

# Supply Chain Resilience And The Best Supply Chain Practices Applied In Export Knitwear Industries In Tirupur District, TamilNadu, India

Dr. V. Prabavathi<sup>1</sup>, Dr. R. Vanathi<sup>2\*</sup>

<sup>1</sup>Associate Professor, School of Management Studies, Jai Shriram Engineering College, Avinashipalayam (Po), Tirupur – 638 660, Tamil Nadu, E-Mail: prabaravi139@rediffmail.com, Mobile Number: 9095265775, ORCID ID: 0000-0003-4227-7238.

<sup>2\*</sup>Assistant Professor (SS) and Head, Department of Business Management, Erode Arts and Science College (Autonomous), Erode - 638 009, Tamil Nadu, E-Mail Id: rvanathi@gmail.com Mobile Number: 8300157529, ORCID ID: 0000-0003-0958-8835.

**Citation:** Dr. V. Prabavathi, Dr. R. Vanathi (2024), Supply Chain Resilience And The Best Supply Chain Practices Applied In Export Knitwear Industries In Tirupur District, TamilNadu, India, Educational Administration: Theory and Practice, 30(5), 12937-12941  
Doi: 10.53555/kuey.v30i5.5481

## ARTICLE INFO

## ABSTRACT

Supply chain resilience is the capacity to absorb stress, recover critical functionality, and thrive in altered circumstances, and it has become a key indicator of an industry's overall performance. Resilient industries enjoy better outcomes than their peers. Downturns and disruptions are inevitable. Whether industries lose momentum or preferably adapt and advance comes down to one thing: supply chain resilience. Driven by the globalization of markets and the competitive business environment, supply chain practices have become very popular calling for continuous flow processing with low inventory volumes, leveled and just-in-time production and accurate scheduling of transport for cross-docking operations leading to more cost-effective and responsive supply chains (SCs). The research is descriptive in nature, on the basis of the primary as well as secondary data. The aim of this study is to amalgamate knowledge on supply chain resilience and best supply chain practices that constitute an important reflect in the export knitwear industries. The study summarizes and builds upon the other well-cited reviews and surveys in this research area taking into consideration the export knitwear industries in Tirupur. A direct survey was designed and conducted extensively to collect data from employees working in Export Knitwear Industry at Tirupur District, which is analyzed with the help of SPSS and AMOS software and conclusions are drawn.

**Keywords:** Supply Chain, Supply Chain Resilience, Supply Chain Practices, Knitwear Industry and Tirupur Export Knitwear Industries.

## INTRODUCTION

Supply chain resilience is the ability to cope with disruptions and uncertainties in the supply chain, such as demand fluctuations, supplier issues, natural disasters, geopolitical conflicts, or pandemics. A resilient supply chain can adapt to changing conditions, recover quickly from shocks, and maintain operational efficiency and customer satisfaction. Supply chain resilience is not only important for reducing risks and costs, but also for creating competitive advantage and value for the business and its customers. By building a resilient supply chain, organizations can improve their performance, reputation, and sustainability in the long run. In this study the researcher is interested in evaluating the supply chain resilience and the best supply chain practices applied in export knitwear industries in Tirupur district, Tamil Nadu, India.

### Factors that contribute to supply chain resilience

- Diversifying the sources of supply and distribution channels to reduce dependency on single points of failure.
- Building flexibility and agility into the supply chain design and processes to enable rapid response to changing customer needs and market situations.
- Investing in digital technologies and analytics to enhance visibility, collaboration, and decision making across the supply chain network.
- Developing contingency plans and risk mitigation strategies to prepare for potential disruptions and minimize their impact.

- Fostering a culture of resilience and innovation among the supply chain stakeholders to encourage learning, improvement, and adaptation.

