

## **SUPPLY CHAIN AGILITY IN CONTRAST TO A TEXTILE FIRM'S PERFORMANCE IN BHILWARA-RAJASTHAN**

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# SUPPLY CHAIN AGILITY IN CONTRAST TO A FIRM'S PERFORMANCE IN SELECTED TEXTILE FIRMS OF BHILWARA-RAJASTHAN

## ABSTRACT

The supply chain (SC) abstraction has become an issue due to global competition and increasing customer demand for value since the Companies are trying to expand their manufacturing enactment in footings of cost, interruptions, flexibility, diversity and traceability. Therefore, the evidence must be accessible in real time transversely the SC and this cannot be attained deprived of assimilated software structure for supply chain management (SCM). The current research work is basically on the supply chain situation of the textile industry. For this purpose the data from 90 workers 20, supervisors and 10 managers were gathered from textile industries situated at Bhilwara district of Rajasthan using convenience sampling method. To analyse the data Principle component Factor analysis is applied with the selected variables. With the 6 factors the principal component factor model further confirmatory factor analysis was used. The findings indicate that the important supply chain dimension for company's growth includes Supply chain coordination (SCCOR), Supply chain cooperation (SCCOP), and SC communication (SCCOM). The result depicts that success of an adroit or an agile supply chain is the dexterity and flexibility with which these accomplishments and the realization of customer needs and customer satisfaction are the very reasons for the network.

**Keywords:** *Supply chain coordination (SCCOR), Supply chain cooperation (SCCOP), and Supply chain communication (SCCOM), Supply Chain Agility and Organisational performance.*

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## **SECTION-1 INTRODUCTION**

Supply chain agility has been delved into in numerous studies. It has been examined and defined in relation to the agile enterprise (Whitten et al., 2012; Gehani, 1995; Browne et al., 1995; Browne & Zhang, 1999; Jagdev & Browne, 1998; Goranson, 1999), pro-ducts, personnel (Breu et.al., 2002), virtual teaming (Bal et.al., 1999), competences (Yusuf et.al., 2004), and the atmosphere (Robertson & Jones, 1999). The early advocates of agility propounded it as a arrangement with excellent core competences to encounter the swiftly varying desires of the bazaar with dexterity and flexibility. The firm's exclusive dimensions comprise its human resources, hard and soft technologies, experts and highly motivated management, and information and communication technologies. A system that shifts quickly (with speed and high responsiveness) among business models or between business lines is said to be flexible. Flexibility often means responding efficiently to customer demand almost in real time (Youssef, 1994). Goldman et al. (1995) describes alertness as a vibrant, framework specific, destructive alteration that clinches and chases development, realization, profits, market share and customers. Gehani (1995) and Gligor & Holcomb (2012) asserts that an agile organization can acutely satisfy client instructions, can introduce new merchandises often in a appropriate manner, and can speedily get in and out of strategic alliances with its trading partners.

According to the Global Supply Chain Forum, supply chain management seeks to enhance and integrate the key business processes, from the original suppliers of raw materials to the end user of the manufactured product. Therefore, these processes in essence create products, services and information that add value to the stakeholders of the supply chain (Lambert & Cooper, 2000). By following keenly, the evolution of supply chain management (SCM), Lambert & Cooper (2000), Lamming (1996) and Lamming et al. (2000) espy that the term SCM was propounded and introduced by management consultants in the early 1980s and has since generated wide and keen interest across disciplines. Initially, supply chain management was discerned.

## **SECTION-2 REVIEWS OF LITERATURE**

Supply Chain Agility is an operational strategy focused on enhancing velocity and flexibility in the SC. It is the system involved in the creation and sale of a product, from the delivery source materials i.e dealer to the producer, through to its subsequent delivery to the end user. All organizations have supply chains of varying degrees, depending upon the size of the organization and the type of product manufactured. These networks after obtaining these supplies and

components transform these materials into finished products and then distribute them to the customer. (Chopra & Meindl, 2001).

Agile organizations are market-driven, with more product research and short development and introduction cycles. The focus is on quickly satisfying the supply chain, the chain of events from a customer's order inquiry through complete satisfaction of that customer. All physical events are enacted quickly and accurately. The faster materials, information, and decisions flow through an organization the faster it can respond to the demands of the market. The keys are flow and time (Sila & Ebrahimpour, 2005).

