

# A Study on Logistic and Supply Chain Management System of Hosiery Textile Industry in Tiruppur City- India

S. Gokilavani<sup>1</sup>, R. Rajasekaran<sup>2</sup> and M. Esther Krupa<sup>3</sup>

<sup>1,2,3</sup>Department of Commerce PSG College of Arts and Science  
E-mail: <sup>1</sup>vaniph3@gmail.com, <sup>2</sup>majordrrrajasekaran@yahoo.com, <sup>3</sup>estherkrupa@gmail.com

**Abstract**—In Today's business scenario, the success of business depends upon various factors and one of the important factors is logistic and supply chain management system. In order to improve the performance of the organisation, reduce cost and to achieve consumer satisfaction the businesses have started realising and giving importance to logistic and supply chain management. Objective of this particular study is to identify the factors which are motivating the logistic and supply chain concept and also to identify the drawbacks. For the purpose of the study a systematic methodology has been adopted and through a well structured questionnaire, primary data has been collected from respective hosiery textile units in Tiruppur city and required secondary data has also been collected from the published journal, magazines, articles, research report etc. The study reveals that the hosiery textile industries at Tiruppur city are showing continuous progress in logistic and supply chain because of emerging e-commerce technology and Global positioning system (GPS). It also shows the drawbacks such as inadequate infrastructure, inefficient and unskilled human resource. This study also creates an opportunity for future research projects and programmes.

**Keywords:** Logistic, Supply chain, Methodology, E-commerce, Infrastructure.

## 1. INTRODUCTION

The effective and efficient supply chain has become critically important for the growth of industry and survival of any business. Supply chain management (SCM) is a new way of thinking that takes a total view of the business process starting from the source of supply to the point of consumption or usage. Hence, SCM is the integrated management of all the linkages and value added services from the supplier's supplier to the customer's customer. Integrating the supply chain to improve logistics efficiency is the key challenge. It should integrate the three individual business processes of procurement, asset management, supply chain enterprise application, supply chain planning, supply chain strategy, logistics and product lifecycle management.



Fig. 1: Sub-linkages in each of the above functional areas.

World's growing population has been a key driver of textile consumption growth in business, because changing lifestyle, rising incomes and increasing demand for quality products are set to fuel demand for hosiery textile industry's product. The Indian textile industry counts among the leading textile industries in the world. Textile is one of the oldest, largest and significant industrial sectors in India. All the segments of the textiles value chain are doing well at present both in the domestics and global markets.

Due to emerging competition in the dynamic markets of globalised economics of countries across the world, business organizations the world over have realised that the business process of satisfying the demand of the customer is of critical importance to them. It was clear to these business firms today having taken logistics and supply chain initiatives more seriously than ever to maximise the profit and help the organisation to succeed in the competitive market.

### 1.1. Statement of the problem

The consumer market consists of so many products that are produced all over the world and put together at one location. There is a global journey from producing cotton to transforming it into textile garment and then selling it. The management of such chains, its design, process execution, transport and control is logistics and supply chain management. In this process the Tiruppur hosiery textile industries are carrying out the logistic and supply chain activity in a systematic manner with certain constraints. Some of the key issues of logistics and Supply chain practices create impacts on the performance of hosiery textile industries. In order to identify the factors which are influencing the above industry and also to understand the real supply chain drawbacks in this particular study have conducted by the researcher.

### 1.2. Objectives of the study

- To study the performance of logistic and supply chain system in hosiery industry.
- To identify the factors which are influencing the logistic and supply chain system.
- To analyse the drawbacks which affects the logistics and supply chain system
- To offer suggestions based on the study.

### 1.3 Scope of the study

The purpose of this study is to investigate the performance, current scenario and future prospects of logistics and SCM practices of Tiruppur hosiery textile industry. Based on the finding, the hosiery textile industry would be able to initiate new technology and motivate for suitable logistic and supply chain management system. The study will be useful to the hosiery textile industry to understand the real scenario and maximise their profits. It also provides a theoretical framework to understand the logistic and supply chain system and the performance of selected industries in the city and argues in the favour of Logistic and SCM system to meet the largest challenges.