### Supply Chain Resilience and Knitwear Industries

The journey toward building up flexibility in supply chains requires structured state of intellect toward danger assessment, joint and common purposes between peoples and the intrigued of resilience and viable streams of materials and information. Knitwear industry is rich in raw material sources, and is one of the largest producers of cotton which favors the knitwear sector. Its highly trained manpower, competitive spinning sector and value chain is also at its favor. Knitting industry in India is one of the most thriving businesses today. The Indian knitwear market has witnessed impressive growth in the last decade. The need for speed and the need for comfort have together made way for comfort wear. Export market for India's knitwear is showing positive signs of growth. It is steadily emerging as one of the fastest growing export segments. When supply chain resilience along with best supply chain practices is perceived as positive by the export knitwear industries, this will result in better organizational performance and higher levels of commitments. Thus, supply chain resilience as a whole will shows its impact towards the knitting industries in all the aspects of its excellence.

### Aim and Purpose of the Study

The aim of the research presented in this study was to add to the knowledge on supply chain management practices by exploring the supply chain resilience. This study also investigated the supply chain management practices and its impact on the performance of the knitwear industry. Overall, this study contributes to the knowledge of the role played by the supply chain management practices implied in the knitwear industry and its contribution to the industry performance.

### Statement of Problem

Businesses often define their activities in terms of domestic and export sales. This can be a shortsighted and restricting view. Shortsighted firms also define their supply chains in terms of freight, warehouse and other costs. They fail to understand how their customers and businesses are impacted by Supply Chain Management. Best practices in Supply Chain Management lead to growth and prosperity. However, often the result of all this myopic thinking is that these firms trap themselves into being defined as a commodity product provider; here price is the key differentiator with competition, which lack value proposition key customers. The present study attempted to determine the solution to this problem, which focus on the companies that view themselves as dynamic and as global see the prospects for themselves, and make them realize that they have value propositions and supply chain best practices that separate them from competitors; they know that value propositions are about the customers and not about what firms do. They understand trends; they lead.

### LITERATURE REVIEWS

**Szegedi (2012)**, the supply chain encompasses all activities associated with the flow and transformation of goods from raw materials' stage (extraction) through to the end user, as well as the associated information flows. Supply chain is a set of three or more entities (organizations or individuals) directly involved in the upstream and downstream flows of products, services, finances, and / or information from a source to a customer. **Croxton (2001)**, supply chain management is increasingly being recognized as the integration of key business processes across the supply chain. In order to build links between supply chains members it is necessary for companies to implement a standard set of supply chain processes. The Global Supply chain forum identified eight key processes (customer relationship management, customer service management, demand management, order fulfillment, manufacturing flow management, procurement, product development and commercialization, returns) that make up the core of supply chain management. **Olah (2018)**, the organization and implementation of the supply of goods between supply chains members should be organized in such a way that economies of scale (cost-effective methods which bridge large geographical distances) and economies of choice (customized services offered) apply simultaneously to chain members. Since the management of links between supply chain members is carried out by logistics service providers and their importance and role have been strengthened recently, the comprehensive, scientific examination of logistics service providers is current and necessary for the best practices of supply chains to be adopted. **Richey (2010)**, Supply chain practices becomes a network where a series of relationships form to ensure that the end customer receives value from efficient and effective processes that deliver the best products and service to market. Supply chain practices involve integration, coordination, and collaboration throughout supply chain. Supply chain practices are a collaborative-based strategy that links inter- organizational business operations with the expressed purpose of achieving a shared market opportunity. **Leuschner (2013)**, within business performance, financial performance and customer-oriented performance were examined. Financial performance is an important measure of firm performance and has been used in several studies. Customer-oriented performance is a more perception-based measure that includes attitudes like satisfaction and loyalty. Within operational performance, there were enough studies to evaluate the specific effects of cost, quality, delivery, innovation and flexibility. The importance of evaluating these relationships is to enable us to gain a deeper understanding of where exactly the

performance benefits from better SCI arise.

