Supply Chain Management Practices in SMEs of India: Some Managerial Lessons from Large Enterprises

Inayatullah*[1], Rakesh Narain[2], Amar Singh[3]

*[1] *Corresponding Author, Research Scholar, Department of Mechanical Engineering , Motilal Nehru National Institute of Technology, Uttar Pradesh, India*

[2] *Professor, Department of Mechanical Engineering, Motilal Nehru National Institute of Technology, Uttar Pradesh, India*

[3] *Ex Faculty, Department of Mechanical Engineering, Kamla Nehru Institute of Technology, Uttar Pradesh, India*

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ABSTRACT -
The objective of this paper is to provide insight into the similarities and dissimilarities of Supply Chain Management (SCM) practices between large enterprises (LE) and small-and-medium enterprises (SME) of India. Survey method is used to gather the responses from Indian organizations. Exploratory factor analysis is performed to reduce the number of variables, and Reliability analysis is performed to check the consistency of the constructs. A set of hypothesis has been formulated and tested using ANOVA. The findings reveal that the selected sectors have similar opinion regarding the business objectives, supply chain objectives, and reasons for choosing outsourcing strategy. Disagreement exists amongst the sectors on factors developing trust between buyers and suppliers, and kind of relationships maintained with suppliers. It is also observed that SMEs face different barriers than the LEs while implementing SCM practices. Also, SMEs have a cultural difference and adopt different criteria for selecting benchmarking partners vis-a-vis LEs. This paper identifies, and empirically tests the way the LEs and SMEs differ in employing SCM practices. More importantly, this paper is one of the few which explains the importance of SCM implementation in SME's perspective. This study adds to the existing SCM literature by finding certain interesting results regarding organizational culture, barriers to SCM implementation, and benchmarking practices in SME context.

Keywords *– Supply chain management, Trust, Buyer-Supplier relationship, Organizational Culture, Barriers, Outsourcing, Benchmarking.*

1. INTRODUCTION

Intensifying global competition, market fragmentation, shortened product lifecycles, rapidly changing technologies, and ever increasing demand of customers have led the firms to work in a hostile business environment [1][2]. Therefore, researchers are always trying to explore new prospects to combat these problems. Supply chain management (SCM) has established itself as a milestone by sustaining both responsiveness and competitiveness in such volatile environments [3]. SCM provides opportunities to improve organizational effectiveness, by developing better collaborative and cooperative relationships amongst all the entities in a supply chain. It has opened a new window of doing a business and changed the total culture by integrating all the entities of a business from suppliers to end customers. Supply chain integration is considered as one of the major factors in improving performance [4].

Since 1990s, after deregulation of Indian economy, the large businesses of the world have shown their interest to start business with native manufacturers or to start the business of their own, which led the Indian markets to face global competition and ultimately to follow SCM practices [5]. The Indian organizations are now implementing SCM practices to survive and thrive in the present competitive environment [6].

Thakkar *et al.*, (2008) [7] defined SCM in SMEs perspective as:

"Supply chain in SMEs is a set of business activities including purchase from open/spot market, manufacturing or processing of subcomponents/subassembly within the plant and delivery to large enterprises using hired transportation to enhance value of end product and in-turn to ensure long-term regular purchase order".

SMEs play very important role in the economies of developing countries and developed countries by generating employment, revenues [8][9] and regional development. The definition of SME differs from country-to-country. In India, the small enterprises are defined as the firms with the total investment in between Rs. 25 lakh to Rs. 5 crore; and the medium enterprises are the firms where total investment is in between Rs. 5 crore to Rs. 10 crore (Micro, Small & Medium Enterprises Development Act, notification no. S.O. 1642(E) dated September 30, 2006) [10]. SMEs contribute 40 % of total employment, 45% of total manufacturing output, and 40% of total exports of the country; and their contribution to the GDP is

17% [11]. SMEs are proved to be crucial part of the supply chain of LEs by serving as a supplier, distributor or producer [12][13]. Despite the fact that SMEs have limited resources (financial, skills, knowledge and technology) [14], SMEs can easily initiate and implement changes across the organization due to its flat structure and few management levels as compared to large companies [15]. The ability of SMEs to make quick adjustment provides it both potential and resilience to cope with environment uncertainties and to improve its position in international market [16]. Still the failure rates of SMEs are reported to be high as compared to large firms [17], because of their dependency on smaller number of customer [18], small market share [19], inability to raise the product/service prices [18][20], inability to adopt new technologies [17], lack of strategic planning [21], limited infrastructure, lack of felicitous management resources [22], and inefficient supply chain [7]. So if the SMEs want to survive and prosper then there is a need of strategic management of all the available resources [23], strategy formulation and planning of all the processes involved [24].

Large firms have a number of advantages over SMEs such as economies of scale [25], brand name recognition, customer power, and richness in resources [26]. The body of literature suggests that the large companies have successfully achieved the benefits of SCM [27][28][29][30][31][32][33][34][35], but the SMEs are still lagging behind in recognizing the full worth of SCM, i.e. how SCM provides the remarkable changes in business processes and helps in achieving better product/service quality, cost reduction, and efficiency [36][37].

Although the extant literature on the topic is very helpful in understanding the various concepts and methodologies of SCM, but very little attention is given to the fact as to how the SMEs differ from LEs in implementation of SCM practices, and how can the SMEs be benefited by the lessons learnt from the experiences of their large counterparts. This paper attempts to find an answer to these questions.

2. CONCEPTUAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT

Business objectives are the statements of specific output that an organization is trying to achieve in future. Business organizations are established with certain objectives. Different objectives imply different courses of action. In order to guide future directions, it is necessary to clarify the objectives of the business in order of priority. Business objectives give a much better understanding of the current position of the organization and helps in deciding what to improve and how to initiate necessary changes to reach the desired objectives. Business objectives should be quantitative, time frame specific, flexible, understandable, and realistic. Major business objectives as identified from literature include: maximize customer satisfaction [38][39], produce better quality products, maximize Return on Investment (ROI), maximize annual profit, maximize revenue, maximize Return on Equity (ROE), maximize Return on Assets (ROA) [40], maximize shareholder value and discounted cash flow, help community etc. [41].

In order to achieve its business objectives, the firms (whether large or small) need to formulate different strategies. Strategies are the roadmap for bringing the firm from current position to desired position [21]. One of the most important strategies is alliance formation. LEs form a long-term, trust based partnership with the SMEs to fight and win the battle of competition, thus creating a win-win situation for both partners [42][43][44]. To have a strategic relationship, both the LEs and SMEs must agree on common objectives. Chapman *et al*. (2006) [45] state that the SMEs are crucial part of the supply chain, and decisions made by the SMEs affect the competitiveness of the entire supply chain. The business objectives of a large firm are affected by variety of stake holders [46], but it is not true for SMEs [47], because business decisions of SMEs are most often driven by the buyer firm or by the owner's values and desires [48]. Although, SMEs lack in internal resources such as finance, technology, infrastructure etc. [49], when compared to large firms, their business objectives must be aligned with the business objectives of their larger counterparts.

Therefore, the following hypothesis is proposed.

