An Empirical Analysis on Supply Chain Problems, Strategy, and Performance with Reference to SMEs

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Abstract

Free trade, globalization of economy, digital business, and introduction of new technology are posting new challenges to all organizations, especially for small and medium enterprises (SMEs). The purpose of this research paper was to identify the problems faced by SMEs while being a part of the supply chain. The study focused on textile units of SMEs. Around 60 samples were taken, and respondents were also considered as key people of the companies. The data were analyzed using mean, rank, standard deviation, and correlation between independent and dependent variables. To measure improvement in supply chain performance, we considered different measures related to increased production, waste reduction, reduce machine breakdown, low transport and inventory cost, and business performance such as sales and revenue increases. The findings showed that supply chain strategy had a significant relationship with the supply-chain performance.

Keywords : **supply chain management, SCM strategy, SCM performance, textile, SMEs**

JEL Classification : L25, L67, M1, M11

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Supply chain management (SCM) has gained significant importance among the researchers and practitioners. It is considered as a competitive strategy which puts a limelight on how to maximize the overall value of the firm by adding value added activities and better utilizing the resources across the firm. In today's dynamic business environment coupled with trade liberalization and fierce competition, survival is even a big question mark for large enterprises (LEs) ; in this scenario, what will be the case of SMEs with respect to survival in a dynamic market ? The survival of SMEs will be determined by their ability to produce quality products, shorter lead times, reduced wastages, effective coping mechanisms, affordable prices, and good marketing strategy with effective services. Small and medium enterprises (SMEs) form a cluster of manufacturing firms which provide manufacturing products and adequate technical support services to LEs (Ganeshan, 2013). Hence, there is a growing demand to take SCM as a holistic view in order to secure more profitable outcomes for all parties in the chain (Baymount, 2015).

Due to globalization, SMEs have an ocean of opportunities to increase their business network. Indian SMEs have been facing numerous challenges over the years - like poor designing of supply chain, inefficient suppliers, cost cutting, non - optimal scale operation, gaps in technology advancement, supply chain inefficiencies, handling the national and international competition, working capital shortages, non - reliable suppliers, delays in on time

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delivery, uncertainty of customer demand, unskilled manpower resources, and turbulent & uncertain market scenario. However, to overcome these issues, they can consider SCM as a strategic weapon to improve their performance in the competitive market.

This paper aims to identify the problems faced by manufacturing of SMEs while implementing it in the supply chain. This study also addresses the strategies for overcoming the problems. Furthermore, it also attempts to find out the relationship of supply chain strategies impacting the business performance of SMEs.

Literature Review

Thakkar, Kanda, and Deshmukh (2011) provided an extensive and evaluative review of literature on supply chain issues in SMEs. They authors revealed that supply chain issues in SMEs were related to adoption and use of IT, E-based IT solutions, improper planning, lack of warehouse facilities, issues related to storage of inventory, constraints on modernization and expansion, non - availability of skilled labors, and lack of SCM practices. The prime focus of this research paper was on SME issues (technical & managerial aspects).

(1) Technology : The role of the technology is one of the key aspects in supply chain management. Rais and Sheoran (2015) addressed that many SMEs are incapable to operate competitively in the globalized dynamic market owing to the problem of lack of technology applications. Furthermore, they also mentioned that sorting and grading of technology is one of the factors affecting India's supply chain. Krishnadevarajan, Muthukrishnan, Balasubramanian, and Kannan (2015) stated that Indian SMEs' are not ready to invest in technology like online ordering, tracking, and invoicing. Most of the Indian SMEs fail to match their supply chain strategy with business strategy due to the poor technology infrastructure (Rogers, Srivastava, Pawar, & Shah, 2015). Kumar, Singh, and Shankar (2015) addressed that the use of modern technologies is considered as one of the critical success factors for implementing SCM in SMEs. Statistics revealed that use of modern technologies was positively correlated (0.441) with SMEs' innovation and growth.