### Research Gap

The research on supply chain management resilience and supply chain management practices in Tirupur's knitwear industry faces several gaps in the existing literature. Firstly, there is a lack of comprehensive studies specific to Tirupur, despite its prominence in the knitwear sector. Secondly, the research often lacks empirical evidence, relying heavily on theoretical frameworks. Additionally, there is a need to identify and analyze the critical supply chain practices relevant to the knitwear industry. The dynamic nature of the industry, with rapidly changing trends and technologies, requires further investigation into how supply chain practices adapt and affect performance. Addressing these research gaps will contribute valuable insights to the field of supply chain management in Tirupur's knitwear industry.

### Research Question

This study seeks to answer the following questions: (a) What is the perception of the respondents towards supply chain resilience towards export knitwear industries? and (b) How to apply the best supply chain management practices to satisfy the customers?

### Objectives of Study

Based on the through study of previous literature related to the supply chain management practices especially the knitwear industries, the researcher aims to measure the supply chain management practices and its performance among the export knitwear industries performance.

### Research Proposed Model

The theoretical framework is a model of logical relationship among various variable of supply chain management. The self-developed theoretical model consists of dimensions relating to supply chain practices followed in the export knitwear industries, which is depicted in **Figure.1**. Based on this model, the research hypothesis is also formulated.

### RESEARCH METHODOLOGY

The research is descriptive research in nature, where the descriptive research is preplanned and structured based on large representative samples (Malhotra, 2004).

#### Research Instrumentation

This research has an applied questionnaire as the research instrument for collecting the data. The questionnaire comprises of five parts: Demographical Profile, supply chain management practices, supply chain collaboration, supply chain integration, and supply chain performance.

#### Pilot Study

In the qualitative phase, the researcher has conducted the pilot survey with a sample of 50 respondents from export knitwear industries at Tirupur district for collecting data. The samples were chosen on random basis and were confined to study area.

#### Sampling

The population for the current study is Export Knitwear Industry's at Tirupur District. There are around 1133 Export Knitwear Industry's located in Tirupur District. According to the Demorgan's table for a population more than 1200 population 437 sample sizes is required with a confidence level of 99 percent and with the confidence interval of 5 percent.

#### Data Analysis

Data presentation involves entering the data, checking the data for accuracy, and developing a database structure that integrates the various measures. Hence, the collected data were fed into Statistical Package for Social Sciences (SPSS) 20 version and Analyzing Momentum of Structures (AMOS) 18 version, popularly used statistical software for social research analysis.

### Results

- The respondents agree with the statement "Demographical profile" influence the supply chain management practices.
- The respondents agree with the statement "Supply Chain Management Practices (SCMP)" with a mean value of 3.00 and with standard deviation of 0.000.
- The respondents agree with the statement "Supply Chain Collaboration" with a mean value of 3.62 and with standard deviation of 0.486.
- The respondents agree with the variable "Supply Chain Integration" with a mean value of 3.98 and with standard deviation of 0.291.
- The respondents agree with the variable "Supply Chain Performance" with a mean value of 3.23 and with standard deviation of 0.419.

## DISCUSSION AND CONCLUSION

There are numerous issues that need to be addressed in the company, before successful implementation of supply chain practices can take place. Companies must develop and support a broader responsibility and sustainability perspective towards their supply chains to ensure that their consumer, business, supply chain, community and environmental relationships and interactions remain viable in order to be able to face challenges for globalizing markets. Experience shows that it is a complex and long process to integrate Supply Chain Management Practices in all levels of the organization. In this process companies are facing many challenges to overcome and it requires continuous improvement.

Supply Chains are a critical part of world trade. However, a Supply Chain in itself is insufficient. Only those that are efficient will succeed. In consideration of a Supply Chain to be efficient, it is crucial to understand its principal functions as well as the role played by each function in the Supply Chain's overall efficiency. Accomplishing this makes it facile to identify obstacles and impact the essential improvements.