SCM was initially related to the management of inventory within a supply chain. This ideology was later expanded to incorporate and embrace the management of all purposes within a supply chain. In the quest for competitive advantage, Organizations, consultants, practitioners and academics have attempted to organize and integrate supply chain management (SCM) concepts and practices. Empirical QM research has grown over the last 20 years. Empirical research has distinct and restrained QM practices (e.g., Ahire et.al., 1996; Flynn et.al., 1994; Nair, 2006; Saraph et al., 1989; Sila & Ebrahimpour, 2005). Numerous studies have examined the associations among QM performs and numerous aspects of a company's enactment (e.g., Adam et al., 1997; Ahire & O'Shaughnessy, 1998; Dow et al., 1999; Kaynak, 2003; Samson & Terziovski, 1999).

Quality assurance in SCM related to dissimilar types of goods and services have been investigated (by Manning et al. 2007; V. John Peters 1999; Braglia & Petroni, 2000; Sroufe & Curkovic, 2008) in order to align the SC with quality assurance to derive the models which can be adopted by the organisations to assure the quality.

Supply chain collaboration (Papakiriakopoulos & Pramataris, 2010; Wiengarten et al., 2010) for different types of merchandises and facilities such as FMCG, perishable goods (aramyan et al., 2007), services etc. have been researched for increasing the performance of SC at different cross sections of it to derive the profit as well as sustained market position and growth for organizations. Robinson & Malhotra (2005) defined the concept of supply chain quality management as the formal coordination and integration of business processes involving all partner organizations in the supply channel to measure, analyze and continually improve products, services, and processes in order to create value and attain happiness of transitional and final clients in the bazaar. They also create out its significance to academic and manufacturing practice and proposed a Quality-SCM framework. (Taticchi & Brun, 2010) identified role of performance measurement systems to support quality improvement initiatives at supply chain level. Peters (1999) discussed service quality and total quality management as a business strategy designed to add value to customers.

Kaynak & Hartley, (2008) found that the inclusion of customer focus and supplier quality management in the QM model supports the importance of internal and external integration for quality performance. (Beamon et al., 1998) proposed a process quality model for the analysis,

improvement and control of supply chain and concluded that the coordination of logistics functions into integrated supply chain systems has increased the need for improved process quality.

Seth et al., (2006) devised a conceptual model for quality of service in the supply chain and found that majority of studies on service quality have focused on service industries, not supply chain as a whole. Mowat & Collins (2006) worked on consumer behavior and fruit quality and found in their survey that 124 consumers revealed that 46 percent ranked price as the most important attribute influencing the purchase decision, followed by taste (25 percent), size (13 percent) and skin color (3 percent). Taste was the attribute most frequently associated with disappointment (84 percent of responses), followed by price (10 percent) and texture (6 percent). Empirical tests of these propositions provide initial evidence that safety does indeed. Cooper & Ellaram (1993), presented various characteristics like low cost and differentiated service that help to build a competitive advantage for the supply chain of an organization. Supply chain characteristics of the specific supply chain strategy depend on the organization's competitive strategy. Lee & Billington (1995), defined supply chain "as a network of facilities that procures raw materials, transforms them into intermediate goods and then final products, and delivers the products to customers through a distribution system". Naim et al. (1999), opined that supply chain management has received increasing attention from practitioners and academia as there is a major challenge for today's managers to effectively manage the flow of materials from supply sources to the ultimate customers. Chapman et al. (2000), opined that the size of the firm plays an important role in adopting the type of supply chain. Smallness in terms of firm size is useful in the agility of the firm. Prabir & Helge (2000), made a study to demonstrate improvement in the logistics processes in small and medium size companies to improve market share and operational efficiency through information exchange. Kennerly & Neely (2001), considered that the suppliers would be able to fetch the retailer's information systems for viewing stock levels, knowing future requirements and possible inclusion of suppliers and customer relations in planning procedure to optimize the whole supply chain on a real-time basis. Mason Jones et al. (2000) recognized the need for customer satisfaction and market place understanding by the end users of products when designing a new supply chain strategy. Supply Chain Management has been defined by Mentzer et al. (2001) as the "systematic, strategic coordination of the traditional business functions and tactics across these business functions within a particular organization and across businesses within the supply chain".

Agarwal & Shankar (2002) expressed that in supply chain management there is supply of products, coordination of demand, and flow of product, information and money between the trading partners of a company's supply chain. Denis Towill & Martin Christopher (2002) opined that lean and agile principles may be successfully combined by considering the needs of the customers and corporate strategy to design a suitable supply chain strategy.

