

# Literature Review on Impact of CRM, SRM, Information Sharing and Goal Congruence on Retail-SCM

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## Abstract

**Background/Objectives:** Literature review has been conducted in the area of Supply Chain Management (SCM) to comprehend the various Supply Chain Management Practices (SCMPs), adopted by firms and how these can impact the performance of the organization and thus be a source of competitive advantage to the firm. Additionally, the SCMPs, which are particularly relevant for the retail sector, were identified and a conceptual retail supply chain model was proposed for further validation. **Methods/Statistical Analysis:** A total of 100 selected refereed journal articles were systematically studied. **Findings:** A couple of key findings emerged; there are several research articles on SCM in the manufacturing sector, but the field is relatively new with reference to the Retail-SCM. The literature review aids to develop an understanding of the relevant Retail-SCMPs which have an impact on SCP and FP. The proposed conceptual model can then be validated through multivariate data analysis. **Applications/Improvements:** The findings and subsequent methodological discussions aim at providing practical guidance to Retail-SCM researchers and practitioners.

**Keywords:** Firm Performance, Retailer, Supply Chain Management, Supply Chain Management Practices, Supply Chain Performance

## 1. Introduction

The term SCM was brought to the public domain by Keith Oliver. The term gained importance in the mid nineteen hundred and nineties, when a lot of articles and books came out on this subject. Most of the studies in the early nineteen hundred and nineties were concerned with defining the Supply Chain. According to the Council of Supply Chain Management Professionals (CSCMP), SCM encompasses “the planning and management of all activities involved in sourcing, procurement, conversion, and logistics management. It also includes coordination and collaboration with channel partners, which may be suppliers, intermediaries, third-party service providers, or customers. SCM integrates supply and demand management within and across companies”.

Over a period of time, the scope of Supply Chain research has widened. SCM has become a part of the by and large business strategy and therefore a top-management agenda item. Today’s SCM requires strong leadership and guidance from the higher-ups in the organization. If Supply Chains are managed through its fragmented components like transportation, procurement, inventory and distribution, then the improvements in terms of reducing the overall cost to customer does not happen and therefore the benefits of implementing SCM do not seem to be substantial. Supply Chain Performance Measurement is the crucial part of SCM. Effective management of Supply Chain Performance of Supply Chains, have been increasingly recognized as the significant factors in enhancing the performances of a firm. More and more firms are beginning to adopt SCM

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to improve performance of their organization. However, there is a deficiency of standard constructs for supply chain in the Supply Chain Performance Management literature. Therefore, this research work addresses the issue of lack of standard constructs in framework for Supply Chain Performance Measurement in retail sector.

Researchers are giving importance to various aspects, when they talk about Supply Chains and thus the scope of Supply Chain research has broadened. Supply Chains are acting as means for creating competitive advantage for the firm<sup>1</sup>. They further iterate that traditional supply chains focus on cost or speed, but today's value supply chains focus on array of integrated priorities like quality, cost, flexibility and speed. Members, who indulge in collaborative supply chain end up benefiting and having more bargaining power than the rest<sup>2</sup>. The authors have developed a supply chain research construct, which focuses on buyer-supplier relationship by reducing the supplier base, developing long term relationship with the suppliers, continuous communication, organizing cross functional teams and supplier involvement in planning and forecasting<sup>3</sup>. This clearly depicts that focus of supply chain literature has moved towards collaboration and long term relationship development between the partners in the supply chain.

There are a few authors who have done a detailed review of SCM literature. They have conducted a comprehensive review of literature to get a complete understanding of the SCM<sup>(4,5)</sup>. A comprehensive literature review was conducted by reviewing 442 papers between the periods 1999-2003 with a standpoint of methodologies<sup>6</sup>. The authors suggested that advanced empirical research using hypothesis testing has been used for data analysis by most of the researchers. Another author reviewed 100 papers and suggested that most of the studies have been conducted in the manufacturing segment and there is a need for further study in other sectors as well<sup>7</sup>. A literature review was conducted by reviewing 22 papers of seven sub-fields of SCM. These reviews provide an overall perspective on the supply chain literature<sup>8</sup>.