Hypothesis 1: *Enterprises do not differ with respect to the business objectives.*

In present era, organizations are continuously engaged in improving their performance; yet the performance bar continues to rise. Customers are becoming greedier because they have access to a variety of legitimate competitive options. New technologies and managerial practices emerge and fade with the blink of eye [50]. These are the forces that calls for enhanced collaboration with suppliers as well as with customers to improve the quality of products/services, provide better aftersale services, produce highly reliable products/services, provide best product performance, improve on time delivery, provide fast response to changing needs, innovate new product/services, reduce lead time, reduce inventory costs, reduce inventory levels, reduce transportation cost, reduce warehousing cost, increase the depth of distribution, increase the number of customers, achieve lowest product cost, achieve better asset utilization etc. [51][52][53]. To achieve these objectives and lasting competitive success, maintaining an efficient as well as responsive supply chain is inevitable. SCM allows the organization to focus on the core activities for which it has unique skills and expertise. All non-core activities are transferred to the other members of the chain depending on their capabilities in the respective areas. When appropriate close and cooperative relationships are maintained to achieve a certain level of objectives; the team is called integrated supply chain, which competes with other supply chains in today's business environment [54][55][56].

SMEs act as a participant in various value-adding activities in supply chain management. SMEs provide raw materials and semi-finished/finished parts to the manufacturer and distribute finished products to the customer. While LEs are focusing to acquire larger market share, SMEs have different competitive priorities such as serving market niches and generating sufficient profit in process, regardless the size of their market share [57]. Both LEs and SMEs may use similar supply chain management processes [58]. While LEs are using SCM to achieve multiple outcomes; SMEs are trying to fulfill the order winning or order qualifying criteria [12]. So, the study proposes that the SMEs have similar supply chain objectives as their large counterparts.

Hypothesis 2: *Enterprises do not differ with respect to the supply chain objectives.*

For a business, achieving and retaining the competitive position calls for closer coordination with suppliers and customers in order to ensure faster deliveries of high quality products at lowest possible cost [40][59]. During past ten years, it have been observed that business firms are putting more emphasis on downsizing, focusing on core-competencies, outsourcing and making strategic alliance with chosen suppliers to satisfy the customers' needs [60][61]. Building a team is the first supply chain initiative. Dyer *et al*. (1998) [62] have stated two different models of supplier management; arm's-length model and partnership model. The *arm's-length model* allows the firms to reduce their dependence on suppliers while increasing their bargaining power, thus putting more power in the buying firm's hand. On the other hand, the *partnership model* focuses the firms to establish close relationships with suppliers by sharing more information, relying on trust and commitments, clearly defining each-one's part to play, having long-term orientation, involving them in product development programs, making relationship-specific investments, providing tangible/intangible assistance, sharing risks and benefits [56][63][64][62][60][65][55][66], and avoiding unnecessary demands related to product/service quality, cost, or completion/delivery time [67]. Cost reduction is a prime motivator to supply chain collaboration, customer satisfaction and service is perceived as more enduring and should therefore be brought to the fore as the leading goal. One of the factors having positive effects in developing trust between buyer and supplier is the integration of all the partners in the supply chain. Trust can be developed by treating suppliers as strategic partners, having face-to-face communications, degree of assistance offered by the buyer to the supplier, length of relationships between the buyer and supplier, continuity in the buyer-supplier relationships, the type of culture prevalent in the organization, etc. [68]. LEs outsource their non-core activities to the SMEs [69]. Since SMEs act as a vital link of the supply chain, they need to work with LEs preferably on a long-term co-operative agreement so that the whole chain achieves a competitive position. SMEs have the ability to produce parts or products at lower costs within the quality standards set by the LEs, and therefore, SMEs can no longer remain isolated. They also need to exhibit excellent performance; otherwise the buyer may simply switch to another supplier. SMEs can use their alliances with LEs to overcome the scarcity of resources for present and future requirements, and also to stimulate rapid learning and foster changes [70][71]. It has been observed that the organizations that recognize the power of strategic alliances get benefited accordingly[72][73][62][54][74][75][76][77][78][60][79]. When compared to large firms, it is quite possible that SMEs may use similar tactics as their larger counterparts, in order to develop and maintain strategic relationships with suppliers. Parallel to the above discussion the following hypotheses are proposed:

Hypothesis 3: *Enterprises do not differ with respect to the kind of relationships maintained between buyer and supplier.*

Hypothesis 4: *Enterprises do not differ with respect to factors having positive effects in developing trust between buyer and supplier.*

Organizational culture can be defined as the style of conducting business, treating employees, customers, and the community [80]. It is based on a set of beliefs, attitude, and experiences of a group of people that are developed over period of time while struggling with difficult situations, and therefore, are used to train the new recruits as how to think, tackle, and solve a particular problem [81]. The culture prevalent in the organization itself depends on the shared values, practices, and beliefs of the employees [82]. Organizational culture is the value which cannot be bought, and it can either help the organization to grow or ruin it [83]. Culture affects the way people work in the organization or outside, i.e. negotiating, interacting with other business persons, organizations or customers. Every organization, irrespective of their size, has a specific culture which decides the present and future of the business. A successful organization has a culture whose characteristics are co-operation, joint problem solving, mutual information sharing between various departments, clarity in authority hierarchy, clarity in defining every one's responsibility, top management support, enhanced customer orientation, and aligned objectives and goals [68]. Organizational culture casts a foundation for creating more economic value than competitors [84] by dealing with the problems due to internal integration and external adaptation [85]. If an organization is failing to achieve the desired outcomes or losing its effectiveness in the marketplace, dysfunction in organizational culture could be one of the reasons [86]. The effect of dysfunctional culture may manifest in many ways; such as employees blame each other for their mistakes, learn about changes by grapevine way, receive conflicting orders and instructions, resist new initiatives and changes that management are trying to implement, lack of cooperation and information exchange between departments and have objectives contrary to organization's objectives etc. [87]. Therefore, dysfunctional culture needs attention of the top management as soon as possible, as it is critical for both the survival and growth of the organization. SMEs have less number of employees, therefore it is easy for SMEs to diagnose the existing culture and make necessary adjustment [88]; on the other hand LEs have a large number of employees, departments, and wider working area, thus diagnosing, controlling, and changing the culture might be a difficult task, because the firm could face resistance from employees to maintain the status quo. So, it is quite possible that both LEs and SMEs may have different organizational culture. Hence according to this theoretical framework, the following hypothesis is proposed:

Hypothesis 5: *Enterprises do not agree with respect to the culture prevalent in the organization.*

In order to cope up with the dynamics of marketplace, a close watch is necessary to control every aspects of the business process. The task is very difficult because it is impossible for a single firm to be the best in every field. Therefore, outsourcing comes into picture which allows the firms to transfer one or more non-core activities (such as transportation, warehousing, finance, taxes, manufacturing etc.) to the other organizations which have specialty in that field [89]. Outsourcing can be considered as a strategy which enable the firms, whether large or small, to focus on their core competencies in order to utilize the available resources efficiently, and to improve the firm's performance [90]. Outsourcing allows the firms to reap the capabilities of others in order to pursue global competition. Organizations use outsourcing as tool to get the benefits like productivity enhancement, increased flexibility, faster delivery, rapid innovation, avoid investments, enhanced credibility, maintain old functions, cost reduction, quality improvement, improved customer service, and access to new skills and technologies [91]. Elango (2008) [92] averred that the outsourcing activities are associated with certain risks; therefore care must be taken to avoid these perils. Apart from careful selection of suppliers and vendors, legal documents must be prepared for safety. There can be several reasons for choosing outsourcing strategy; for example: to reduce surplus labour, to focus on core business, to reduce and control operating costs, unavailability of resources, to avoid investments, to increase flexibility, to reduce workload, to take advantage of supplier's capabilities etc. [61]. Literature dealing with outsourcing strategy in large organizations is abundant. However, the outsourcing strategy in SME's perspective is not adequately studied [93]. So, it is necessary to investigate the advantages/disadvantages of outsourcing in the context of SMEs. In the similar vein, the study proposes that both LEs and SMEs may have similar reasons for choosing outsourcing strategy:

Hypothesis 6: *Enterprises do not differ with respect to the reasons for outsourcing a particular activity.*

It is evident from literature that the SCM has immense potential to raise a firm from bottom to top. The ability of an organization to recognize and conquer the hurdles in the implementation of SCM practices constructs the pathways to achieve a performance of world class standard [94]. A range of barriers identified to extensive adoption of SCM practices are; non-availability of training or education in the use of new techniques, lack of standardization of business processes, poor understanding of SCM practices, opportunistic behavior of the organizations in establishing cooperative, collaborative relationship, lack of proper information and communication, high cost and the time required, human resource resistance to new techniques and lack of channel trust, culture, lack of unification, inadequate information system etc. [68]. The barriers inhibiting the practice of SCM has been summarized in the factors such as partnership with suppliers, limited expertise, management commitment, understanding of SCM, supported technologies and customer satisfaction [95. Meehan and Muir (2008) [96] surveyed the SMEs of United Kingdom and found the major barriers while implementing SCM, existed at different levels, i.e. at discrete level, relational level, and company level. The barriers at individual level are lack of experience and knowledge in performance enhancement program, lack of experience in electronic business, and lack of skilled workers. At relational level, the barriers are lack of potential to influence other members of the chain, lack of trust between partners, lack of interest by other members of the chain in pursuing activities needed for supply chain development. At organizational level, the barriers include geographical distance from customers/suppliers, suspicion regarding the proposed benefits of SCM. So, both LEs and SMEs must have to transcend these barriers to achieve the benefits of SCM. According to United Nations Industrial Development Organization [97], clustering approach can be an important strategy for SMEs to overcome the various obstacles faced in the path of long-term sustainable growth. A cluster is an aggregation of firms established in the close proximity, so that each firm can collaborate with other firms to gain the benefits of both economies of scale and scope, which a firm cannot achieve in isolation. Various advantages of clustering approach are: availability of raw material, availability of skilled work force, access to new technologies, client's attraction towards the cluster, emergence of customized services, increased competition which in turns fosters innovation of new processes and products. In India, there are a few cases in point which are excellently utilizing the manufacturing cluster approach and reaping huge benefits; the Panipat cluster which contributes to 75 % of total blanket production of the country, the Tirpur cluster which accounts for 80% of the total cotton hosiery production and exports, the Agra Cluster which produces footwear, the Ludhiana cluster which contributes 95 % of total woolen knitwear, 60 % of total bicycle and their parts, 85% of the total sewing machines production of the country [98]. Nonetheless, a large number of Indian SMEs are unregistered, unorganized, and under-performing because of lack of cooperation, lack of trust, resistance for innovation, collaboration, and adoption to modern skills and technologies [99. Thus, Indian SMEs need to identify the impediments to implementation of SCM practices, and construct bridges to surpass those barriers. This study suggests that while it is possible for both LEs and SMEs to have similar objectives and goals, the barriers in effective implementation of SCM may differ. Therefore, following hypothesis is proposed:

Hypothesis 7: *Enterprises do not agree with respect to the factors acting as barrier to the SCM implementation.*

In order to pinpoint the obstacles and bottlenecks, and to achieve superior performance, organizations embrace benchmarking as a strategic tool [100]. Shirley (1996) [101] defined benchmarking as a continuous and systematic process in which an organization's processes or practices are compared with its rivals having a better position in the marketplace, to discover the best way to perform a particular activity or process. Benchmarking imparts better comprehension of the current practices of the organization and allows the firms to re-engineer their business processes, so that they can attain best-in-class performance or beyond [102]. The essence of benchmarking is to dig deeper and to reach the excellence on the basis of comparative data. There are five phases involved in the benchmarking process; i.e. planning the study, collecting the information, analyzing the performance gap, taking corrective actions, and continuous monitoring [103]. Selecting the right benchmarking partner is the most important activity involved in all of these phases. Benchmarking partners can be selected on the basis of similarities in products/processes, organizational culture, or strategic plans from various sources such as quality award winners, business newspaper and magazine articles, trade journal articles, conference speakers, industry and professional associations etc. The benchmarking partners need to display cooperation, commitment, and willingness to share the crucial information [104]. Selection of suitable benchmarking partner is very tedious task for SMEs. This is because of availability of a large number of potential players in the SME sector. Also, sometimes SMEs want to compare itself with world-class LEs, which cause more difficulties because of the resource, culture, and competitive gap [105]. Singh *et al*., (2006a) [51] suggested that a successful benchmarking relies on:

- Senior management interest and support.
- Understanding of organization's operations and requirements for improvements.
- Openness to change and new ideas.
- Willingness to share information with benchmarking partners.
- Dedication to ongoing benchmarking efforts.

In general, SMEs are owned by a single person or by members of a family having limited skills and ability to react strategically. In their study, Cassell *et al.* (2001) [106] found that few of the owners/managers of SMEs do not believe in the appropriateness and potential of benchmarking because the expected outcomes are not immediate and considerable time and resources are needed for completion of the activity. The survey conducted by Adebanjo *et al.* (2010) [107] in both LEs and SMEs context reported that the organizations do not use benchmarking due to lack of resources, unavailability of suitable benchmarking partners, lack of understanding and technical knowledge of benchmarking activity, high cost and time duration, inability to assess the benefits of benchmarking, lack of top management interest and support. Panwar *et al.* (2013) [108] also experienced similar results while surveying Indian automotive industries and reported that the reasons for not adopting benchmarking activities include lack of finance and human resources, and lack of in-house expertise. Zeinalnezhad *et al.* (2014) [109] investigated the current practices followed by LEs and SMEs and observed that the awareness regarding benchmarking has been increased considerably. The managers of SMEs appraise benchmarking as a weapon for learning and continuous improvement, and realized the need of ethical and legal guidelines to reap the benefits of benchmarking endeavour.

A firm's management has the sole responsibility to decide the firm's future, so it is imperative for them to have an open mind for new ideas. The managers and supervisors must act as communicator (to interact with employees and other businesses), advocate (to support the adoption of new strategies), coach (to motivate the employees for transition), liaison (to help and support the project team), and resistance manager (to manage the compliance of employees) to facilitate the necessary changes throughout the organization [110].

Elmuti and Kathawala (1997) [103] stated that the benchmarking team members should be chosen carefully. The team members should be selected from various departments, and must possess deep knowledge of the entire organization. The efforts required for benchmarking in terms of cost and time must be estimated prior to undertaking the exercise [111]; because SMEs generally have financial crunch and resource limitations. This would help the entrepreneurs to make decisions about financial commitments in advance.