Quayle (2003), expressed that though small and medium enterprises (SMEs) play significant role in supply chains, there is limited literature around SMEs and Supply Chain Management (SCM) practices. From the survey, the author examined that purchasing is an unimportant function

unlike the recognition of purchasing in large companies in SMEs. Bruce Daly & Towers (2004) expressed that there are three major supply chain strategies namely; lean, agile, and lean/agile strategies. The authors argued that “the lean/agile approach is most appropriate for the textiles and clothing industry as products are innovative with short product life cycles, high volatility and low predictability”.

Chopra & Meindl, (2004), presented two basic supply chain types namely, Lean, cost, efficiency driven supply chains and agile, fast, service driven supply chains to assist cost leadership and differentiation strategy respectively. Samaranayake (2005), considered the supply chain as a set of business activities that are used by any organization to provide value to its customer either as a service, product or both. The author proposed a framework that consists of integration of components (materials, resources and activities of a business processes), representation of functionality relationships among the supply chain partners and execution of components at the structure level.

Sabbaghi & Vaidyanathan (2005), made a study to develop a conceptual framework describing the SME strategies in a supply chain network. According to the authors, supply chain strategy needs to integrate business functions (forecasting, purchasing, and manufacturing, distribution, sales and marketing) into a harmonious system to envelop the company's suppliers and customers. Christopher (2005), defined “supply chain as the set of activities composed by a particular company and all the other interacting companies directly or indirectly, through its suppliers and customers, upstream and downstream, for effective consumption of the products and/or services by the end user”. Vonderembse et al. (2006), discussed supply chain types that are necessary for success across three types of products: standard, innovative and hybrid basing on the product characteristics and stage of the product life cycle. JiteshThakkar et al. (2008) carried out a critical review of seventy seven related articles on the issues of SCM and SMEs under supply chain integration, strategy and planning & implementation. The author pointed out the growing importance of this research area and investigated the issues in more depth within the strong social environment of SMEs.

Bulent Sezen & Sema Erdogan (2009), incorporated the lean philosophy in which lean tools (Kanban, JIT, TPM, 5 S, etc.) are used to reduce wasteful activities in the strategic supply chain management and its processes. Lean approach brings the organization to the business model in which competitive advantage is achieved at reduced costs. Tumaini & Qin Zheng (2010) presented a case study to find perceptions towards adoption of Supply Chain Management Strategy in small and medium enterprises. The authors found that SMEs give less focus to supply chain management strategies and are also reluctant to employ integrated and transparent system to link them with other partners in the chain.

Danie & Johanna (2011), analyzed six organizations implementing different supply chain strategies based on specific supply chain characteristics. The authors concluded that market demand predictability, market winners and the organization's position in terms of the decoupling point can be used effectively to imply a supply chain strategy for organizations. SamaHamisi (2011), identified challenges like high inventory levels, setting up of customer service levels,

high logistic costs, complexities involved in global sourcing and outdated technologies. The author proposed opportunities like adoption of suitable supply chain strategy, trust in relationship, collaboration in exchange of information between supply chain partners and clustering of proximate producers, suppliers, buyers and other actors for Tanzanian SMEs in adopting supply chain management.

Womack et al., (1994) and Macduffie & Helper (1997). The idea of “lean thinking” has been expounded by Womack & Jones (1996) amongst others. Recht & Wilderom (1998) discussed the transferability of Kaizen-oriented suggestion systems (KOSS) to organizations outside Japan. Shah & Ward (2003), expressed that lean manufacturing represents cumulative of practices to create a streamlined & a high-quality system to produce finished products at low cost. The authors also opined that a lean supply chain attempts to streamline all the practices of the partners of the whole chain in a similar manner. “Lean strategies allow manufacturers to systematically and continuously eliminate the seven wastes namely; inventory, over production, waiting, transportation, motion, over processing, and defective products result from inefficient processes”.

Thomas et al (2006), presented an industry week survey of U.S. manufacturers in 2004 and found that almost 36% of plants reported implementation of lean principles in some style and that logistics have been implementing lean principles beyond manufacturing.