## 2. Importance of the Study for the Retail Sector

Retail Supply Chain has been considered as the domain of this study. The supply chain plays an important role in retail sector by linking the manufacturer with

the ultimate customer. In case of big retail firms like Pantaloon, Shoppers Stop, Trent etc., the supply chain is extremely complex. For example a store may stock more than 200,000 products, across 15 to 20 different product categories in each of its outlets, which can range from 10 to 400. The products will be sourced from suppliers across the country. It is difficult for a retailer to ensure the right quantity of each item, in each store. If there is excess stock of some items, the inventory cost will go up and the item will take away expensive shelf space as well as warehouse space. If the item is in shortage, it means loss of sale for the retailer. The retailer needs to keep track of each item, the level of stock and when to re-order and accordingly issue purchase orders. The supply chain has to also deal with the return of goods from the end customer to retailer to the supplier. All these activities make retail operations a complicated task. On top of this, the net profit margin of a generalized multi-brand retailer is very low.

The retailer therefore, has to ensure, that it is able to attract continuous footfalls and higher sales by giving better service and value and at the same time keeping the costs under control to remain profitable. This is an extremely ambitious objective and requires that the Supply Chain is well managed and is in synch with the strategy of the organization. For the Supply Chain to be well managed, retailers need to ensure efficient information flow, collaboration and cooperation among various Supply Chain partners. Thus, the retailer needs to interact with all the suppliers on one side to ensure smooth flow of goods and services in accordance with the customer requirement and customers on the other side by ensuring that the customer experiences value in the transaction. This seems to be a herculean task in the light of the complexity of the activity. As Indian retailers have still not reached maturity level with their supply chains, it would be worthwhile understanding the various Supply Chain aspects of retail firms.

## 3. Retail Supply Chain Management

Traditionally, power in the supply chain has been with the manufacturers. They would dictate the requirements of the supply chain and the suppliers and retailers would adhere to it. Over a period of time, retailers are taking control over their supply chain. They are dictating the requirements of the supply chain and the manufacturers

are following suit. There has been a power shift from manufacturers to the retailers<sup>9</sup>.

Over a period of time retail-SCM as a profession and as a functional area has gained considerable importance. Practitioners have established retail-SCM as a career path and professional conferences are conducted in this area. The research in the SCM area has had focus on manufacturing companies and very little research has happened in the retail area<sup>10</sup>. During the research, it was identified that over the past 15 years, very few retail-SCM related articles have come in the top logistics and retail journals. Amongst the articles that have got published, research in narrow areas of supply chain like inventory management, retail on-shelf performance, etc. have been conducted in most of the articles. The retail on-shelf performance was evaluated of advertised items at the point of sale<sup>11</sup>. How the traditional selling system through brick and mortar stores can convert itself into online business with a better performance was evaluated<sup>12</sup>. The impact of incorrect inventory information on retail outlet was studied<sup>13</sup>. A study was conducted to analyze the allotment of retail shelf space based on the profitability of the product<sup>14</sup>. Another study ascertained that the retail operational strategies employed by the retailers in the USA and Europe like quick response, lean and postponement helped the retailer to improve its efficiency<sup>15</sup>. The retail supply chains need to respond to unanticipated changes at reasonable costs<sup>16</sup>. The supply chains need to be responsive, flexible and agile.

The relationship between SCMPs and Supply chain profitability was studied<sup>17</sup>. Another study ascertained the collaboration among the enterprises using best practices and information and communication technologies associated with Efficient Customer Response (ECR)<sup>18</sup>. Yet another Study ascertained the impact of inter-organizational information technology in retail supply chain<sup>19</sup>. The authors<sup>20</sup> looked at whether Wal-Mart has squeezed its suppliers financially in the US and another study discussed the buyer-supplier relationship and power dependence<sup>21</sup>.

## 4. Supply Chain Management Practices

For a business like Retail, SCM plays a crucial role in deciding whether the business is successful and profitable or not. Globally successful retailers like Wal-Mart,

Amazon, Tesco, etc are doing well because they have spent sufficient time and effort to make their Supply Chain processes efficient and responsive. They have used technology to bring in collaboration among their partners.