It is evident from literature that LEs differ from SMEs in terms of structure, resources, policies, systems and procedures, human resources, market and customers etc., therefore the models and tools developed for LEs are not suitable for SMEs [15][112]. In spite of these differences, SMEs agree with LEs on central concepts such as quality, performance, efficiency etc.; hence the use of benchmarking is inevitable. Therefore, Indian SMEs need to assess their strengths and weaknesses in comparison to LEs and other better performing SMEs, and initiate corrective measures. In the light of available literature, it is thus hypothesized that:

Hypothesis 8: *Enterprises do not differ with respect to the requirements necessary to perform benchmarking exercise.*

Hypothesis 9: *Enterprises do not differ with respect to the factors that must be considered important while selecting benchmarking partner.*

3. RESEARCH METHODOLOGY

The research involves an empirical testing method. The domain of the constructs for the study is prepared by a review of relevant literature and interviews with industry executives and faculty experts. All the constructs of the questionnaire were estimated through respondents' perceptual assessment on a five-point Likert scale, starting from "strongly disagree" (1) to "strongly agree" (5). The questionnaire includes: 7 questions regarding business objectives, 22 questions related to supply chain objectives, 9 questions related to trust development between buyer and supplier, 10 questions related to kind of relationship between buyer and supplier, 8 questions related to barriers to the implementation of SCM practices, 18 questions related to organizational culture, 15 questions regarding outsourcing, and 10 questions for benchmarking. In addition, the questionnaire also consists the questions related to demographic profile (type, size, number of employees, annual sales turnover etc.) of the organizations. The questionnaire was sent to 425 Indian organizations working in different sectors namely Automobile, Manufacturing, Electronics & Tele-communications, Chemicals & Fertilizers, and FMCG. The organizations taking part in the survey were selected from the directory of public sector, private sector, and government sector. The number of respondents who completed and replied usable responses was 54. Out of which 33 responses were from LEs, and 21 responses were from SMEs. The response rate was found to be 14.06 %.

Although, the response rate is less but in comparison to other studies [113][59][114], it seems to be acceptable. It was found that 52% of the respondents belong to the senior management level, 32% from the middle management level, and remaining 16% were from the junior management level. The companies that participated in the survey indicate that the preferences given by them represent the perceptions of their current practices and the importance of SCM strategies.

4. FINDINGS OF THE SURVEY

4.1 Demographic characteristics of the organizations

Table 1 shows the distribution of the 54 usable responses received from different types of organizations in percentage. It is indicated that 51.85% of respondents were from private sector, 35.19% from public sector, 3.70% from government sector, and 9.26% from other sectors. About 61.11% of the respondents are large scale, 29.63% are medium scale, and 9.26% are small scale organizations. The table also shows that most of the responses have come from manufacturing (48.15%), automobile (20.37%), and electronics & communication (12.96%) sectors. The distribution of respondents on the basis of number of employees is found as follows: 53.70% of the organizations have more than 1000 employees, 7.41% of the respondents have employees in the range of 500-1000, and 24.07% have employees in between 100 to 500. The remaining respondents have less than 100 employees. About 32.08% of the respondents have annual sales turnover over 500 crores, 32.08% have annual sales turnover in the range of 100-500 crores, 16.98% have annual sales turnover in the range of 50-100 crores, 7.55% have annual sales turnover in the range of 5-50 crores, and remaining 11.32% have annual sales turnover less than 5 crores (1 Crore = 10 million & Rs. 62.82 (apporximately) = 1 US Dollar).

Table 1. Demographic Profile of the Respondent Organizations

Organization Type	Organization Size	Business Type	Number of Employees (% of organisations)	Annual Sales Turnover (% of organisations)
Public Sector 35.19%	Large Scale 61.11%	Automotive 20.37%	<50 7.41%	< 5 Crores 11.32%
Private Sector 51.85%	Medium Scale 29.63%	Manufacturing 48.15%	51-100 7.41%	5-50 Crores 7.55%
Government Sector 3.70%	Small Scale 9.26%	Machine Tool 1.85%	101-500 24.07%	50-100 Crores 16.98%
Others 9.26%	-	Chemical & Fertilizers 9.26%	501-1000 7.41%	100-500 Crores 32.08%
-	-	Electronics & Telecommunic	Over 1000	Over 500 Crores

		ations	53.70%	32.08%
		12.96%		
		FMCG		
-	-		-	-
		1.85%		
		Others		
-	-		-	-
		5.56%		
100%	100%	100%	100%	100%

5. DATA ANALYSIS AND RESULTS

5.1 Measures Validation

In order to reduce the total number of items into a smaller number of underlying factors, Factor analysis is performed. Total five factor analyses are conducted using principal component analysis followed by varimax rotation for interpretation of factor matrix. The Bartlett's Test of Sphericity and Kaiser-Meyer-Olkin Test is also carried out to check the sample adequacy and to ratify the use of factor analysis. All the extracted factors have eigen values greater than one. The items are grouped together on the basis of the factor loadings from the rotated component matrix (i.e. greater than 0.3). The resulting factor scores of each constructs are used to test the hypotheses.

The first factor analysis is conducted on the items related to business objectives of the organizations. Two factors with eigen values greater than one are extracted from the seven business objectives, which altogether explained 64.23% of the variance and labeled as BO1 and BO2 (Table 2).

Table 2: Business Objectives of Organizations

Factors/variables	Factor Loading 1	Factor Loading 2	Cronbach's Alpha
Factor 1: Maximize Profit (BO1)			
Increase earnings per share	0.884		
Deliver value to shareholders	0.803		0.822
Increase return on investment	0.795		
Maximize profit	0.737		
Factor 2: Maximize Satisfaction (BO2)			
Maximize customer satisfaction		0.837	
Produce better quality product		0.814	0.684
Increase turnover (sales)		0.479	

The second factor analysis is performed on the items associated with supply chain objectives. The twenty two supply chain objectives are reduced to four factors and named as SCO1, SCO2, SCO3, and SCO4 (Table 3). The total variance explained by these factors is found as 60.92%.

Table 3: Supply Chain Objectives

Factors/variables	Factor loading 1	Factor loading 2	Factor loading 3	Factor loading 4	Cronbach's Alpha
Factor 1: Improved logistics Services (SCO1)					
Reducing transportation costs	0.709				
Reducing order to delivery cycle time	0.688				
Shorten lead-time as long as it does'nt increase cost	0.687				
Reducing/Rationalizing supplier base	0.678				
Expanding width/depth of distribution	0.641				0.852
Reducing warehouse costs	0.605				
Expanding Revenues	0.596				
Deploy buffer stocks of parts or finished goods	0.522				
Factor 2: Customer Satisfaction through Better Quality Products (SCO2)					
Best Product Performance		0.792			
Highly Reliable Products		0.765			
Provide fast response to changing needs		0.765			
Enhance customer service/satisfaction		0.751			0.805
Improving on time Delivery		0.681			
Integrating suppliers and customers in product development		0.396			
Factor 3: Quick Response to Market Needs (SCO3)					
Flexibility of production volume			0.823		
Flexibility of product mix			0.780		
Offer broad product line			0.694		0.799
Innovating new product/services			0.598		
Deploy excess buffer capacity			0.494		

Factor 4: Lower Costs (SCO4) Lowest product cost	0.668		
Reducing Inventory cost	0.638	0.713	
Secure supply of raw materials and components	0.567		

The third factor analysis is performed on the items associated with trust development between buyer and supplier. A total three factors are extracted from nine items with total variance 65.22% and named as T1, T2, and T3 (Table 4).

Table 4: Factors that lead to trust development between buyer and supplier

Factors/variables	Factor Loading 1	2	3	Cronbach's Alpha
Factor 1: Openness in relationship (T1)				
Extent of assistance provided in quality improvement	0.881			
Extent of assistance provided in cost reduction	0.796			0.788
Extent of assistance provided in delivery/inventory management	0.728			
The extent to which buyer treats supplier fairly	0.692			
Factor2: Emphasis on written agreement (T2)				
The readiness of supplier to invest in your specific requirement, without a written contract		0.859		
Buyer might try to take unfair advantage of supplier		0.701		0.609
Continuity (Percent of time the supplier re-wins the business at a model change)		0.452		
Factor 3: Efforts to build the trust & strengthen the relationship (T3) Face to face communication between two parties			0.859	0.641
Length of relationship			0.820	

In the fourth factor analysis, the ten items related to the kind of buyer-supplier relationship are reduced to two factors namely BSR1 and BSR2 having total variance as 64.88% (Table 5).