Supply chain software or technology is very essential for the companies, but they are not willing to invest in technology (Singh, 2013). Upgraded technology like supplier relationship management, CRM, and E-commerce are needed to combat existing challenges in Indian SMEs (Symbiosis Centre for Management & Retailers Association of India, 2013). More and Basu (2013) noticed that the aid of information technology reduced the poor visibility into movement of goods in a supply chain. Jayaram and Avittathu (2013) mentioned that technology development is one of the key challenges faced by Indian firms in the supply chain management area. Lack of the technology and poor IT infrastructure impacts the supply chain performance (Kumar & Pugazhendhi, 2012). Technology based solutions are essentially needed by SMEs for setting up a successful supply chain in India (Chadha, 2011).

(2) Production Capacity : Low production capacity is another major pitfall of the supply chain in SMEs. The reasons for the low production capacity in SMEs are poor location, non - availability of raw materials, multi models of logistics, not using latest machinery and equipments, and financing issues related to production. Hosmani (2014) noticed that capacity of the production facilities largely depended on the degree of vertical integration within the firm. Hypotheses claimed that flexible production system could actually perform better than mass production. Specifically, flexible production system for small firms is able to achieve a better economic performance than it does for large enterprises. Babu (2012) revealed that delays were caused by production constraints in the supply chain in the automobile sector. Mahendran, Narasimhan, Nagarajan, and Gopinath (2011) stated that low production capacity was caused by the machinery malfunction and human risks. Another research indicated that decrease in production capacity was due to non utilizing of modern machineries, less scope

for division of labor, higher operating cost per unit of output, shortened product life cycle, and poor storage and warehousing functions (Thakkar et al., 2011).

(3) Skilled Labor : SMEs face another problem in shortage of skilled labors. Indian manufacturing SMEs have limited knowledge of implementation of SCM. Meehan and Muir (2008) identified some barriers that may prevent SMEs from implementing SCM including, lack of individual skilled labor, lack of power in supply chain, and lack of knowledge and understanding the benefits of the SCM practices. Rahman,Wasilan, Deros, and Ghani (2011) noticed that SMEs lacked application of knowledge of supply chain while adopting the SCM practices in their companies. More and Basu (2013) revealed that irregular cash flow in the supply chain occurred due to the lack of knowledge about supply chain financial tools. Kumar, Liu, and Scutella (2015) indicated that innovation is one the key parameters in SMEs. Further, they noticed that SMEs are capable to implement the new technologies (4.2430) and customers' response for features (3.9402). In addition, they observed that Indian SMEs should implement new technology in all fields and they have to improve quality and reduce the operation costs. However, another study revealed that as compared with large enterprises (LEs), SMEs have one of the major strengths, that is, innovation (Baymout, 2015). He further said that SMEs should form alliances and their networks can help them to overcome resource constraints through increased innovation.

(4) Production Planning : SMEs have limited power and resources to face the difficulty to optimize the production planning. Babu (2012) stated that production constraints caused short term production changes. In addition, SMEs have to change the production planning frequently for their customers due to shortened product life cycle and mass customization. Hosmani (2014) identified significance of supply chain decisions relating to production planning. Moreover, he mentioned that operation decisions were particularly based on master production schedule, schedule on machines, equipments, maintenance, and man power. He further indicated that day to day activities were required to match the supply and demand to decide on weekly production schedules.

Aggregate production planning is suitable for SMEs in order to manage the inventory & match the supply and demand in order to optimize the production schedule. Without focus on production planning and controlling techniques, SMEs may face serious trouble in their supply chain processes like high cost of inventory, storage cost, high production cost, and mismatch with supply and demand. Jayaram, Dixit, and Motwani (2014) and Ganeshan and Suresh (2015) mentioned in their studies that SMEs faced the problems of poor planning and scheduling in their production activities. Manufacturing firms do not have a mindset for single source as it is seen as too risky. Today, they are having many options of sourcing from any part of the globe. They can easily access them to get the inputs.

(5) Collaboration with Suppliers : Manufacturing companies move to make a long-term sustainable collaboration with their suppliers. Three key areas have to be developed. Firstly, the goverence model, which means alignment of supply chain objectives of the firm and its suppliers, and the model clearly defines the roles, responsibilities, and outcomes. Secondly, leadership and ownership of the collaboration- the leaders of the both teams should be able to work as a unit with the sole objectives of delivering value to the customers. Thirdly, the supply chain collaboration makes a joint spend analysis and budget management - this gives both the parties accurate and actionable data to identify savings targets, efficiency initiatives, and better planning. More and Basu (2013) mentioned that SMEs had a weak collaboration with their partners, which caused them to reduce their supply chain efficiency. In India, manufacturing industries face a major challenge in collaboration with inter firm organizations (Chadha, 2011). Kumar, Singh, and Shankar (2015) indicated that SMEs have to give the highest importance (3.6853) for networking with suppliers and customers.