SCMPs is a set of practices that integrate manufacturers, suppliers, customers and distributors to improve Supply Chain as well as FP<sup>22</sup>. Successful implementation of SCMPs can enhance firm's competitive capabilities such as cost leadership, customer service and product differentiation. They are the managerial actions undertaken to improve the performance of the integrated supply chain. It can be seen as activities along with the technologies that are used to enable such collaboration among the supply chain partners<sup>(23,24)</sup>.

SCMPs implemented to achieve better performance require that there is good amount of cross-functional integration between the various functions in the organization. For example, the material planning, sales, production, procurement, distribution and finance department need to work together in a synchronous manner to enable the smooth functioning of the supply chain. This internal synchronization is not sufficient, as the company also needs to deal with the external parties, who are a part of the supply chain. Such external parties are suppliers, customers, transporters, warehouse managers, third party logistics, etc. The authors<sup>25</sup> states that firms, which are trying to achieve superior SCP require supply chain integration within a firm and with external partners like suppliers and customers. The authors<sup>(26,27)</sup> in their study state that integration with both customers and suppliers has the strongest association with improvement of performance. Collaborative planning on replenishment using vendor managed inventory enables a firm to achieve higher margins<sup>28</sup>. The authors also state that sharing information about inventory levels or customer requirements is associated with higher performance as compared to companies who do not.

A study was conducted to understand the impact of information systems and SCMPs on the performance of the firm based on a sample of 203 manufacturing SMEs<sup>29</sup>. SCM has become a noteworthy strategic tool for firms striving to improve customer service, quality and competitive success<sup>30</sup>. The authors surveyed various senior managers in various industries to study the prevalent SCMPs like customer service management, product and delivery assessment, supply chain characteristics, Supply

chain integration, information sharing, JIT capability, capacity assessment and information assessment. Another author<sup>31</sup> identified SCMPs like strategic supplier partnership, customer relationship, information quality, information sharing and lean retailing practices, which have significant direct positive impact on supply chain profitability. Another study<sup>32</sup> listed that SCMPs like customer relationship, strategic supplier partnership, information technology, supply chain integration and information sharing and have an impact on organizational performance.

It can be observed that various researchers have covered various aspects of SCMPs in their studies. The dimensions identified depicts that, the common supply chain practices observed by these researchers are customer relationship management, long term relationship, information technology, information sharing, supplier relationship management, goal congruence, lean and JIT practices, etc.

Detailed literature review, indicate that the shortcoming of previous studies on SCM relates to their overall importance on general forms of SCM that are applicable across different types of manufacturing organizations. To address this limitation, the specific requirements of retail firms have to be addressed. This warrants for further research into the Retail-SCM. In reviewing and consolidating the literature, four distinctive dimensions emerged from the literature that explain the SCMPs and are extremely relevant for the retail sector, which are provided in the next section.

## 5. Variables of Selected Supply Chain Management Practices

Construct measurement development is the core of theory building. The study intends to develop SCM constructs that exhibit sound psychometric properties. The various contributions of researchers in the supply chain area, when put together have all the critical elements of having a successful supply chain. After consolidating the findings of various researchers and taking into account the specific needs of the retail sector, a research framework has been arrived at. In reviewing and consolidating the literature, four dimensions of SCMPs emerge, which are specifically important to the retail sector and which drive the performance of the firm, namely Supplier Relationship Management (SRM), Goal Congruence (GC), Customer

Relationship Management (CRM), and Information Sharing (IS).

Satisfying customer requirement is the ultimate aim of a business<sup>(33-36)</sup>. The present framework reflects customer focus in terms of providing timely pre-sales and post sales services, satisfying needs and providing value to the customer, as the key driving force for effective SCM.

The performance of a retailer is not entirely dependent on its own performance, rather performance of the entire supply chain contribute to the overall performance of the supply chain. Keeping this in mind, the framework includes supplier relationship management as a variable<sup>(37-41)</sup>, which focuses on the relationship between the suppliers and the retailer. SCM is an integrative function and therefore supplier relationship management is the key to supply chain success<sup>42</sup>.

