

# Variation in export-quality knitted hosiery fabrics manufactured by Pakistan Textile Industry

by Mahlaqa Afreen, Lecturer, Department of Clothing & Textiles.

The article is written with an objective to highlight production and manufacturing process of knitted fabrics for foreign markets. The existing working conditions of Pakistan's hosiery and knitwear industry and issues pertaining about the industry's performance regarding the fabric-making process, details of fiber, yarn, count, knit variation selection are discussed in this article. The study was carried out in 12 hosiery industries of Karachi located in three different industrial areas. The results indicate that cotton fiber, carded yarn, 10-20/s count and double knit are very popular in the manufacture of knitted hosiery fabric. Sudden electricity failure and old mechanical process are main problems being faced by this industry. However, despite the problems indicated, Pakistan's hosiery knitwear industry is still giving an average 50% increase in growth rate per year.

**Key words:** Carded yarn, Double knit, Yarn count.

## Introduction

The knitwear (hosiery) industry is playing a vital role in value addition of Textile sector. In the export field, the hosiery knitwear industry of Pakistan has managed to make a big name in many countries of the world. The world produces over 17 million tons of knitted textiles and apparel representing one third of the global textile market. Moreover, output is forecast to grow by 25% over the next ten years, reaching more than 21 million tons. (Textile Intelligence, July 2003). According to an estimate of Pakistan Hosiery Manufacturers Association, current production of knitwear is at the level of 1.1 billion pieces. Out of this production, 60% comprises jersey, knitted fabric, T-shirts, sweat shirts, polo shirts, jogging suits, track suits and children outer wear. (Ahmed, N. January 1970).

This study focused only on the export oriented industries dealing in hosiery knitwear because Pakistan's knitwear industry is almost entirely export-oriented. However, domestic use of garments such as vests and underwear are common in all urban groups. The organized sector exports almost all its products, with the local consumption standing at only around 15 per cent. Often these are brought into the local market because they have either been rejected by quality controllers of the firm for which they were manufactured, or because orders have been cancelled, or due to over-production. (Ali, N. July 2003). The present study focused upon the infrastructure of Pakistani knitted textile industry specifically in the hosiery section. It took into account the variety of fabrics according to fiber, yarn, count, knit as well as machinery and technology and other such factors that directly or indirectly affect the production of hosiery fabrics/garments.

The study also highlights the problems that knitted-textile industry is facing vis-a-vis manufacturing process and the reasons behind these problems. The study will be

helpful for the small businessmen and industrialists who are interested in establishing their businesses in this sector. In order to become more flexible and make better quality products, producers are investing in machinery which offers benefits of the latest technological development; as a result automation has been used in the past to produce large orders at low price. However, Pakistan still needs advancement in the knitted (hosiery) sector in order to compete with the international market.

## Methodology

The present study is a brief report on the knitted hosiery fabric industries of Karachi, their manufacturing process for foreign market and technology and system being used for this purpose. Hosiery industries of Karachi were selected for the study because Karachi is the biggest industrial city of Pakistan and is recognized as the nucleus for the economy of Pakistan.

The study is quantitative in nature. Information about the quality and type of knitted fabrics produced, types of yarn, yarn count and the machinery used by the Pakistani textile industry for the production of grey fabrics used for hosiery was collected through a questionnaire to be filled in by managers of selected industries. The sample areas of this study were the three industrial areas of Karachi, i.e. Site, Korangi and Landhi industrial areas.

A total of 12 industries were the exact sample size for the study. Co-operation of the managers of the selected industries was vital to the collection of the data. Before designing a questionnaire for this study an interview with PHMA (Pakistan Hosiery Manufacturers Association) fabric manufacturing instructor was arranged. A discussion was carried out upon the Pakistani knit wear (hosiery) manufacturing process. The questions emerged from the discussion. The data were first entered on EPI Data program and then transferred

to SPSS (Statistical Package for Social Sciences), Frequencies and percentages were worked out for analysis.

## Results and Discussion

### General description of Pakistani hosiery knit wear industry

Table 1 (a) and (b) shows the frequency and percentage of the nature of industries and raw material used for hosiery fabric. The results show that most of the industries are conducting their business privately (66.6%). According to a letter sent to Akram Sheikh, Deputy Chairman of Planning Commission by Jawed Bilwani of the Pakistan Hosiery Manufacturers Association (PHMA) the knitwear and hosiery industry is considered as the largest employer in the country. (Daily Times, 2006) 83.3% industries are purchasing local raw material for manufacturing hosiery fabrics.

**Table No:1 (a) Nature of industry**

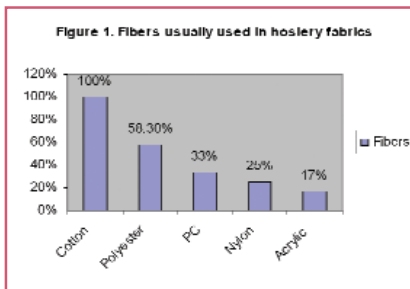
Sr.No		Frequency	%
1	Proprietorship	2	16.60
2	Partnership	2	16.60
3	Private	8	66.60

**Table No:1 (b) Raw material for hosiery fabric**

1	Local based	10	83.30
2	Export based	2	16.60

**Table-2: Common yarn count used for hosiery fabric.**

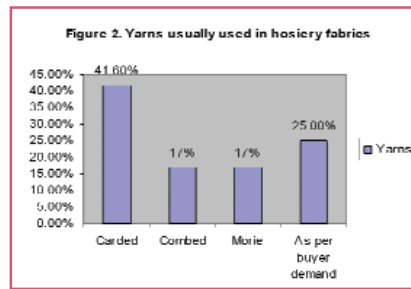
Sr.No	Counts	Frequency	%
1	10/s	8	66.60
2	20/s	11	91.60
3	26/s	3	25.50
4	30/s	8	66.60
5	36/s	3	25.50
6	40/s	3	25.50



**Specification about fabric manufacturing process**

With reference to given Figures 1 – 3 and Table No 2, it is indicated that cotton is considered as most commonly used fiber in fabric-making process (100%) while polyester is the second most used fiber (58.3%). Cotton is the leader in high quality in various blends.