Another study addressed that manufacturing sectors may develop a sustainable product design and adopt eco-

friendly SCM practices. They would also need to pay a greater attention while collaborating with their suppliers (Kearney & CSCMP, 2014). Trust among the supply chain members is one of the most important aspects for improving the supply-chain performance. Trust is required for communicating the information in the supply chain. It plays a crucial role and builds confidence and favorable attitude among the supply chain members (Anderson & Narus, 1990).

In case of SMEs, while adopting the supply chain management practices in their companies, development of reliable suppliers (3.6414) is considered as the paramount success factor. Statistics revealed that the development of reliable suppliers positively correlated with the SMEs' internal and external performance pertaining to customer service and satisfaction (0.389), innovation and growth (0.343), financial performance (0.231), and internal business performance (0.265) (Kumar et al., 2015). However, Jayaram et al. (2014) mentioned that SMEs faced issues related to trust among the supply chain partners. Kumar and Pugazhendhi (2012) and Thakkar et al. (2011) noted that lack of trust among the supply chain partners may affect their company performance. Another study mentioned that lack of trust was one of the barriers in Indian SMEs (Zahedirad & Shivaraj, 2011).

(6) Sharing Information : Kumar et al. (2015) identified that sharing information (3.4343) with supply chain members was a crucial factor for implementing SCM in SMEs. Moreover, they proved it statistically that information sharing among the supply chain members was positively correlated with their internal business performance (0.363).

(7) Imbalances of Supply and Demand : In the present day context, volatile demand and changing customer preferences are the biggest challenges of SMEs and their supply chain has to be responsive to the market changes. Mentzer, Dewitt, Keebler, Min, Nix, Smith, and Zacharia (2001) addressed that supply chain practices should be efficient for products that must effectively cope up with market demand. Krishnadevarajan, Balasubramanian, and Kannan (2015) identified that SMEs faced the biggest problem of receiving the uncertainty of customer orders (4.01) in their supply chain. Indian manufacturing SMEs faced major challenges in difficulty to track the demand, that is, uncertainty in customer order. Bhattacharya, Mukhopadhyay, and Giri (2014) stated that demand side trends impacted the supply chain in the auto industry.

According to Hosmani (2014), SMEs of manufacturing industry keep some inventory as buffer stock for uneven customer orders or uncertainty demand. If they would do a forecasting with perfect accuracy, then the particular inventory would be used as cycle inventory. However, almost all the SMEs at all times would do the forecasting with hundred percentage accuracy. Every forecast has some degree of uncertainty. SMEs may cover the uncertainty to a greater or lesser degree by keeping as buffer stock in case of unexpected sudden increase in demand. Manufacturing units find alternative ways to handle the imbalances of supply and demand by using flexible manufacturing systems. This can help a manufacturing unit by changing the production rate of different products on the basis of requirement. SMEs may use tactical forecasts to guide the setting of monthly and quarterly production schedules and timetables. Singh (2013) addressed that the increasing demand and supply volatility has been changing the Indian business scenario. Babu (2012) profoundly enunciated that rising customer requirements and fluctuating market demands are key challenges in the automotive industry.

(8) Inventory Management : Manufacturing of SMEs encounters the major issue in unorganized inventory management techniques. They may not be able to manage all the inventory starting from raw materials, spares, assemble parts, and finished products. Because they have few limitations pertaining to limited physical space, lack of knowledge in inventory techniques, and unsystematic way of handling the inventory, these issues drive them to higher costs in inventory management and negatively affects their supply-chain performance. Babu (2012) noticed that increased inventory was a major problem in the supply chain, particularly in the auto sector.