### 1.4. Research Methodology

The research has been carried out by adopting the following research methods along with statistical tools and techniques. Sources of data have been used both primary and secondary. Primary data have been collected from hosiery textile units in Tiruppur through well defined questionnaire. The Questionnaire has prepared in simple and understandable way so as to enable the respondents to express their views of opinion freely and frankly. Secondary data was collected through journals, magazines, articles, research report, newspapers and from internet. Area of the study is confined to Tiruppur city only. Random sampling method has been adopted. There are only ten hosiery textiles units have selected

from the total population. Period of study restricted to 12 months (From 1<sup>st</sup> April 2013 to 31<sup>st</sup> March 2014). For the purpose of the analysis descriptive and rank analysis tool have been adopted and the same interpreted in the form of tables and charts.

### 1.5 Limitations of the study

- It Confined only to Tiruppur city of Tamilnadu state, India.
- It deals only with hosiery textile industries
- Data related only to the period from 1<sup>st</sup> April 2013 to 31<sup>st</sup> March 2014.
- It deals only about Logistics and Supply chain system adopted by the hosiery textile industries.

## 2. REVIEW OF LITERATURE

**Textile World<sup>1</sup>, Dec2002**, Focuses on the importance of investing in supply chain management for the textile industry in the U.S. Reduction of processing time; Automation and integration of global supply chain; Reduction of production costs.

**Apparel Magazine<sup>2</sup>, Aug2003**, This article presents information about developments in the apparel industry of the U.S. Apparel Search Co. introduced a new division, Apparel Search Logistics, to provide supply chain management consultation services to the clothing and textile industries. Gerber Technology announced profits of \$13.4 million and revenues of \$154.1 million for its fiscal year ended April 30, 2003, compared with profits of \$10.5 million and revenues of \$158.1 million in the prior year. Nester Software Technologies Inc. and Albrecht Bäumer GmbH & Co. KG have formed an agreement in which Albrecht Bäumer will become the exclusive worldwide distributor of the NESTERfoam<sup>TM</sup> automatic foam nesting software solution. NESTERfoam<sup>TM</sup> has been fully integrated with Albrecht Bäumer's WINCAP CAD/CAM system.

**Wallace, Stein W. Tsan-Ming Choi<sup>3</sup> 2011**, The article presents an introduction to the journal offering information on various topics dealt in it including challenges for the British apparel supply chain management, adapting lean manufacturing principles to the textile industry, and mass customisation in the Hong Kong apparel industry.

**Maurer, Bettina<sup>5</sup>, 2013**, The article reports on a panel discussion on the subject of corporate social responsibility in the clothing industry, held in Mönchengladbach, Germany. Topics of discussion included unfair labor practices and unsafe working conditions in the global textile industries, the problem of transparency in supply chain management system, and consumer education.

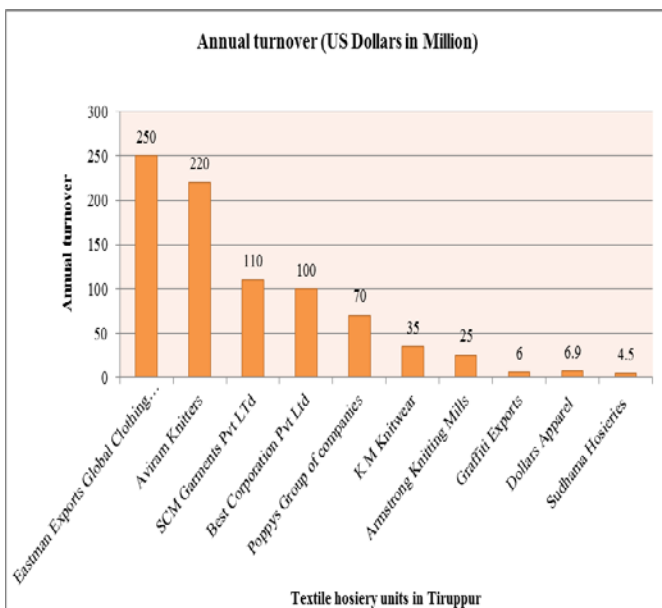
## 3. DATA ANALYSIS AND FINDINGS

This part reveals that the analysis and findings of the study on logistic and supply chain management system of hosiery

textile industry in Tiruppur city. The data collected from the hosiery textile industry were systematically analyzed and presented in the form of tables and charts. And also arranged in such a way that a detailed analysis can be made so as to present suitable interpretations for the same along with chart.