In the fifth factor analysis, four factors (O1, O2, O3 and O4) are extracted from the fifteen items associated with the reason for outsourcing practices, and the total variance explained by them is equal to 74.22% (Table 6).

For each factor analysis, the Bartlett's Test and Kaiser-Meyer-Olkin test is also performed and the result is found to be in acceptable limit. The Bartlett's test is a statistical test used to find out the correlation among the extracted factors and to check the appropriateness of factor analysis [115](Hair *et al.*, 1998). This test is used only when each variable have less than five measures [116]. Kaiser-Meyer-Olkin (KMO) test is used to find out whether the sample size is large enough to give precision result or not; through an index ranging from 0 to 1 [115].

Table 5: Kind of relationship maintained with suppliers

Factors/variables	Factor Loading 1	2	Cronbach's Alpha
Factor 1: Involvement of supplier throughout (BSR1) We have effective information sharing	0.827		
We have continuous improvement programs, which includes key suppliers	0.812		
We solve any problem jointly	0.804		0.869
We share risks and rewards	0.757		
We involve suppliers in our R& D activities	0.621		
Our company views suppliers as a strategic partners	0.613		
Factor 2: Efforts for supplier development (BSR2)			
We have provided the supplier substantial Financial assistance		0.889	
We have provided the supplier substantial On the job Training		0.854	0.850
We have provided the supplier substantial Managerial assistance		0.719	
We have provided the supplier substantial Technical assistance		0.687	

For analyzing the internal consistency of each factor, reliability test using cronbach's alpha [117] is performed. The values of cronbach's alpha for all factors range from 0.609 to 0.869; i.e. near to the recommended value 0.7 [118]. Only three factors namely BO2, T2, and T3 have cronbach's alpha values (0.684, 0.609, 0.641 respectively) less than the recommended value, but as suggested by Flynn *et al.* (1990) [119], the cronbach's alpha values greater than 0.6 can be acceptable for exploratory research. Thus, the reliability tests have provided the evidence that all the constructs exhibit good reliability.

5.2 Observations on Proposed Hypotheses

One-way-ANOVA is used for testing the proposed hypotheses. The results are obtained using SPSS software. One-way ANOVA calculates the p-values for identifying the significant differences among selected sectors. If the calculated p-value is found to be < 0.05, then the data has a significance of difference. These results are presented and discussed in the following subsections.

5.2.1 Observations on Hypothesis 1

Business objectives of both LEs and SMEs are compared and the result is shown in the table 7. It has been observed that both the sectors have similar perception regarding the various business objectives namely maximize profit (0.465), maximize satisfaction (0.053). The numerical values given in the bracket indicate the significance of difference. As the *p*-values indicating the significance of difference are >0.05, it means that sectors do not significantly differ with respect to business objectives. Therefore, this hypothesis is statically validated. The results seem logical because the essence of every business is to earn more profit while satisfying the customer's needs.

Table 6: Reasons for outsourcing

Factors/variables	Factor Loading			
	1	2	3	4
Factor 1: To Offer Better Product (O1)				
Ability to consistently take advantage of emerging technologies	0.740			
Take advantage of offshore capabilities and talent	0.716			
Improve time to market	0.694			
Benefit from supplier's investment & innovation	0.591			
Improving quality	0.538			
Factor 2: To Manage Internal Resources (O2)				
Resources not available internally		0.782		
Outsourced function too difficult to manage internally or is out of control		0.599		
Reduce work load		0.550		
Avoid investment		0.517		
Factor 3: To Improve Productivity (O3)				
Reduce surplus labour			0.723	
Improve company focus on core business			0.690	
Increase flexibility			0.492	
Factor 4: To Reduce Cost (O4)				
Reduce cost				0.833
Improve service				0.653
Reduce and control operating cost				0.535

Table 7: Comparison of business objectives

ANOVA						
		Sum of Squares	df	Mean Square	F	p-value
(BO1)	Between Groups	0.546	1	.546	0.541	0.465
	Within Groups	52.454	52	1.009		
	Total	53.000	53			
(BO2)	Between Groups	4.031	1	4.031	4.281	0.053
	Within Groups	48.969	52	.942		
	Total	53.000	53			

In today's era, the survival and growth of organizations depend on customer satisfaction, hence deserves maximum attention. Thus, to stay in business, all the organizations, irrespective of their size, have to fulfill the necessary requirements, and in process earn profit for themselves.

5.2.2 Observations on Hypothesis 2

Both sectors have been compared for the supply chain objectives that help in achieving the business objectives of the organizations. As shown in Table 8, these supply chain objectives are: Improved logistics services (0.779), customer satisfaction through better quality products (0.161), quick response to market needs (0.233), and lower costs (0.383). Since the *p*-value in each case is > 0.05, it can be inferred that respondent organizations in different sectors do not significantly differ on these supply chain objectives and thus, the hypothesis is statically validated.

Table 8: Comparison of supply chain objectives

ANOVA						
		Sum of Squares	df	Mean Square	F	p-value
(SCO1)	Between Groups	0.081	1	0.081	0.080	0.779
	Within Groups	51.919	51	1.018		
	Total	52.000	52			
(SCO2)	Between Groups	1.986	1	1.986	2.025	0.161
	Within Groups	50.014	51	0.981		
	Total	52.000	52			
(SCO3)	Between Groups	1.442	1	1.442	1.455	0.233
	Within Groups	50.558	51	0.991		
	Total	52.000	52			
(SCO4)	Between Groups	0.778	1	0.778	0.774	0.383
	Within Groups	51.222	51	1.004		
	Total	52.000	52			

The findings are inline with the previous studies [120][121][122][123], which state that SMEs need to improve their logistics efficiency in order to increase sales turnover, and customer satisfaction through better quality products at low costs with faster deliveries. Logistics activities can be seen as a source to gain competitive advantages. Previous studies also represent that the logistics cost and performance of LEs are better as compared to LEs [122][124]. Logistics costs (such as inventory carrying costs, transportation costs, warehousing costs etc) in India is very high (13-14 % of GDP) as compared to the developed countries like USA (8% of GDP). There are several reasons for the above problem such as; poor road conditions which increases operating cost and reduce the fuel efficiency; complex tax laws, inadequate technological supports, market fragmentation, manual warehousing management, low wages and skills of workers, poor maintenance of equipments, unequal population distribution etc. [125][126]. So, the success of the firm will depend on the ability of firm to overcome these obstacles [122][123].

5.2.3 Observations on Hypothesis 3

Both sectors are compared with respect to kind of relationship maintained between buyer and supplier and the results are given in the table 9.

Table 9: Comparison of kind of relationship maintained with suppliers

ANOVA						
		Sum of Squares	df	Mean Square	F	p-value
(BSR1)	Between Groups	0.246	1	0.246	0.243	0.024
	Within Groups	49.754	49	1.015		
	Total	50.000	50			
(BSR2)	Between Groups	0.054	1	0.054	0.053	0.019
	Within Groups	49.946	49	1.019		
	Total	50.000	50			

It has been observed that the respondent sectors have different perception regarding the involvement of supplier throughout (0.024), and efforts for supplier development (0.019). As the *p*-values of both the factors are less than 0.05, the difference is significant. According to UNIDO (2001) [130], the cooperation among the SMEs exist either occasionally or do not exist. SMEs are generally characterized by low level of trust, dormant dispute, and high level of competition. Most of the SMEs are less strategically oriented and have low professional management skills; they do not share business information, common problems with others, and do not believe in joint problem solving activities. Also, most of the SMEs have skepticism regarding the benefits that can be achieved through collaboration. SMEs have resource constraints in terms of finance, technology, skills etc., therefore do not engage in development of supplier's expertise. Herath *et al.* (2013) [127] argue that strategic orientation have a positive impact on firm's performance. Developing collaborative relationships with suppliers has proved to be advantageous and helpful in growth of the firm practicing it. Despite the potential benefits, collaborative relationships are difficult to establish because of the fear of mistrust, misuse of information, and opportunistic behavior. SMEs need to perceive the transactional relationship as a key determinant to the success and put more emphasis on involvement of suppliers throughout and supplier development.