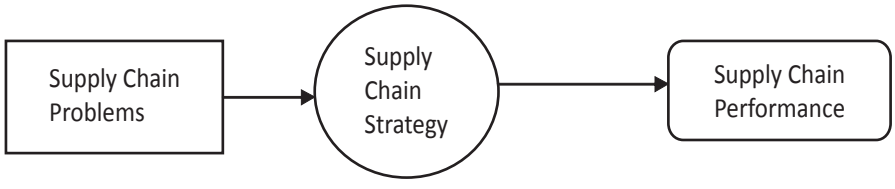
(9) Top Management Commitment : For creating stability in manufacturing, our Indian manufacturing SMEs' CEOs have to be clearly focused on supply chains in the long term perspective. But now, the supply chain view is restricted to cost reduction and availability in short terms. The main role of CEOs is to promote the supply chain culture and supply chain thinking across the functional areas. Breakout of the silo mentality, job rotations, enforcing collaboration through KPIs, developing whole system view analytical ability, and customer orientation are the tasks in front of the manufacturing CEOs to make the company successful in a business environment. Another issue is lack of top management support while implementing the supply chain management processes in SMEs. SMEs' top level management have limited knowledge in supply chain practices, have poor planning and execution, poor financial support, poor decision making, unorganized organizational structure, and non systematic handling of the customer order, incompatibility with the SCM plan, shared risks and rewards, and limited organizational boundaries. These are subset issues with top management while adopting the SCM practices in SMEs (Zahedirad & Shivaraj, 2011).

Kumar et al. (2015) pinpointed in their research that the top management's commitment is one of the critical success factors for SMEs while implementing SCM processes. Moreover, they claimed that the top management commitment had a significant correlation (0.264) with improvement of SMEs' internal business performance. Lack of financial support affected the efficiency of supply chain flows (Rais & Sheoran , 2015). More and Basu (2013) noticed that unreliable and unpredictable cash flows and lack of financial management tools were the major challenges of Indian SMEs. Large Enterprises (LEs) have sufficient quality of suppliers as well as strong and big network with suppliers. However, comparing with LEs, SMEs have very limited and long proximity of quality suppliers. This is a major obstacle for SMEs' development. Bala (2014) mentioned that the supply chain network design was crucial for the company's performance. In addition, a weak supplier network leads to the companies having high inventory (Singh, 2013). Improper supply chain network was one of the major pitfalls in the company's network (Singhal, Agarwal, & Mittal, 2011).

Research Methodology

This paper is an empirical study for the identification of problems of SMEs while adopting the supply chain management (SCM) practices. This study targets South Indian small scale textile manufacturing units. There are 6250 textile units in Tiruppur, Tamil Nadu under six different operations. A sample size of 60 SMEs was drawn from 6250 textile units in Tiruppur based on proportionate stratified random sampling. In this study, pilot survey and questionnaire were used to collect the relevant factors from small scale textile units. The questionnaire consisted of four sections, which are : Demographic background of SMEs ; supply chain management issues of SMEs ; SCM strategies ; and SCM performance. The respondents were the owners, directors, or managers of the SMEs. The study was undertaken during January - May 2017. The Figure 1 represents the conceptual framework of supply chain problems, strategy, and performance.

Figure 1. Framework for the Study



Results and Discussion

Cronbach's alpha was used to measure the internal consistency. It was calculated for each scale, as recommended for empirical research in operations management (Flynn, Sakakibara, Schroeder, Bates, & Flynn, 1990). The Cronbach's alpha for all constructs are in the range from 0.6 to 0.9. For this study, the value of Cronbach's coefficient is 0.83, which is good for the internal consistency. Data acquired from survey of small scale textile units were analyzed by statistical tests such as mean, rank, standard deviation, and correlation analysis in the following sections.