### Limitations and Future Implications

- The respondents of the study were busy, so they were not in a position to spare their valuable time much restraining their elaborate and accurate responses.
- The study concentrates only on the knitwear industries in Tirupur District and hence, the findings may not be applicable to knitwear industries of other districts or state.
- This research was done based on conceptual dimensions and hence, the influence of biased responses may be more.
- The study was confined to the knitwear industries and hence, the results of the study may not be applicable to other industries.

The functioning of organizations involves a dynamic process that changes over time. Future research should elaborate the study by conducting industry analysis. Potential researchers should also examine other ways of nurturing supply chain resilience and supply chain management practices with what the study have proposed.

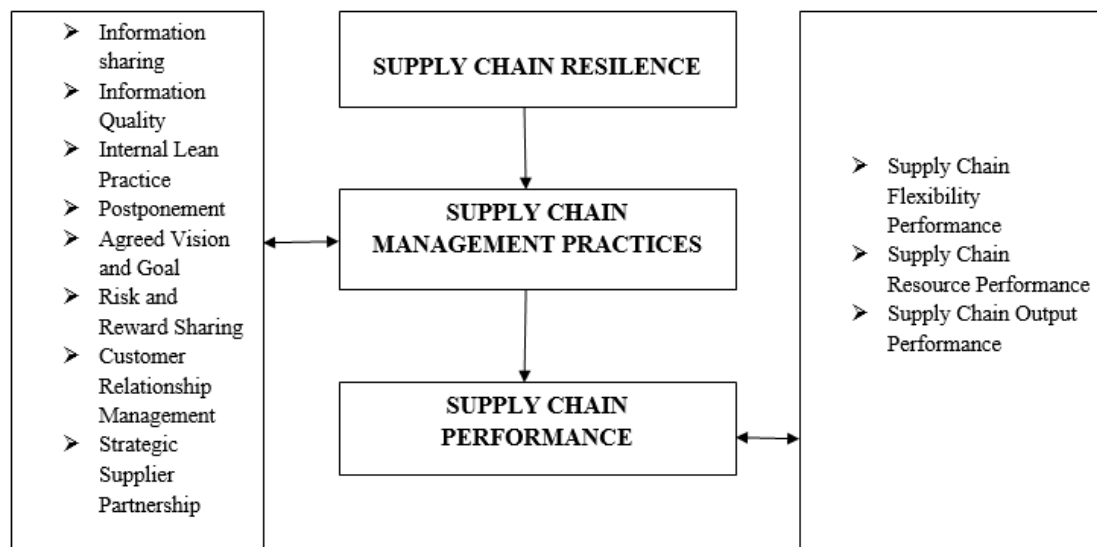
## REFERENCES

1. <https://www.bing.com/search?q=supply+chain+resilience+meaning>
2. Mohammed Ali (2021), "Capability components of supply chain resilience for readymade garments (RMG) sector in Bangladesh during COVID-19", *Modern Supply Chain Research and Applications*, Vol. 3 No. 2, pp. 127-144.
3. Krisztina Szegedi (2012), "Challenges of Responsible Supply Chain Management", *Journal of Economic Literature (JEL)*, Code: M14, 8(2), pp.68-75.
4. Croxton K.L. (2001), "The Supply Chain Management Processes", *The International Journal of Logistics Management*, 12(2), pp.13-36.
5. Olah (2018), "Future Challenges and Areas of Development for Supply Chain Management", *Log Forum-Scientific Journal of Logistics*, 14(1), pp.127-138.
6. Richey (2010), "Exploring a Governance Theory of Supply Chain Management: Barriers and Facilitations to Integration", *Journal of Business Logistics*, 31(1), pp.237-257.
7. Leuschner (2013), "A Meta-Analysis of SCI and Firm Performance", *Journal of Supply Chain Management*, 49(2), pp.34-57.
8. Kavitha. N & Sangeetha. J (2014), "A Study on Problems of Garment Exporters in Tirupur" *Paripex - Indian Journal of Research*, 3(9), pp.9-10.
9. Yoganandan. G. (2016), "Textile Exporters in India: A Case Study of Tirupur", *International Journal of Research in Computer Application & Management*, 6(11), pp.33-36.
10. Kumar. D & Singh. D. (2015), "Export Competitiveness of Indian Textile Industry", *Abhinav National Monthly Refereed Journal of Research in Commerce & Management*, 4(2), pp.1-5.
11. Khatoon. S (2015), "A Comparative Analysis of Production of Cloth in Indian Textiles Industry between The Pre and Post MFA Phase-Out Period", *International Journal of Research in Commerce & Management*, 6(7), pp.63-66.