5.2.4 Observations on Hypothesis 4

A comparison is made between LEs and SMEs with respect to the factors affecting the development of trust between buyers and suppliers. These factors are listed in the table 10. It is noticed that, the factors openness in relationship (0.912) and emphasis on written agreement (0.868) have the *p*-value > 0.05; while, the factor efforts to build the trust & strengthen the relationship (0.008) has *p*-value less than 0.05. Therefore, sectors differ significantly with respect to efforts to build the trust & strengthen the relationship.

Table 10: Comparison of factors that lead to development of trust between buyer and supplier

ANOVA						
		Sum of Squares	df	Mean Square	F	p-value
(T1)	Between Groups	0.013	1	0.013	0.012	0.912
	Within Groups	51.987	51	1.019		
	Total	52.000	52			
(T2)	Between Groups	0.014	1	0.014	0.014	0.868
	Within Groups	51.986	51	1.019		
	Total	52.000	52			
(T3)	Between Groups	0.028	1	0.028	0.028	0.008
	Within Groups	51.972	51	1.019		
	Total	52.000	52			

Both the sectors agree that openness in relationship and emphasis on written contracts positively affects the level of trust between buyer and supplier. Mutual openness and transparency in sharing information regarding current practices and future plans are necessary for a successful collaboration [128]. However, the openness reduces the bargaining power of suppliers on price; it promotes the pooling of resources and proficiency, co-makership, early involvement of supplier, and forces the buyer to provide the business continuously [129]. The corporate relationships revolve around contracts. Contracts are voluntary legal agreement that include all the terms and conditions that are necessary during business transactions between the parties. The contract protects both the parties from rifts, and forces them to avoid opportunistic behavior [130]. Both the sectors agree that more emphasis on written contracts is helpful in fulfilling the expectations of both parties, performing specific duties, and resolving the conflicts, if any.

As discussed before, previous studies have shown the importance of face to face communication and length of relationship between buyer and supplier. These two measures are known to have a great impact on the strategic alliances. While, LEs are already paying attention to strengthening the relationship with its suppliers, SMEs are lacking to do it, because their suppliers are generally small firms and do not posses any crucial competencies. SMEs need to recognize the importance of their suppliers because these suppliers are the one responsible for flexibility and effectiveness of SMEs. SMEs play an indispensable character in the value chain of LEs; and also have a unique place in the SME clusters. Therefore, to make themselves more viable in today's competitive situations, SMEs have to have more committed towards establishing, diagnosing, employing efforts to strengthen the relationships, institutionalizing the partners, and having strategic orientation towards these relationships.

5.2.5 Observations on Hypothesis 5

Both sectors are compared with respect to the type of culture prevalent in the organization. The various measures of the organizational culture are given in the table 11. During the test, some of the measures were reversed to get a clearer picture.

Table 11: Comparison of the organizational culture

ANOVA

		Sum of Squares	df	Mean Square	F	p-value
Everyone in the organization knows what contribution they make to the whole (OC1)	Between Groups	0.231	1	0.231	0.287	0.594
	Within Groups	41.861	52	0.805		
	Total	42.093	53			
People spend a lot of time to blame others for their mistakes (OC2) (reversed)	Between Groups	1.905	1	1.905	1.836	0.011
	Within Groups	53.965	52	1.038		
	Total	55.870	53			
The only way we learn of changes is by the grapevine (OC3)	Between Groups	0.626	1	0.626	0.809	0.373
	Within Groups	40.208	52	0.773		
	Total	40.833	53			
it is not uncommon here to get conflicting orders and instructions (OC4) (reversed)	Between Groups	0.019	1	0.019	0.016	0.038
	Within Groups	61.481	52	1.182		
	Total	61.500	53			
People in the organization only get together when there is a crisis (OC5)	Between Groups	0.019	1	0.019	0.016	0.898
	Within Groups	61.481	52	1.182		
	Total	61.500	53			
There seems to be quite a lot of friction and not too much cooperation between departments (OC6) (reversed)	Between Groups	0.054	1	0.054	0.036	0.015
	Within Groups	78.779	52	1.515		
	Total	78.833	53			
In my job I am rather unclear about what goes on in other function (OC7)	Between Groups	0.054	1	0.054	0.077	0.783
	Within Groups	36.779	52	0.707		
	Total	36.833	53			
I do not think many people below senior management really understand the organization's objectives (OC8)	Between Groups	0.781	1	0.781	0.564	0.456
	Within Groups	72.052	52	1.386		
	Total	72.833	53			
We are unable to secure funding for some long term	Between Groups	0.015	1	0.015	0.010	0.920
	Within Groups	78.355	52	1.507		

requirement (OC9)	Total	78.370	53			
Managers seem more concerned about the narrow interest of their department rather than the wider company objectives (OC10) (reversed)	Between Groups	1.697	1	1.697	1.232	0.023
	Within Groups	71.636	52	1.378		
	Total	73.333	53			
Some departments seem to have goals that are contrary to company goals (OC11) (reversed)	Between Groups	0.127	1	0.127	0.091	0.046
	Within Groups	72.632	52	1.397		
	Total	72.759	53			
We do not work very closely with other functions to meet our collective objectives (OC12) (reversed)	Between Groups	0.127	1	0.127	0.113	0.033
	Within Groups	58.632	52	1.128		
	Total	58.759	53			
Sometimes my decisions adversely affect the effectiveness of other departments (OC13)	Between Groups	3.292	1	3.292	3.551	0.065
	Within Groups	48.208	52	0.927		
	Total	51.500	53			
On the whole communication in the company seems to be rare and restricted (OC14)	Between Groups	0.554	1	0.554	0.674	0.416
	Within Groups	42.779	52	0.823		
	Total	43.333	53			
I do not have all the necessary information to effectively meet my objectives (OC15) (reversed)	Between Groups	0.837	1	0.837	0.778	0.021
	Within Groups	55.922	52	1.075		
	Total	56.759	53			
All too often no one knows what his counterpart in another part of the organization is doing about things that affect them both (OC16)	Between Groups	0.445	1	0.445	.440	0.510
	Within Groups	52.537	52	1.010		
	Total	52.981	53			
Bosses seem to keep changing their minds without consultation (OC17)	Between Groups	1.992	1	1.992	1.656	0.204
	Within Groups	62.545	52	1.203		
	Total	64.537	53			
There seems to be a lack of informal and voluntary cooperation amongst people in your organization (OC18) (reversed)	Between Groups	1.992	1	1.992	1.656	0.039
	Within Groups	62.545	52	1.203		
	Total	64.537	53			

There appears to be a consensus as far as the organizational culture prevalent between these two sectors is concerned. Both the sectors agree that, in their organizations: authorities are clearly defined, people do not blame others for their mistakes, all the departments cooperate with each other, everyone in the organization knows about their responsibilities and duties, the managers of all departments have aligned objectives, and people voluntarily help each other to solve their problems; as all of these measures have *p*-values less than 0.05. However, the few areas where sectors disagree are:

- Everyone in the organization knows what contribution they make to the whole.
- The only way we learn about changes is by the grapevine.
- In my job I am rather unclear about what goes on in the other function.