Rozhan & Rohayu (2008) made a study from Malaysian perspectives and stated that for many organizations, lean production system is an important element in their supply chain management practice. The study recommended that the organization needs to focus on improved value delivery to customers, rely on just-in-time system, eliminate waste, involvement of all stakeholders in the value creation process, develop close collaboration, work closely with suppliers and reduced number of suppliers for lean supply chains.

SylwiaKonecka (2010), discussed the attributes of lean, agile and hybrid supply chain strategies. The attributes are related to nature of demand, type of product, cost, quality, integration, etc. The lean supply chains were sufficient until the cost reduction in the process is important. Agile management strategy is desirable, in case of market requirements started to increase. In case of the same attributes, with different importance for the product, hybrid supply chain strategy need to be adopted.

Wong (2010), presented that lean production especially requires consensus on corporate culture with low cost technological systems. The author opined that inconsistency of national culture hinders the transfer of managerial philosophies or production systems.

Sufian & Manideepa (2013) examined the relationship between strategic supplier partnership and postponement on the supply chain strategy and the responsiveness. The study identified that the relationship between lean supply chain strategy and supply chain responsiveness is mediated by strategic supplier partnership. In case of agile supply chain, postponement partially mediates the supply chain responsiveness.

Singh et al. (2013) presented a case study on the application of lean and JIT principles in the supply chain of a pharmaceuticals company. The author identified the issues like lead time

reduction, inventory reduction, workers participation, quality improvement etc., are useful for lean implementation.

Agile Supply chain Strategy Richard (1996) and Brown & Bessant (2003) considered agile manufacturing as a lean producer and the agility depends on a range of underpinning operations management capabilities such as total quality management and just in time. Christopher (1999), described agile as “a supply chain which is market sensitive, virtual, network based and possesses integrated processes”.

Naylor et al. (1999), defined the agile and lean paradigms to supply chain strategies to emphasize the distinguishing features of each strategy basing on the customer value determined from quality, price, delivery time and service level. Christopher (2000), considered some characteristics of the market like short cycle times, wide variety of products and unpredictable demand are suitable for the agile supply chain approach while markets characterized by standard products with less demand uncertainty are suitable for lean supply chains.

Christopher & Towill (2000), commented that the leanness may be a constituent of agility under some product characteristics (Predictable demand, low variety and high volume). Christopher & Towill (2002), summarized agility features along six activity levels: marketing, production, design, organization, management and people. Hallgren & Jan Olhager (2009), investigated a wide perspective on internal and external factors related to lean and agile manufacturing capabilities and their impact on quality, delivery, cost and flexibility performance using structural equation modeling. In the study..

Ambe (2010) explored the concept of agile supply chain to determine the relation between agile supply chain and competitive advantage (quick response to market change and customer demand). The author concluded that agile supply chain is an appropriate strategy for competitive advantage. Kristina (2011) presented a survey paper on empirical research on the evolution of supply chain agility during the period of 1990 – 2010. The author identified background theories and presented various authors’ attitudes on definitions for agility, evaluation criteria of agility and review of agility concept adaption for supply chain competitive ability acquisition.

Abdolhamid et al. (2011) assessed the agility in an electronic company through gap analysis. Gap between current agility and needed agility is determined using a questionnaire. Nesrine El-Tawy & David Gallear (2011), proposed a framework for the Egyptian manufacturing business to show the relationship between the agility principles (customer focus, cooperation, mastering changes, and valuing people & information) and lean principles (waste reduction, value stream mapping, process flow, pull strategy and continuous perfection) through qualitative interviews.

Ghatari et al. (2013) prioritized agile factors i.e. planning performance management, cost reduction, delivery speed, trust development and environmental pressure through a multi-attribute decision making method. Pranav (2014) reviewed the literature on agile manufacturing under agility concept, agile manufacturing, agile manufacturing drivers, enablers, agility measurement, agile manufacturing benefits, applications caution and criticism. Leagile Supply Chain Strategy Leagile is combination of both lean and agile strategies. The objective of leagile strategy is to achieve the efficiencies in mass production with medium variety of products. To



achieve leagility the de-coupling point is to be located at the final assembler, an action that usually requires associated product rationalization (Lee & Sasser 1995).

Naylor et al. (1999), agreed that both agile and lean can be combined in the same supply chain as in the business world it is more likely that companies have a mixed portfolio of products and services. There will be some high volume products where demand is stable and more predictable and there will be products with sporadic demands seeking agile response.