Especially with polyester and polyamide it gives surprisingly pleasant and smooth handle. The key inherent characteristics in hosiery fabrics are softness, brightness, and stretch; they are also very hard wearing. Polyester fiber's blend ability with cotton is excellent; moreover, it is a medium priced fiber as well. In case of yarn, carded yarn is frequently used (41.6%). However, type of yarn is also specified by the buyers (25.5%). The most commonly used count for the yarns ranged from 10 to 30/s. The variation used in knitting the hosiery fabrics are Double knit (75%) and Jacquard (50%).

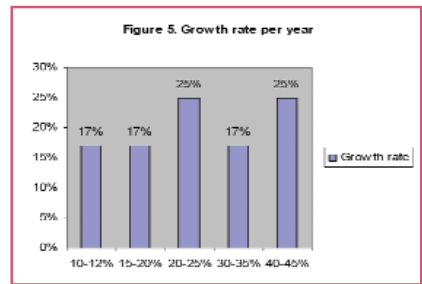
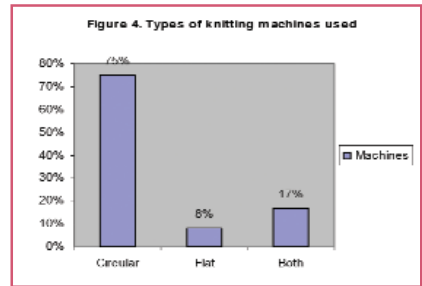
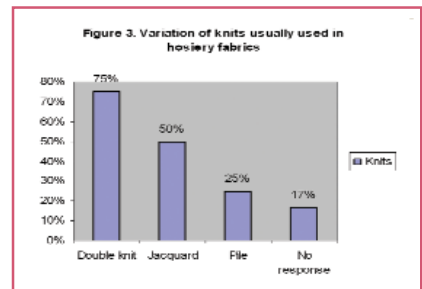


**Description of machinery being used**

Results of this section (as indicated in Table 4) show clearly that 100% machinery is imported in Pakistan. Use of latest computerized machinery stands at 33.3% whereas 41.6% of the manufacturers are still working with old technology. Figure 4 shows that the most common type of machine being used is the Circular knitting machine. According to a survey by Finance Government of Pakistan, 2003, there are about 12,000 knitting machines spread all over the country. The Capacity utilization is approx 70%. Besides locally manufactured machinery, liberal import of machinery under different modes is also being made and the capacity based on exports is being developed. (Finance Government Pakistan [FGP], 2003).

**Growth rate of hosiery knitted industry**

Figure 5 shows that the annual growth rate achieved by maximum no. of the industries is between 40 – 50% and 20 – 25%.



In this situation, if attention is given to this area a marked improvement in knitwear hosiery industry can be expected. Other specifications about the fiber, yarn, count, and variation of knit are found to be similar in almost all industries. Electricity problem is a big issue in the hosiery knitwear industry. Bottom line is although PHMA has been established for the support of hosiery industries yet Pakistan hosiery knit wear industry needs special attention and support of Government and latest technology is greatly required for better production of grey fabrics.

**Table-4: Machinery in use.**

Sr.No	Type	Frequency	%
1	Local	0	0.0
2	Imported	12	100.0
<b>(Latest machinery in use)</b>			
1	Computerized	4	30.30
2	High speed	2	16.60
3	Stripper	1	8.30
4	No response	5	41.60

**Conclusion**

According to the results that were depended upon the views of respondents, it is concluded that Pakistani export based hosiery knitwear industry has its significant importance in the economy of Pakistan and as a result of (what has been already stated) needs improvements in many sections. Majority of the knitwear industries are producing hosiery fabric by using the local raw material and old machinery and still the growth rate is increasing every year.

**Usual problems faced by the industry**

According to the results shown in Table 3, it is clearly indicated that almost every industry surveyed, faced some problem. Although the problems vary from one industry to another, yet they are common and need to be solved. The most common problem observed is electricity problem (33.3%).

**Table-3: Problems faced in fabric manufacturing for hosiery.**

Sr.No.	Problems	Frequency	%
1	Electricity outage	4	33.3
2	Shrinkage	1	8.3
3	Yarn knot	2	16.6
4	Mechanical	1	8.3
5	Raw material	1	8.3
6	Transportation	2	16.6
7	Poor time management	2	16.6
8	Worker's faults	1	8.3
9	No major problem	3	25.5

**References**

- ❖ Textile Intelligence (July 2003) World market for knitted and apparel with forecast (2003).
- ❖ Ahmed N.M. (1970). Pakistan Knitwear Industry, Post Quota Challenges, Pakistan Textile Journal 4th January 1970.
- ❖ Ali, N (2003, July 4). Knitwear industry to unravel in WTO regime [Electronic version]. Daily Times.
- ❖ Finance Government Pakistan. (2003) Manufacturing and mining, Survey report from [http://www.finance.gov.pk/survey/sur\\_chap\\_06-07/03-Manufacturing.PDF](http://www.finance.gov.pk/survey/sur_chap_06-07/03-Manufacturing.PDF). ♦