- I do not think many people below senior management really understand the organization's objectives.
- We are unable to secure funding for some long term requirement.
- Sometimes my decisions adversely affect the effectiveness of other departments.
- On the whole communication in the company seems to be rare and restricted.
- All too often no one knows what his counterpart in another part of the organization is doing about things that affect both of them.
- Bosses seem to keep changing their minds without consultation.

The findings of the study are corroborated with previous studies [68][131][132][133][134][135]. According to Schein (2010) [136], culture prevalent in the SMEs depends upon three sources, thinking and belief of the owners, experiences of employees developed with the passage of time, and assumptions, values, belief brought in by new recruits. The most important source are the owners of the firm, because the owners decides the missions and objectives of the enterprise, recruits people for specific work, and deals with the external environment. Therefore, the owners and top management must think strategically while deciding what, which, and how the work should be performed, because the employees tend to adapt the values and beliefs of the founders, and as the company matures, the founder's visions and beliefs are reflected in organizational culture [82]. SMEs are generally characterised by having less number of employees, thus diagnosing, maintaining, and changing the organizational culture is easier in comparison to LEs. As previously discussed, organizational culture is the most important ingredient for superior performance; thus, it is imperative for leaders to have a keen look on the culture that is prevalent in the organization, so that the necessary modification can be implemented to achieve competitive advantages [88].

5.2.6 Observations on Hypothesis 6

Both sectors are compared with respect to the reasons for choosing outsourcing activity, and observations are listed in the table 12.

Table 12: Comparison of the reasons for outsourcing

ANOVA						
		Sum of Squares	df	Mean Square	F	p-value
To offer better products (O1)	Between Groups	1.523	1	1.523	1.539	0.220
	Within Groups	50.477	51	0.990		
	Total	52.000	52			
To manage internal resources (O2)	Between Groups	0.000	1	0.000	0.000	0.983
	Within Groups	52.000	51	1.020		
	Total	52.000	52			
To improve productivity (O3)	Between Groups	0.367	1	0.367	0.363	0.550
	Within Groups	51.633	51	1.012		
	Total	52.000	52			
To reduce cost (O4)	Between Groups	0.146	1	0.146	0.143	0.707
	Within Groups	51.854	51	1.017		
	Total	52.000	52			

It is discerned that both sectors have same reasons for choosing outsourcing activity, as the *p*-values of all the extracted factors are greater than 0.05. Thus, the hypothesis is statically validated. These results are similar to the available outsourcing literature [61][137][93][138]; which indicate that the prime motivators behind the selection of outsourcing strategy are: offering better products, managing internal resources, improving productivity, and reducing costs. Elango (2008) [92] argued that outsourcing can be a strategic gambit for SMEs to fight the battle against the business giants by becoming more innovative, more efficient, and more flexible. As discussed before, SMEs have resource deficiencies; therefore with the help of outsourcing, SMEs can exploit the resources of others for mutual benefits. Nowadays, outsourcing is becoming popular in both LEs and SMEs; while LEs use outsourcing to focus on core-competencies and to gain competitive advantages, SMEs are engaging in outsourcing to get access of cutting-edge technologies and resources.

5.2.7 Observations on Hypothesis 7

Sectors are compared together with respect to the barriers to implementation of SCM practices, and the results are displayed in the table 13.

Table 13: Comparison with respects to the barriers to implementation of SCM practices

ANOVA						
		Sum of Squares	df	Mean Square	F	p-value
Human resource resistant of new techniques (B1)	Between Groups	0.247	1	0.247	0.192	0.046
	Within Groups	65.677	51	1.288		
	Total	65.925	52			
Non-availability of training or education in the use of new technologies (B2)	Between Groups	0.035	1	0.035	0.022	0.022
	Within Groups	80.720	51	1.583		
	Total	80.755	52			
Opportunistic behavior of the organization in establishing	Between Groups	0.013	1	0.013	0.012	0.915
	Within Groups	55.459	51	1.087		

cooperative, collaborative relationship (B3)	Total	55.472	52			
Lack of clear understanding of the definition of SCM (B4)	Between Groups	1.261	1	1.261	0.976	0.028
	Within Groups	65.909	51	1.292		
	Total	67.170	52			
No standardization of business processes across most of the companies which makes impossible to integrate the processes (B5)	Between Groups	6.614	1	6.614	4.435	0.040
	Within Groups	76.065	51	1.491		
	Total	82.679	52			
Mistrust between partners (B6)	Between Groups	3.562	1	3.562	2.482	0.121
	Within Groups	73.192	51	1.435		
	Total	76.755	52			
Lack of proper information and communication (B7)	Between Groups	8.183	1	8.183	6.171	0.016
	Within Groups	67.629	51	1.326		
	Total	75.811	52			
High cost and time required (B8)	Between Groups	3.247	1	3.247	2.815	0.100
	Within Groups	58.829	51	1.154		
	Total	62.075	52			

It is observed that both sectors have agreement regarding barriers human resource resistant of new techniques (0.046), non-availability of training or education in the use of new technologies (0.022), lack of clear understanding of the definition of SCM (0.028), no standardization of business processes across most of the companies which makes impossible to integrate the processes (0.040), and lack of proper information and communication (0.016), as their *p*-values are less than 0.05. Their opinion differs with respect to other barriers opportunistic behaviour of the organization in establishing cooperative/collaborative relationship (0.915), mistrust between partners (0.121), and high cost and time required (0.100). Anderson *et al.* (2007) [139] expound that many people in the organization defy changes, especially when they do not have skills to cope with new processes or technologies. In order to implement the changes successfully, the managers have to stimulate appropriate attitude and etiquette to the employees. The findings also reinforce the study performed by [95] and [50] in both LE's and SME's perspective, which elucidate that the paramount barriers against the implementation of SCM practices are lack of clear understanding of SCM, lack of cooperation among partners, and other issues related to technological expertise. The findings reveal that both the sectors have disagreement on some barriers such as mistrust between partners, high cost and time required, and opportunistic behavior of the organization in establishing collaborative relationships. These results seem logical in SME's perspective because SMEs are known to have certain characteristics such as resource scarcity, high flexibility, and high expertise to perform traditional functions. Therefore, SMEs cannot afford to invest its resources for long period of time. SMEs have fear that the partners may misuse the shared information, or show opportunistic behavior for short-term benefits. Previous literature also revealed the various benefits that can be achieved by implementing the SCM practices. So, in order to overcome these barriers and achieve the benefits provided by SCM practices, SMEs have to adopt changes at all levels of the organization.

5.2.8 Observations on Hypothesis 8

Sectors are compared together with respect to the benchmarking requirements and the results are given in the table 14.