12. Lakshmanan. R, Swamynathan. R & Mansurali. A (2016), "Empirical Study on Social Initiatives of Small and Medium Enterprises (SMEs) in Indian Apparel Industry", *Fibres & Textiles in Eastern Europe*, 24(2), pp.9-14.
13. Balakumar. R.S. (2015), "An Overview of the Readymade Garment Industry in India", Retrieved from textile learner website: <http://textilelearner.blogspot.in/2015/01/readymade-garment-industry-in-india.html>
14. Janardhanan. A (2017), "Why Tirupur's Rs 42,000 crore textile hub fear a wipeout" , Retrieved from Indian Express website: <http://indianexpress.com/article/explained/demonetisation-effect-narendra-modi-gst-farmers-income-tirupur-textile-industry-job-loss-unemployment-arun-jaitley-492723>.

15. Joshi. R.N (2012), "Indian Garment Industry: A Comparative Study of Growth Trends in Domestic and Export Market", Journal of the TEXTILE Association, 72(5), pp.313-317.
16. Mehra. M.K (2011), "Indian Textile Industry – Past and Present" Journal of the TEXTILE Association, 71(6), pp.336-337.
17. Elangovan N. (2012), "Cluster Institutional Isomorphic Pressures: A case of Tirupur knitwear cluster" Research Journal of Social Science and Management, 2(4), pp.95-102.
18. Marimuthu. K. N & Jessica. M (2012), "Indian Textile Industry Growth and Development Opportunities and Challenges of Coimbatore Region", International Journal of Research in Commerce, Economics and Management, 2(7), pp.67-72.
19. Sudha. A.M & Ramchandra R (2012), "Cluster units in export garment industry: SWOT Analysis", IOSR Journal of Business and Management, 4(6), pp.18-28.
20. Celine, M. B (2013), "Developing a Competitive model for Tirupur's hosiery industry", International Journal of Scientific Research, 2(8), pp.236-239.
21. Jessica.M & Marimuthu. K. N (2013), "Performance of Textile Industry in Tamil Nadu: Perspectives of General Manager", International Journal of Innovative Research and Development, 2(12), pp.228 – 236.
22. Narayanaswamy. K & Joseph. J (2013), "A Study on the Government Role in Promotion of Apparel Exports from India" , Abhinav National Monthly Refereed Journal Of Research In Commerce & Management, 2(7), pp.62-68.

**Table 1: Mean and Standard Deviation of "Supply Chain Management Practices (SCMP)"**

<b>Supply Chain Management Practices (SCMP)</b>	<b>Mean</b>	<b>Sd</b>
Strategic Supplier Partnership (SSP)	2.99	.126
Customer Relationship Management (CRM)	2.01	.106
Information Sharing (IS)	2.89	.348
Information Quality (IQ)	3.79	.415
Internal Lean Practice (ILP)	4.10	.301
Postponement (PST)	3.22	.418
Agreed Vision and Goals (AVG)	2.67	.491
Risk and Reward Sharing (RISK)	2.25	.433
<b>Mean Score</b>	<b>3.00</b>	<b>0.000</b>
<b>*Primary Data</b>		



**Figure 1: Conceptual Framework**