Jack et al. (2001) proposed some solutions for poultry supply chain to cope with high demand uncertainty. The customer order decoupling point, the product differentiation point and the information decoupling point play a central role in these solutions. Hock et al. (2001), defined leagile supply chain as “the combination of lean and agile principles applied to the strategy of supply chain to respond satisfactorily in case of volatile market demands”.

Christiansen et al. (2007), considered short response, feasible deadlines, ability to change the volume and the mix of production as logistic goals inleagile supply chain.

Yinan Qi et al. (2009), investigated relationship between supply chain strategies namely; lean, agile and lean/agile and product characteristics using data collected from 604 manufacturing firms in China. In the study, the authors concluded that lean strategy is associated with very low values for innovative products while an agile strategy is marked by much higher values for innovative products.

Banihashemi (2011), considered leagile supply chain, to study the relationship between product life cycle of standard, innovative and hybrid products and selection of the appropriate of supply chain. The author realized that during introduction and growth stages of life cycle, standard products require agile supply chain and lean supply chain is needed in maturity and decline stages. Hybrid or leagile patterns are appropriate patterns for hybrid products.

Gunjan & Rambabu (2012), addressed the standard constructs of lean, agile and leagile supply chain to align competitive strategy and supply chain strategy. They examined the reliability and validity of constructs of lean, agile and leagile supply chain in Indian manufacturing industry.

Miah et al. (2013) evaluated the supply chain strategies using Analytical Hierarchy Process (AHP) for apparel manufacturing industry by considering lead time, quality, cost, service level, responsiveness and efficiency as key factors. The author concluded that apparel manufacturing industries require leagile strategy in order to compete in a volatile market. Samman (2014) developed an AHP methodology to test whether existing strategies can perform as lean, agile or leagile manufacturing strategies for cloth manufacturing and fashion industries.

Helena et al. (2014), made a study to identify and understand Lean, Agile, Resilient and Green paradigms trade-offs. An exploratory case study approach was used to identify the trade-offs in the automotive

The study in question has the objective including examine the effect of supply chain coordination over supply chain agility, impact of supply chain cooperation over supply chain agility, assessing the precipitate of supply chain communication over supply chain agility and further effect of supply chain agility over operation and performance.

### SECTION-3

#### MATERIAL AND METHOD (METHODOLOGY)

To the best of the researcher's knowledge, there are some studies in the ambience of supply chain agility, which attempt to capture the unique dimension on performance in textile Industry. The present study has followed exploratory research approach. Exploratory research is designed out via review of existing literatures information, questionnaires and observation. The universe of this study consist of employees/workers, supervisors and managers working in textile industry of India. Workers/employees, supervisors and managers were selected from textile Firms. The study includes 90 employees/workers, 20 supervisors and 10 managers of Bhilwara textile industry in Rajasthan - India. In this study, the respondents were selected by using convenience sampling (using a cross-sectional design) from textile industry of Bhilwara. In this study for data collection, Primary data was collected from workers/employees, supervisors and managers of textile firms of Bhilwara in India. Structured questionnaire has been filled by workers, supervisor and managers. Secondary data was collected through Books, Periodicals, Journals, Research papers, and case-study, Websites, Articles, and Newspapers. The use of internet has presented help to the researcher via various search engines, i.e google.com.

#### Hypotheses

H1= Supply chain coordination (SCCOR) is positively associated with supply chain agility (SCAGI).

H2= Supply chain cooperation (SCCOP) is positively associated with SCAGI.

H3= Supply chain communication (SCCOM) is positively associated with SCAGI.

H4 = the higher the level of SCAGI the higher the level of OP.

### SECTION-4

#### ANALYSIS AND RESULTS

To analyse the data first factor analysis is conducted with the selected variables. With the 6 factors the principal component factor model further confirmatory factor analysis was used. Further the SEM model revealed the results in table-1 as under:

**Table-1**

Result of factor analysis, model fit and Regression coefficient

Indicator (Cronbach's alpha; eigen value)	Principal component factor loading	Measurement model		
		Standard coefficient	$R^2$	$t$ value <sup>c</sup>
<b>Supply chain coordination (SCCOR)</b>				