(1) Problems Faced by Textile SMEs While Implementing and Using SCM : On the basis of wide literature survey and pilot study, 16 problems were identified which the textile units faced during implementation and usage of SCM. These problems are : non availability of suitable technology ; low production capacity ; lack of skilled labor ; weak collaboration with suppliers ; no information sharing with suppliers ; lack of trust with the suppliers ; less importance of production planning ; unorganized inventory management ; lack of innovative practices ; lack of knowledge in supply chain area ; less attention paid by CEO/Manager ; limited financial resources ; geographical distance from suppliers ; inefficient quality suppliers ; and high operating cost. The respondents were asked to rate the problems using a 5- point Likert scale (1- *strongly agree*, 3 - *neutral*, and 5 - *strongly disagree*). The Table 1 reveals that out the supply chain problems while using SCM, it is observed that biggest problem is imbalance of supply and demand (4.13). Bhattacharya et al.(2014) also highlighted that demand side trends impacted the supply chain. It is followed by unorganized inventory management (3.82). The next major problem is lack of innovation in implementation process (3.80). Krishnadevarajan, Balasubramanian, and Kannan (2015) also noted that SMEs did not implement the innovative practices in SCM operations. They would follow the old traditional methods. The next problem faced by SMEs is limited financial resources (3.77) because of fear of global competition. The next problem is non availability of suitable technology (3.75). Another problem faced by SMEs is higher operating cost (3.62) ; lack of knowledge in SCM practices (3.60) ; and less importance of production planning control (3.52). Hence, SMEs have to focus on short term and medium term production planning control techniques. The next problem is low production capacity (2.98) ; long distance of suppliers-transportation of raw materials from longer distance (2.95) ; management has not paid attention to their SCM operations (2.60) ; non availability of skilled labour (2.42) ; lack of trust with suppliers (2.15) ; and poor quality of supplier in terms of poor delivery, non availability of raw materials, poor communication with suppliers (1.92). The least problems faced by SMEs were weak collaboration with suppliers (1.90) and no information sharing with vendors (1.72).

(2) Supply Chain Strategies in Order to Tackle Problems : On the basis of intense literature survey and pilot study, 16 strategies were identified in order to address the SCM issues. These strategies are : need to upgrade to suitable technology ; increased production capacity ; accuracy of demand forecast ; recruiting skilled manpower ; strong relationship with suppliers ; sharing valuable relationship with suppliers ; reliable suppliers ; make short term and medium term planning ; systematic way of handling inventory ; innovativeness while implementing SCM ; knowledge in supply chain practices ; CEO's focus on SCM processes ; increased financial resources ; closeness with suppliers and customers in terms of locations ; sufficient quality suppliers ; and low operating cost. The respondents were asked to rate the strategies using a 5 -point Likert scale (1 - *strongly agree*, 3 - *neutral*, and 5- *strongly disagree*). The results are shown in the Table 2.

It is inferred that supply chain strategies need to be followed to tackle the supply chain problems. It is observed that reliable suppliers (4.42) have highest importance, followed by increased financial resources (4.35), and make short term and medium term planning (4.10). It is noted that SMEs have to follow the aggregate production

Table 1. Supply Chain Problems - Parameters

S. No	SCM problem Parameters	Mean	Rank	Std. Deviation
1	Non availability of suitable technology	3.75	5	1.00212
2	Low production capacity	2.98	9	0.70089
3	Imbalances of supply and demand	4.13	1	0.79119
4	Lack of skilled labor	2.42	12	1.26614
5	Weak collaboration with suppliers	1.90	15	1.23096
6	No information sharing with the vendors of SMEs	1.72	16	1.16578
7	Lack of trust with the suppliers	2.15	13	1.03866
8	Less importance of production planning and control	3.52	8	1.07501
9	Unorganized inventory management	3.82	2	0.94764
10	Lack of innovation in implementation process	3.80	3	1.04746
11	Lack of knowledge in supply chain practices	3.60	7	0.97772
12	Less attention paid by CEO/Manager	2.60	11	0.86749
13	Limited financial resources	3.77	4	1.01458
14	Geographical distance from suppliers and customers	2.95	10	0.92837
15	Inefficient quality suppliers	1.92	14	1.04625
16	Higher operating cost	3.62	6	0.64022