**Table 1: Annual turnover of leading textile hosiery units.**

S. No	Name of Company in Tiruppur city	Annual Turnover in US Dollar.
1	Eastman Exports Global Clothing P Ltd	US \$ 250 Million
2.	Aviram Knitters	US \$ 220 Million
3.	SCM Garments Pvt LTd	US \$ 110 Million
4.	Best Corporation Pvt Ltd	US \$ 100 Million
5.	Poppys Group of companies	US\$70 million
6.	K M Knitwear	US \$ 35 Million
7.	Armstrong Knitting Mills	US \$ 25 Million
8.	Graffiti Exports	US \$ 6 Million
9.	Dollars Apparel	US \$ 6.9 Million
10.	Sudhama Hosieries	US \$ 4.5 Million



**Chart 1 showing the annual turnover of textile hosiery industry.**

**Interpretation**

From the above table, it is clearly understood that the Logistic and supply chain system of organisation helps to increase their business turnover. According to the above information's Eastman Exports Global Clothing Private Ltd as got number 1 financial status among hosiery exporters in Tiruppur and followed by Aviram Knitters and SCM Garments Private LTd, US \$ 250 Million, US \$ 220 Million, US \$ 110 million respectively.

**Table 2: Average growth rate of logistic operation (Quantity handled) of leading textile hosiery units.**

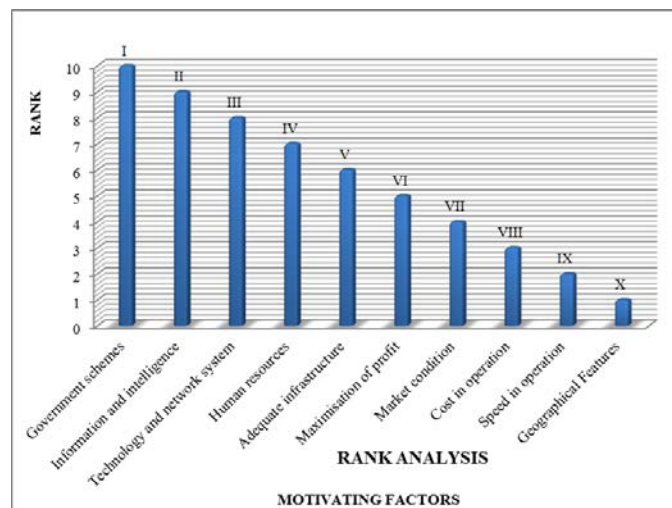
S. No.	Name of Company in Tiruppur city	Average Growth Rate %
1.	Eastman Exports Global Clothing P Ltd	17%
2.	Aviram Knitters	13%
3.	SCM Garments Pvt LTd	15%
4.	Best Corporation Pvt Ltd	14%
5.	Poppys Group of companies	13%
6.	K M Knitwear	09%
7.	Armstrong Knitting Mills	13%
8.	Graffiti Exports	09%
9.	Dollars Apparel	11%
10.	Sudhama Hosieries	12%

**Interpretation**

From the above table, it is clearly understood that the Logistic and supply chain system of organisation helps to increase their business turnover. According to the above information's Eastman Exports Global Clothing Private Ltd shows 17% growth rate in logistic operation among hosiery exporters in Tiruppur and followed by SCM Garments Private LTd, and Best Corporation Pvt Ltd 15% and 14% respectively.

**Table 3: Motivating factors of Logistics and SCM in Hosiery Textile industry**

S.NO	Factors	Rank
1.	Government schemes	I
2.	Information and intelligence	II
3.	Technology and network system	III
4.	Human resources	IV
5.	Adequate infrastructure	V
6.	Maximisation of profit	VI
7.	Market condition	VII
8.	Cost in operation	VIII
9.	Speed in operation	IX
10.	Geographical Features	X



**Chart 3: Showing the motivating factor for logistics and supply chain management**

**Interpretation**

The above table reveals that the motivating factors for logistics and supply chain operation of hosiery units in Tiruppur city based on ranking analysis. The researcher has identified ten different motivating factors according to the discussion made with hosiery units. Out of 10 different motivating factors the most influential motivating factors is government schemes, policies and programmes because that only provides the complete infrastructural facilities to support the smooth and free flow of goods and services from the origin to the respective destinations. Hence it stands number one.