<b>Coordination with Cross-functional teams (<math>\alpha = 0.90</math>; Eigen value = 4.51)</b>				
Teamwork between our suppliers and company is encouraged	0.51	0.94	0.3	8.64
Planning is coordinated by company with views of suppliers.	0.74	1.34	0.67	14.72
Task force teams coordinates with suppliers.	0.83	1.52	0.84	17.68
Ideas and information are shared with our supplier.	0.79	1.51	0.83	17.57
Cross-functional integration with employees are facilitated by company. <sup>a</sup>				
<b>Coordination with Long-term relationship (<math>\alpha = 0.85</math>; Eigen value = 2.77)</b>				
Long term relationship with suppliers is proposed.	0.76	0.64	0.51	11.82
Company works with suppliers to improve their quality in the long run	0.54	0.74	0.51	11.78
Company is looking for long-term alliance with Suppliers	0.70	0.92	0.73	14.78
Suppliers are having positive views regarding dealing with our company	0.59	1.16	0.69	14.57
Suppliers got desired share among company's profit. <sup>a</sup>				
Company has good relationship with key suppliers. <sup>b</sup>				
<b>Supply chain cooperation (SCCOP) cooperation with management (<math>\alpha = 0.92</math>; Eigen value = 6.77)</b>				
Management is supportive for improving cooperation between purchase department and suppliers.	0.68	0.88	0.48	11.73
Purchasing is treated as important part of company's corporate strategy.	0.79	1.05	0.67	14.92
Purchaser's views are given due consideration by management.	0.81	1.23	0.84	17.35
Management considers the requests for increasing supply resources	0.52	0.89	0.36	9.33
Management always supports the need for inter-organizational information systems. <sup>a</sup>				
<b>Supplier involvement (<math>\alpha = 0.86</math>; Eigen value = 2.23)</b>				
Supplier's views are considered for packaging design at development stage.	0.62	1.11	0.6	13.16
Suppliers are provided participation in company's project teams.	0.49	1.36	0.61	13.32
Supplier's views are considered during product design phase.	0.63	1.24	0.56	12.46
Key suppliers are having involvement in supply strategy planning. <sup>a</sup>				
Planning committees suggests key issues deal with major suppliers. <sup>a</sup>				
<b>Supply chain communication (SCCOM) Communication through Information technology (IT) (<math>\alpha = 0.84</math>; Eigen value = 3.67)</b>				
Direct communication links are developed for supply chain related issues.	0.71	1.4	0.47	11.41
Inter-supplier's coordination is achieved using online links.	0.71	1.39	0.55	12.13
IT-enabled transaction processing is done with suppliers.	0.75	1.49	0.63	13.17
Electronic mailing capabilities provide quick information to major suppliers.	0.55	1	0.29	8.42
Electronic transfer facility is used for supply orders, invoices or transfer of funds.	0.59	1.46	0.5	10.75
Information system is used to track shipments. <sup>a</sup>				
<b>Communication with supply chain (<math>\alpha = 0.86</math>; Eigen value = 3.98)</b>				
Company communicate financial, production, design, research, and	0.51	1.02	0.37	9.66

competition information				
Suppliers are provided with required information that might help the regarding supply.	0.67	0.92	0.46	11
Information is provided in frequently, timely and informally in appropriate manner.	0.73	0.98	0.71	15.08
Frequent face-to-face communication with suppliers takes place.	0.55	0.95	0.54	12.45
We exchange performance feedback. <sup>a</sup>				

a Items dropped after EFA.

b Items dropped after CFA.

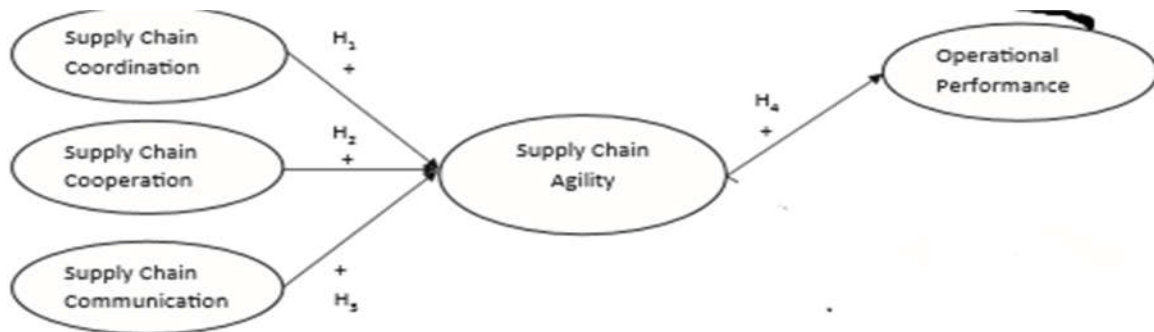
c All *t*-values are significant at  $P < 0.05$  level.