Table 2. Supply Chain Strategies

S. No	SCM Strategies	Mean	Rank	Std. Deviation
1	Need to upgrade to suitable technology	3.78	7	0.95831
2	Increase production capacity -Invest in machinery and equipments	3.83	6	1.02786
3	Accuracy of demand forecast	3.72	9	1.1945
4	Recruiting skilled manpower	3.08	15	0.82937
5	Strong relationship with suppliers	3.70	10	0.94421
6	Sharing valuable information with suppliers	3.90	5	0.89632
7	Reliable suppliers	4.42	1	0.82937
8	Make short term and medium term planning	4.10	3	0.83767
9	Systematic way of handling inventory	3.27	14	1.0229
10	Innovativeness while implementing SCM	3.32	12	0.87317
11	Knowledge in SC practices	3.58	11	0.76561
12	CEO focus on SCM processes	3.05	16	1.14129
13	Increased financial resources	4.35	2	0.93564
14	Closeness with suppliers and customers in terms of locations	3.77	8	1.1103
15	Sufficient quality suppliers	3.93	4	0.89947
16	Low Operating cost	3.30	13	0.64572

planning strategies, that is, they have to make three months plan, convert it into monthly plan, weekly, and daily plan in their production processes. The next SCM strategies are : availability of sufficient quality suppliers (3.93) to supply the right quantity and right quality of raw materials ; on time delivery and proper communication with their partners are the prominent factors. The next strategy is increased production capacity (3.83) - SMEs need to

invest in machinery and equipments for increasing their productivity. The next strategy is upgrading suitable technology (3.78) ; closeness with suppliers (3.77) ; forecast accuracy (3.72) – to balance the supply and demand ; strong relationship with suppliers (3.70). More and Basu (2013) addressed that weak collaboration with suppliers affected the supply chain efficiency. SMEs in this study made a strong relationship with their suppliers. In addition, SMEs require adequate knowledge in supply chain (3.58) ; innovative practices (3.32) ; low operating cost (3.30) ; proper inventory handling techniques (3.27) ; highly skilled manpower (3.08) ; and top management focus on supply chain (3.05). Ganeshan and Suresh (2016) stated in their study that supply chain strategies to handle the supply chain problems are : accurately predict the demand ; flexible production system ; quality improvement in operation and production ; closeness to suppliers and customers ; and optimize the logistics operation.

(3) Supply Chain Performance Measures : Performance measurement is the process of quantifying the effectiveness and efficiency of various processes. It is a quantifiable indicator used to evaluate how well a business organization has achieved its desired objectives. By measurement, it provides the necessary information to decision makers to plan, control, and direct the activities of the organization. For this paper, six performance parameters were considered for measuring the supply-chain performance. These are : increased production/output ; reduced wastage ; reduced machine breakdown; reduced storage and transportation cost ; increased sales ; and revenue increases of SMEs. The respondents were asked to rate the SCM performance based on the SCM strategies. A 5- point likert scale was used (1- *strongly agree*, 3 - *neutral*, 5 - *strongly disagree*). It can be inferred from the Table 3 that after implementing the SCM strategies, the respondents measured their SCM performance by giving the ratings, which are : production or output increased (3.98) to a considerable extent ; sales increased (3.77) ; and revenue increased (3.66). Unexpectedly, reduction of wastage (3.62) and machines breakdown also increased (3.50) were not considered as highly important factors for measuring SCM performance by the SMEs.

Table 3. Supply Chain Performance

S. No	SCM Performance Parameters	Mean	Rank	Std. Deviation
1	Increased production/output	3.98	1	1.11221
2	Reduced wastage	3.62	4	0.88474
3	Reduced machine breakdown	3.50	5	0.83362
4	Reduce storage and Transportation cost	2.88	6	0.95831
5	Increased sales	3.77	2	0.9806
6	Revenue increases	3.66	3	1.01958

(4) Correlation for Testing Research Propositions : In the earlier section, the study has tried to address issues related to supply chain problems, supply chain strategies, and their effect on supply chain performance of textile SMEs. The main propositions in the present study are concerned with the relationship between SCM strategies and performance of SMEs. For testing of propositions made in this study, correlation analysis has been conducted (Table 4). Some of the observations on the basis of this analysis are as follows :

- SMEs are required to upgrade to suitable technology is positively correlated (0.664) with increase in production output. The forecast accuracy is positively correlated (0.647) with increase in the production output.
- SMEs' knowledge in supply chain practices is positively correlated (0.311) with waste reduction.

