A STUDY ON THE RELATIONSHIP AMONG SUPPLY CHAIN MANAGEMENT PRACTICES AND ORGANISATIONAL PERFORMANCE IN TEXTILE INDUSTRY OF TAMILNADU.

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Abstract— *The purpose of the study is to examine the supply chain structure of the Textile industry in Tamil Nadu. Textile industry is one of the traditionally well-developed industries in Tamil Nadu. Tamil Nadu has a strong production base and accounts for about 1/3 rd of Textiles production in the country. The study aims at examining the existing structure of the supply chain at every level from raw material to the garment production until it reaches to the customer. The study also focuses on investigating the major supply chain challenges and aims at suggesting the proper supply chain framework. The study finds that the Tamil Nadu Textile industry is facing many supply chain issues such as inventory management, quality control, lead time, collaboration, technology and logistics which are almost faced by all the companies all over the supply chain.This paper presents preliminary findings and appropriate supply chain strategic suggestions.*

Keywords— Textile industry, supply chain management, supply chain practice, Flexibility Performance.
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I.   INTRODUCTION

Supply chain has become an important focus of competitive advantage for organization business. The management of supply chain study emphasizes how to maximize the overall value of the firm by better using and deployment of resources across the whole of the firm.

A supply chain is the set of values- adding activities connecting the enterprise's suppliers and its customers. The principle of supply chain activity is receiving input from firm's suppliers – add value – deliver to customers **(Levi at al (2004).**

Tamil Nadu has the second largest economy in India with a Gross State Domestic Product of 9767 billion (US$140 billion) in 2014–15 when it grew at 14.34%, witnessing highest increase of debt (92%) among all the states between 2010-2015. Per capita GDP of Tamil Nadu was $3,000 in the year 2014–15, the third highest in India. As the most industrialized state of India, Tamil Nadu is also the most urbanized, accounting for 9.6% of the urban population while only comprising 6% of India's total population according to the 2011 census. Services contributes to 45% of the economic activity in the state, followed by manufacturing at 34% and agriculture at 21%. Government is the major investor in the state with 51% of total investments, followed by private Indian investors at 29.9% and foreign private investors at 14.9%. Tamil Nadu has a network of about 113 industrial parks and estates offering developed plots with supporting infrastructure. It has been ranked first by the Economic Freedom Rankings for the States of India.

II.   LITERATURE REVIEW

Supply chain management has been becoming increasingly important in competitive business.To compete at the supply chain level, firms must adopt an appropriate supply chain management strategy.The strategy needs integrate and coordinate throughout the supply chain to generate the performance of supply chain members **(Green Jr. et al., 2008; Cohen and Roussel, 2005; Wisner, 2003).**

Mason-Jones etal. (2000) argued that supply chains need to adopt a strategy that suits both their particular product andmarketplace.

Fisher (1997) suggested that the first step in developing the supply chain strategy is to consider the nature of the demand for an organization's product, proposing that these are either functional or innovative.

Supply chain management practices encompasses set of approaches and practices that effectively integrate with suppliers, manufactures, distributors, and customers to improve the long-term businessperformance and their supply chain **(Chopra and Meindl, 2007).** In this study, supply chain managementpractices are defined as several of management activities that purposed to improve the supply chainperformance **(Li et al., 2006; Wong et al., 2005; Zhou and Benton, 2007; Koh et al., 2007; Sufian, 2010).**

Li et al., (2006) stated that customer relationship is the entire array of practices that areemployed for the purpose of managing customer complaints, building long-term relationships withcustomers, and improving customer satisfaction.

Vickery et al. (2003) emphasize the importance of establishing a close customer relationship as a major practice of supply chain integration to enableorganizations to respond faster to customers.

Supply chain integration is degree of all the activities within an organization, suppliers, andcustomers are integrated together **(Stevens, 1990; Stock et al., 1998; Stock et al., 2000; Narasimhan andJayaram, 1998).** Supply chain integration involves effective communication among all supply chainmembers **(Turner, 1993).**

III.   OBJECTIVES

- To study on the impact of supply chain management practices on organisational performance of Textile Industry.
- To find out the factors influencing supply chain performance among the Textile Industry of Tamil Nadu.

IV.   THEORETICAL FRAMEWORK
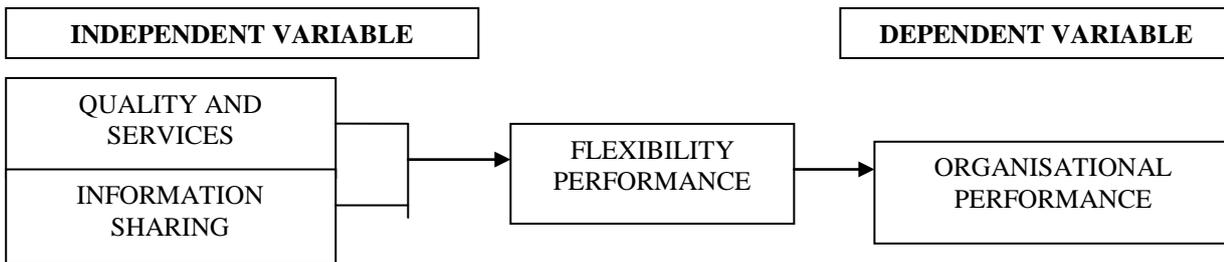
A) *Hypothesis.*

The following hypotheses are formed based on the conceptual thoughts, discussions and intellectual interaction among the field experts:

- The level of supply chain practice Positively influences the degree of organizational performance
- The level of supply chain practice positively influences the degree of supply chain   performance.
- The level of supply chain performance Positively influences the degree of organizational performance.