They also accepted that adequate information and intelligence for logistics and supply chain as rank number 2 and followed by innovative technology and logistic network system.

Hence it is concluded that the government schemes, policies and programmes are the most influential motivating factor for successful logistics and SCM for hosiery textile industry in Tiruppur city.

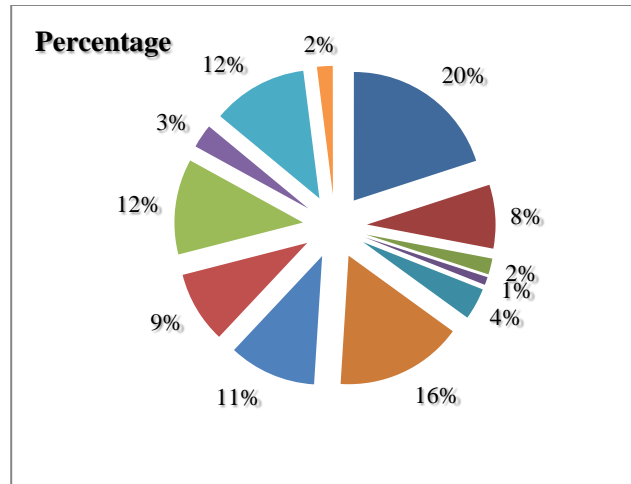
**Table 3: Logistics and SCM problems in Hosiery Textile industry**

S. No	Particulars	Percentage
a)	Poor Infrastructure	20%
b)	Lack of warehouse and storage facilities	8%
c)	Lack of Adequate transport facility	2%
d)	Lack of Adequate equipments	1%
e)	Environmental drawback	4%
f)	More cost	16%
g)	Lengthy Government procedures	11%
h)	Lack of technical knowledge.	9%
i)	Communication network problem	12%
j)	Lack of co-operation from LSP	3%
k)	Lack of support from skilled labour	12%
l)	Lack of support from Agencies / Authorities	2%
	<b>Total</b>	<b>100</b>

**Interpretation**

The above table reveals that the problems of logistics and supply chain operation of hosiery units in Tiruppur city based on percentage analysis. The researcher has identified ten different problems which are affecting the exporters, according to the discussion made with hosiery units. Out of 10 different problems the most influential factors is poor Infrastructure, More cost for transportation, lack of support from skilled labour and communication network problem. Therefore these are the problems which are highlighted by the tirupur exporters.

Hence it is concluded that the poor Infrastructure, More cost for transportation, lack of support from skilled labour and communication network problem are the affecting problems for successful logistics and SCM for hosiery textile industry in Tiruppur city.



**4. SUGGESTIONS**

Based on the collection of data, analysis and findings were made the researcher has given certain suggestions which are pertaining to logistics and supply chain management system of Tiruppur textile hosiery industry. The following are the suggestions of the study.

- The textile hosiery exports are expecting more support from government departments. Hence the related governments departments are expected to create more opportunities and motivate the logistics and SCM system.
- Infrastructure for logistic and supply chain operation needs to be improved with the help of local bodies and also from recognised trade associations of the industries.
- There is a need to improve efficiency and performance of skilled labour through training and development.
- The units are also expected to upgrade and modernise with latest technology, so that the logistics and supply chain management system can meet domestic as well as global competition.
- The satellite communication network system (SCNS), Global Positioning system (GPS), Information and communication technology (ICT) and mobile tracking system need to be upgraded and it should be adopted for the smooth functioning of the logistic and supply chain management system.

**5. CONCLUSIONS**

The latest trend of textile field in India reported as 29.7% growth in the current financial year 2014-2015 i.e., Rs. 8,646.52 crores compared to Rs. 6,665.93 crores in the previous year. Growth in terms of foreign currency 16.91% it is only because of smooth and active logistics and supply chain operations. Hence it is concluded that the hosiery textile industry situated in Tiruppur showing better performance in terms of turnover as well as revenue. Based on the study it is clearly understood that among all factors, the most influential

factors in logistics and supply chain management are government schemes, policies and programmes and followed by information and intelligence and also innovative technology with proper communication network system.

Though the concept logistics and supply chain introduced in our country a decade back, the industries are started following and applying for comfortable business environment. This particular research has not only highlights logistics and supply chain concepts it also provides a room for future research opportunity.

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