Table 4. Correlation of SCM Strategy and SCM Performance Parameters

S. No	SCM Performance / SCM Strategies	Increased Production/ Output	Reduced Wastage	Reduced Machines Breakdown	Reduce Storage and Transportation Cost	Increased Sales	Revenue Increases
1	Need to upgrade to suitable technology	0.664**	0.22	0.52**	0.341**	-0.055	0.497**
2	Increase production capacity - Invest in machinery and equipments	0.591**	0.339**	0.495**	0.72**	0.482**	0.69**
3	Accuracy of demand forecast	0.647**	0.04	0.23	0.074	-0.043	0.394**
4	Recruiting skilled manpower	0.204	-0.441**	-0.208	-0.158	-0.142	-0.307*
5	Strong relationship with suppliers	-0.005	0.225	0.258*	0.485**	0.179	0.246
6	Sharing valuable information with suppliers	0.049	0.271*	0.181	0.203	0.301*	0.334**
7	Reliable suppliers	0.044	0.013	0.159	-0.087	-0.358**	0.087
8	Make short term and medium term planning	0.73**	-0.016	0.316*	0.458**	0.132	0.417**
9	Systematic way of handling inventory	0.719**	0.077	-0.02	-0.02	-0.241	0.428**
10	Innovativeness while implementing SCM	-0.291*	-0.608**	-0.268*	-0.543**	-0.486**	-0.641**
11	Knowledge of SC practices	0.469**	0.311*	0.332**	0.441**	0.162	0.362**
12	CEO focus on SCM processes	0.201	0.086	0.116	0.098	-0.217	0.262*
13	Increased financial resources	-0.108	0.144	0.576**	0.292*	0.312*	0.036
14	Closeness with suppliers and customers in terms of locations	0.175	0.183	0.678**	0.404**	0.183	0.11
15	Sufficient quality suppliers	0.456**	0.116	0.701**	0.62**	0.29*	0.4**
16	Low operating cost	0.196	-0.3*	-0.252	-0.134	0.796**	0.729

*Correlation is significant at the 0.01 level (two tailed) . ** Correlation is significant at the 0.05 level (One tailed).

- Innovation in implementation of SCM processes is negatively correlated with the business performance such as sales increases and revenue increases.
- Knowledge in supply chain is positively correlated with business performance.
- Investment in machinery and equipment is positively correlated (0.69) with the increase in the revenue of SMEs.
- SMEs' low operation cost is positively correlated with the business performance such as considerable sales and revenue increases.

Conclusion

The main objective of the study is to identify the problems of SMEs while implementing the supply chain practices. Based on data collected from key people of textile units of SMEs, 16 problems were identified related to supply chain ; various SCM strategies are also found to tackle the problems ; and finally, it is examined how these SCM strategies impact the SCM performance. From this study, it is observed that the problems have strongly affected the supply chain performance. Major problems faced by SMEs are imbalances of supply and demand, unorganized inventory management techniques, lack of innovative practices in supply chain, and scarcity of financial resources. These problems were highlighted by most of the SMEs while implementing SCM. In order to handle these problems, various SCM strategies are also used, which are : SMEs require accurate forecast techniques ; proper inventory management techniques ; change from the traditional method of working to new

practices ; and generating enormous supply of adequate finance for their SCM operations. Implementation of these strategies has a positive correlation with the SCM performance.SCM performance can be measured by reduced wastage, increased production, financial performance in terms of sales, and revenue increases.

Managerial Implications

This study has many important implications for academic literature and SMEs. The foremost implication is that SMEs should develop their supply chain strategies effectively after examining the dynamic business environment and their future plans. Dynamic change in business scenario includes a liberalized market, integrated economy, and shortened product life cycle. Keeping in mind these factors, SMEs should decide their supply chain strategies for their long-term survival and growth.

Limitations of the Study and Scope for Further Research

There are number of limitations. Firstly, there is only one manufacturing- textile sector - that was considered for this study. Hence, a single sector study results may not be applicable to the other sectors. Secondly, the sample selection was based on the proportionate stratified random sampling. Thirdly, the sample representation was limited number of companies in a limited sector. Fourthly, the study is based on a self reported questionnaire. Hence, the limitations inherent in use of primary data applies to this study. This study can be further extended to other sectors like automobiles, IT, ITES, and Cement industries. In addition, SCM practices of SMEs can be compared to large scale enterprises. The findings from this study may be beneficial for SMEs outside India as well as other nations.

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