B) *Structural Equation Modeling.*

Structural Equation Modeling (SEM) framework is used to test the construct or variables under the dimensions of Emotional Intelligence. The Confirmatory Factor Analysis (CFA) which is employed to identify the items of each construct or variable and also evaluate reliability and validity of each variable or construct. LISREL (Linear Structural Relations) software was developed by Joreskog and Sorbomin (1989) to use the SEM to explore the relationships among latent and observed variables.

Many other fit indexes are available to test the validity of SEM results. Some of such indexes are Goodness of Fit Index (GFI), Adjusted Goodness of Fit Index (AGFI), Comparative Fit Index (CFI), Normed Fit Index (NFI), Root Mean Square Residual (RMSR) and Root Mean Square Error of Approximation (RMSEA).

In the present research, the researcher analyzed the Supply chain Management Practices in four dimensions viz: Quality and Services, Information Sharing, Flexibility Performance and Organisational Performance and each having 5 to 10 sub- variables (Item Scale). The factor loadings for all the sub variables are calculated by using a measurement model called Confirmatory Factor Analysis, in order to test the reliability and validity of the construct of these variables, the choice of the respondents marked in the questionnaire are multiplied by its own factor loadings and hence the total value of all the four dimensions is obtained. It is then tested and validated through Confirmatory Factor Analysis.

Table No. 1 - Variables and Factor Loadings of Supply Chain Management Practices and Organizational Performance.

S.No.	Variables/Item Scale Supply Chain Management Practices	Factor Loadings
	I. Quality and Services.	
1	The organisation rely on few dependable suppliers	0.48
2	The organisation rely on few high quality suppliers	0.43
3	The organisation consider quality as number one criterion in selecting suppliers	0.58
4	The organisation strive to establish long term relationship with its suppliers	0.62
5	The organisation helps its suppliers to improve their product Quality	0.67
6	Theorganisation has continuous improvement programs that include its key suppliers	0.55
7	The organisation include its key suppliers in its planning and goal setting activities	0.62
8	The organisation actively involves its key suppliers in new product development processes	0.70
9	The organisation certifies its suppliers for quality	0.59
10	The organisation regularly solve problems jointly with its suppliers	
S.No.	II. Information Sharing	Factor Loadings
1	Information exchange between our organisation and its trading partners is timely	0.52
2	Information exchange between our organisation and its trading partners is accurate	0.46
3	Information exchange between your organisation and its trading partners is complete	0.45
4	Information exchange between your organisation and its trading partners is adequate	0.56
5	Information exchange between your organisation and its trading partners is reliable	0.62
	Variables/Item Scale Supply Chain Performance	
S.No.	I. Flexibility Performance	Factor Loadings
1	Ability to respond to and accommodate demand variations, such as seasonality.	0.55
2	Ability to respond to and accommodate the periods of poor manufacturing performance such as machine breakdown.	0.54
3	Ability to respond to and accommodate the periods of poor supplier performance	0.50
4	Ability to respond to and accommodate the periods of poor delivery performance	0.59
5	Ability to respond to and accommodate new products, new markets or new competitors	0.74
S.No.	Organisational Performance	Factor Loadings
1	Market share	0.66
2	Sales growth	0.65
3	Profit margin	0.75
4	Overall product quality	0.60
5	Return on investment.	0.61

RESULTS AND DISCUSSIONS:

TABLE NO.2 - TOTAL PATH ANALYSIS - RESULT OF STRUCTURAL MODEL

Path	Coefficient	t-value	Sig. Level	Hypotheses
Relationship between Supply chain Practices and degree of Organisational Performance.	0.25	4.15	Less than 0.01	Supported
Relationship between Supply chain practice and degree of supply chain performance.	0.45	8. 27	Less than 0.01	Supported
Relationship between supply chain performance and degree of organizational performance.	0.59	7.97	Less than 0.01	Supported

The above table depicts that 25% of variance in organizational performance is explained by supply chain Practice with (supply chain quality and Service, Information Sharing), 45% of variance in supply chain   performance is explained by supply chain Practice and whereas 59% of variance in organizational performance is explained by supply chain performance. To conclude, results of the hypotheses testing using SEM shows that all the ten hypothesized relationships were significant at the 0.01 level and that the available data aptly fit into the proposed conceptual model. It has further been found using path analysis of SEM that supply chain practices, supply chain performance exert significant effect on organizational performance of the Garment manufacturing enterprises.

Since the industry is mostly unorganized, the supply chain collaboration and its influence reflect the efficiency of the industry. It is true that in the case of the Indian Garment industry supply chain partners must improve their long term relationship and risk & reward sharing.

V.   CONCLUSION.

SCM is essential for manufacturing industries. Successful supply chain management requires effective communication, supply chain visibility, event management capability and performance metrics. It also requires coordination of activities and information sharing among supply chain partners.

In this paper, Supply chain practices and supply chain performance is having the positive impact on organizational performance of manufacturing enterprises. Hence, manufacturing firms concentrating on improving their supply chain performances and supply chain practices can significantly improve their performance. Hence, managers should concentrate on improving the supply chain performance and supply chain practice to enhance the efficiency of their firms.

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