The final result of Supply chain agility and its relation to the operational performance is verified by the SEM model. The outcome of SEM model is as under (in table 2):

**Table 2**

Supply chain performance measurement model (model fit measures)

$\chi^2$	NC	AGFI	NNFI	CFI	RMSEA
191.44	1.56	0.89	0.96	0.97	0.06



**Fig.1.** Final Supply chain model and its impact on operational performance

## DISCUSSIONS

The fit measures of the hypothesized model are provided in Table-2. The obtained chi-square values of models were highly significant ( $p < .001$ ). Because of the sensitivity of chi-square to sample size, the relative chi-square ( $\chi^2/df$ ) was estimated. The Goodness of fit index (GFI) is analogous to squared multiple correlation ( $R^2$ ) in multiple regression. Comparative fit index (CFI) indicates the overall fit of the model relative to a null model and Normed fit index (NFI) adjusts for the complexity of the model. Root mean square error of approximation (RMSEA) indicates the approximation of the observed model to the true model. Lower the RMSEA, better is the model. RMSEA was close to the required limit of 0.08. This resulted in the fit indices of models to be at the margin. But, these fit measures were close to 0.90. Therefore, the acceptance of model cannot be denied. The fit measure of model was acceptable and was not widely apart.

However, the best that concluded that the model provided a better fit for predicting the audit quality in Indian context.

## SECTION-5 CONCLUSION

Supply chain field is indeed a new and not delved into area for Indian companies. The management view by including, coordination of activities across companies, improving information flows and collaborative redesign is important to improve the supply chain capabilities. The link between supply chain quality management practices and organizational performance have been researched and it was deduced and depicted that organizational performance could be enhanced through improved supply chain quality management . Further the study revealed that the difference between supply chain management and supply chain agility is the extent of dexterity that the organization possesses.

The findings indicate that the important supply chain dimension for company's growth includes Supply chain coordination (SCCOR) including Coordination with Cross-functional teams and Coordination with Long-term relationship; Supply chain cooperation (SCCOP) including cooperation with management and Supplier involvement and Supply chain communication (SCCOM) including Communication through Information technology and Communication with supply chain. The Serendipity of an agile supply chain is the adroitness and flexibility with which these activities can be accomplished and the results and feedback that a customer needs and customer satisfaction are the very reasons for the network. Further studies are expected to use greater sample sizes to enhance the findings.

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**Appendix No. 1: QUESTIONNAIRE**

<b>Indicators of importance of Supply chain</b>	<b>Strongly disagree</b>	<b>disagree</b>	<b>No opinion</b>	<b>agree</b>	<b>Strongly agree</b>
Teamwork between our suppliers and company is encouraged					
Management is supportive for improving cooperation between purchase department and suppliers.					
Task force teams coordinates with suppliers.					
Management always supports the need for inter-organizational information systems.					
Company has good relationship with key suppliers.					
Company is looking for long-term alliance with Suppliers					
Long term relationship with suppliers is proposed.					
Company works with suppliers to improve their quality in the long run					
Planning is coordinated by company with views of suppliers.					
Suppliers are having positive views regarding dealing with our company					
Suppliers got desired share among company's profit.					
Management considers the requests for increasing supply resources					
Purchasing is treated as important part of company's corporate strategy.					
Purchaser's views are given due					

consideration by management.					
Ideas and information are shared with our supplier.					
Company communicate financial, production, design, research, and competition information					
Supplier's views are considered for packaging design at development stage.					
Suppliers are provided participation in company's project teams.					
Information system is used to track shipments.					
Key suppliers are having involvement in supply strategy planning.					
Supplier's views are considered during product design phase.					
Direct communication links are developed for supply chain related issues.					
Inter-supplier's coordination is achieved using online links.					
We exchange performance feedback					
Electronic mailing capabilities provide quick information to major suppliers.					
Electronic transfer facility is used for supply orders, invoices or transfer of funds.					
IT-enabled transaction processing is done with suppliers.					
Cross-functional integration with employees is facilitated by company.					
Suppliers are provided with required					

information that might help the regarding supply.					
Information is provided in frequently, timely and informally in appropriate manner.					
Frequent face-to-face communication with suppliers takes place.					
Planning committees suggests key issues deal with major suppliers.					