Table 14: Comparison with respects to the necessary requirements to perform benchmarking

ANOVA						
		Sum of Squares	df	Mean Square	F	p-value
Senior management interest and support	Between Groups	1.080	1	1.080	1.980	0.165
	Within Groups	28.346	52	0.545		
	Total	29.426	53			
Solid understanding of your own organization's operations and requirements for improvements	Between Groups	0.000	1	0.000	0.000	0.986
	Within Groups	41.870	52	0.805		
	Total	41.870	53			
Openness to changes and new ideas	Between Groups	0.312	1	0.312	0.511	0.478
	Within Groups	31.688	52	0.609		
	Total	32.000	53			
Willingness to share information with benchmarking partners	Between Groups	.837	1	.837	0.778	0.382
	Within Groups	55.922	52	1.075		
	Total	56.759	53			
Dedication to ongoing benchmarking efforts	Between Groups	3.246	1	3.246	3.040	0.087
	Within Groups	54.452	51	1.068		
	Total	57.698	52			

It is discerned that both the sectors have similar opinions that the understanding of all the processes and requirements for improvement in the organization

(0.986), openness to changes and new ideas (0.478), top management's interest and support (0.165), and willingness to share information (0.382) are the requirements that are necessary to initiate benchmarking activity. These findings are homogeneous with previous studies such as [103], [112], [51], [109], [106] etc. The findings also unveil that the sectors have different perception regarding the factor 'Dedication to ongoing benchmarking effort'. This may be because of the well known resource poverty of SMEs. Since benchmarking activities require a lot of time, money, and team of skilled professionals, and also, the outcomes are not immediate, therefore owners of SMEs are hesitating to invest is the above project. Zeinalnezhad *et al.* (2014) [109] have reported that majority of SMEs have initiated the benchmarking project but only few of them have completed the task, on the other hand most of LEs are prioritizing benchmarking to become world-class. Dattakumar and Jagadeesh (2003) [111] have surveyed the benchmarking literature and identified certain issues that the cost, time duration, human resource aspects, and aspects related to benchmarking partners need more attention. They further stated that the organizations continuously engaged in benchmarking have seen steady growth and become more profitable. Thus, the SMEs should make amend to the benchmarking activities and use it for achieving the remarkable success than merrily contended as supporting firms [140].

5.2.9 Observations on Hypothesis 9

Sectors are compared with respect to the aspects that must be considered while selecting benchmarking partners and the observations are given in the table 15.

Table 15: Comparison with respects to the aspects that must be considered while selecting benchmarking partners

ANOVA						
		Sum of Squares	df	Mean Square	F	p-value
An organization having same products/process	Between Groups	.278	1	0.278	0.375	0.543
	Within Groups	38.537	52	0.741		
	Total	38.815	53			
An organization having analogous products/process	Between Groups	.701	1	0.701	0.526	0.471
	Within Groups	69.299	52	1.333		
	Total	70.000	53			
An organization, which is your competitor	Between Groups	.754	1	0.754	0.582	0.449
	Within Groups	67.394	52	1.296		
	Total	68.148	53			
An organization having similar culture	Between Groups	2.601	1	2.601	2.706	0.006
	Within Groups	49.991	52	0.961		
	Total	52.593	53			
An organization having similar strategic plans	Between Groups	2.753	1	2.753	1.825	0.043
	Within Groups	78.450	52	1.509		
	Total	81.204	53			

It is discerned that LEs choose the benchmarking partners among the competitors which have similar or analogous products and processes, similar strategic plans, and similar culture. These findings corroborate with extant benchmarking literature [141][142][143][104][68]. In this study, some overwhelming results have been observed in the context of SME. These results show that SMEs have slightly different criteria for selection of benchmarking partners. As discussed before, SMEs lack in strategic planning and management, and also the culture prevalent in the SMEs are known to be adversarial. Therefore, the SMEs select benchmarking partners among the competitors which have similarity in products/processes, and most importantly have better strategic plans and culture to encourage a strategic and cultural shift.

6. Discussion and Conclusions

The study has provided empirical evidence to show the similarities and dissimilarities between SMEs and LEs in implementation of SCM practices. The study reveals that both LEs and SMEs have similar business objectives and to achieve these objectives they employ same supply chain strategies. The findings also indicate that the two sectors have common belief regarding establishing trust-based-strategic alliances; however, SMEs lack in strengthening the relationship with suppliers and supplier's skill development as well. SMEs are found to have different perspective than LEs regarding barriers to implementation of SCM practices, the culture prevalent in the organization, and benchmarking practices. Major barriers to implement SCM practices in the context of SMEs are found to be high costs, human resource resistant to new techniques, lack of clear understanding of SCM, non-availability of training for new technologies, and improper communication systems. SMEs use outsourcing activities for similar reasons as LEs; i.e. to reduce costs, to offer better quality products, to manage internal resources, and to improve productivity. Both SMEs and LEs seem to believe that senior management's interest and support, solid understanding of all the operations and bottlenecks for improvements, and openness to changes and new ideas are the most necessary requirements for adopting benchmarking activity; however, SMEs use quite different criteria regarding selection of benchmarking partners. SMEs select benchmarking partners among the competitors which have better strategic plans and culture. It seems to be a good strategy for SMEs, because it will provide a learning opportunity to employees as well as to the owners of the SMEs. It has been observed that SMEs show less dedication towards ongoing benchmarking activity; this may be because of lack of resources, lack of proper understanding and belief regarding usefulness of benchmarking, high costs and time involved. The owners/managers of SMEs need to change their sceptical attitude towards the benchmarking activities, as it has the potential to highlight the weaknesses and restructure them into strengths. Benchmarking promotes the 'out of the box' thinking, thus enables the employees and managers to conceive creative ideas for performance enhancement.

During the last few years, SMEs witnessed tremendous hardships due to the turbulent world economy, economic climate of the country and decisional uncertainties. The entire world is facing recession with no hope of an early revival. The focus on 'Make in India' campaign of the new government at this appropriate moment seems to be a silver lining in the dark clouds. The growth of Indian economy is better posed today with its GDP likely to surpass the GDPs of other major Asian economies in the very near future. The Indian government has launched new policies for significant development of the SME sector; which focuses on training and skill development of labors to make the country a global manufacturing hub. One of the major goals of this campaign is to empower the SMEs for sustainability and rapid growth. The 'Make in India' program seeks to attract investors, encourage innovations, fortify intellectual property, and construct facilities and infrastructure suitable for world-class-manufacturing. The government is also scanning the regulatory policies with the aim to simplify it and make these policies more favorable for new start-ups and existing SMEs. The Reserve Bank of India (RBI) and Insurance Regulatory and Development Authority of India (IRDA) are liberalizing their norms regarding various banks and insurance companies across the country, so that the SMEs can get easy credit and finance. Ministry of Micro, Small and Medium Enterprises (MSME) and Small Industries Development Bank of India (SIDBI) have initiated various programs aimed to promote the development of SMEs. Micro Units Development and Refinance Agency (MUDRA) Bank is being be set up under the Pradhan Mantri MUDRA Yojana scheme aimed to provide collateral-free finance to both the existing and the new enterprises. So, the 'Make in India' campaign seems to bring a lot of opportunities for SMEs, and hopefully, it will bolster the development and growth of SMEs as well as the nation.

The key lessons learned from the study is that despite of so many constraints, the owners/managers of the SMEs need to bring in a cultural change in their attitude needed to outlive and outperform other firms existing at every tier of supply chains of LEs. If only SMEs could focus on better strategic planning and management of their businesses and not just only on economic aspects, they could reap much more dividends. With the kind of initiatives taken by the government to encourage and promote SMEs, it is hoped that many of the problems that they face today would get resolved. It is now for SMEs to grab these opportunities, take a lesson from the best practices of LEs and put out their best foot forward to play a bigger role in shaping the economy of the country.

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BIOGRAPHIES

Er. Inayatullah is a research scholar at Motilal Nehru National Institute of Technology, India. His area of interest include Supply Chain management, Mass Customization, Production & Industrial Engineering.

Dr. Rakesh Narain has more than 30 years of experience in teaching and research, besides four and half years of experience in industry and government department. His areas of research interest include computer aided manufacturing, rapid prototyping, supply chain management and Knowledge Management. He got the Literati Club 2004 Highly Commended Award for contributing the best paper in Emerald journal in the 2003 volume.

Dr. Amar Singh has more than 25 years of experience in teaching and research. His areas of interest include supply chain management, production and industrial engineering