poor maintenance of machineries with weighted mean score 1.70 ranked sixth, followed by Injuries to human health which was ranked

seventh with weighted mean score 1.45. The problems posed by Govt officials from Pollution Control Board (weighted mean score 1.43) and rapid up gradation (weighted mean score 1.25) scored least hence ranking last.

Table 7: Problems faced by manufacturing units in relation to production

n=40

Problems related to production	Mean Score	Rank
Costly Machinery	4.75	I
Inadequate funds to construct water effluent treatment	4.50	II
Injuries to human health	1.45	VII
Lack of government assistance in up gradation of technology	2.30	III
Lack of machinery accessories availability limited Cost	1.70	V
Poor maintenance of machineries	1.70	VI
Problems posed by Govt Officials from Pollution Control Board	1.43	VIII
Rapid up gradation	1.25	IX
Under-utilization of machines	2.18	IV

3.8 Problems in production process suggested by manufacturers

Many questions related to problems faced by knitwear industry were questioned during the interview. Other than the problems asked there were various issues faced by respondents. It was found that, all of the respondents were finding difficulty in local procurement of parts of machinery and raw materials due to Covid and 70 per cent respondents had limited cutting measures available and faced difficulty in changeover of production items within a short time frame because of shortage of labour.

Table 8: Problems in production process suggested by manufacturers

n=40

Problems in production	f	%
Difficulty in local procurement of parts and raw materials	40	100
Limited cost-cutting measures available	28	70
Difficulty in changeover of production items within a short timeframe	28	70

*Multiple responses, f – Frequency, % - percentage

3.9 Problems faced in sales

The growth of any business entity is described by no of sales take place. There were some concerns, such as infrastructural bottlenecks, obsolete internal and international connectivity and institutional rigidity with cumbersome rules and regulations that get heightened with the outbreak of COVID-19. The entrepreneurs and workers are skeptic regarding the nature of demand revival in the changing world economic order. (Mehta, 2021)

Table 9: Problems in sales or other business activities as faced by manufacturers

n=40

Problems faced in sales	f	%
Major clients requesting lower prices	40	100
No increase in new clients or markets	40	100
Decrease in sales prices due to global oversupply	40	100
Decrease in orders from clients	12	30

*Multiple responses, f – Frequency, % - percentage

All the respondents witnessed decrease in sales prices due to global oversupply, no increase in new clients or markets, major clients requesting lower prices and only thirty per cent of respondents said there is decrease in orders from clients.

4. Conclusion

The elastane blended apparels have become basic need of customer due to it comfort attributes. It was found that the Ludhiana knitwear sector producing elastane blended apparels faced high prices and fluctuations in prices of raw material. The problem of delayed payment of dues was faced by respondents which slowed down the running capital of the business entity. Because of covid restrictions the sector faced instability of different types of skilled labours. Problems of power supply like high cost with mean and scarcity were faced by manufacturers of Ludhiana. Respondents believed that advanced technology machinery required for production is costly also all of the respondents were finding difficulty in local procurement of parts of machinery and raw materials during covid times and were also witnessing decrease in sales prices due to global oversupply, no increase in new clients or markets, major clients requesting lower prices and decrease in orders from clients.

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