There is a need for two-way information sharing among the supply chain partners for implementing successful SCMPs. Information sharing consists of genuine, frequent and personal contacts between the buyers and suppliers. In order to find joint solutions about customer feedback, retailers need to share information with the suppliers. At the same time suppliers need to share vital information related to their production and delivery schedules with the retailers. Many supplier problems were due to bad communication among the supply chain partners<sup>43</sup>. Therefore, this theoretical construct is conceptualized to involve information sharing as one of the variables of the study<sup>(44-49)</sup>.

The overall supply chain can work effectively, when the supply chain partners perceive their own objectives are satisfied by accomplishing the supply chain objectives. The members of the supply chain channelize their energy to ensure that the materials move smoothly right from the supplier to the retailer. In such a situation, the individual objectives are kept below the overall objective of an efficient supply chain, which ultimately leads to better customer service and better firm performance<sup>(50-54)</sup>. Table 1 summarizes the research studies, where the select SCMPs have been identified.

### 5.1 Supply Chain Performance and Firm Performance

The purpose of this section is to review the variables SCP and FP. Performance measures reflect how the firm is performing to achieve its objectives, mission and values. These measures will include conventional measures of

performance for a business unit. From literature review, it is ascertained that the common FP measures used are net profit, market share, return on investment, growth in net profit, sales, growth in sales, return on asset, productivity ratio, total cycle time, cost saving, total cash flow time, inventory turns, net income before taxes, gross margin, quality performance, inventory management performance and financial liquidity.

There are non-financial measures as well like overall competitive position, present value of firm, innovation performance, market share, R&D performance and quality improvement. Out of these parameters, the operational performance parameters like customer service levels, total cycle time, delivery cycle, etc. provide a direct indication of the effect of SCMPs on firm performance. Keeping the various limitations in mind, the firm performance in this study is measured using indicators of financial performance like Profit, Revenues and Return on Investment<sup>(60-63)</sup>.

Supply chain performance parameters are a set of parameters used to determine the effectiveness and efficiency of an existing supply chain system or to compare competing alternative systems. An extant literature review can determine a lot of parameters, which can judge the effectiveness and efficiency of the supply chain. There are qualitative and quantitative performance measures. The qualitative measures of supply chain performance are like information and material flow integration, customer satisfaction, supplier performance and effective

risk management. The quantitative measures of supply chain performance are sales maximization, profit maximization, cost minimization, return on investment maximization, inventory investment minimization, fill rate maximization, product lateness minimization, customer response time minimization and lead time minimization.

Some of the other common Supply Chain Performance parameters used are forecasting and material accuracy, on-time delivery capability, delivery reliability and consistency, precise supply chain cost knowledge and control, fast customer response, coordinated product flow right from supplier to the store, inventory management and rationalization and responsiveness to changing requirement<sup>(64-66)</sup>. Table 1 presents the detailed list of researchers, who have established relationship between SCMPs and SCP/FP.

## 6. Proposed Conceptual Model

The conceptual model guiding our research is shown in Figure 1. Based on prior research and theorizing<sup>(3,26-29)</sup>, we begin with a SCMP-SCP-FP model. The researcher has broadly classified the dimensions of SCMP variables into four categories, i.e., CRM, SRM, IS and GC. The framework reflects customer focus (CRM) in terms of satisfying needs, providing timely pre-sales and post sales services and providing value to the customer, as the key driving force for effective performance<sup>(30,37,46)</sup>. SRM

**Table 1.** Variables of Supply Chain Management Practices

SCMP	Definition
Customer Relationship Management (CRM)	“CRM refers to managing customer complaints, improve customer satisfaction and build long term and enduring relationship with the customers” <sup>(21,35,36)</sup> .
Supplier Relationship Management (SRM)	“SRM refers to a long term relationship between the company and all its suppliers to leverage the strategic and operational capabilities of suppliers to achieve significant benefits to each other” <sup>(16,21,35)</sup>
Information Sharing (IS)	“IS refers to the extent to which critical and proprietary information is communicated by the supply chain members with regard to markets, production schedules, products, and customer information” <sup>(35,36,55,56)</sup> .
Goal Congruence (GC)	“GC refers to establishing common agreed vision among the supply chain partners to achieve specific common objectives for each seamless flow of material from supplier to store” <sup>(23, 37,38,57)</sup> .
Supply Chain Performance (SCP)	“A performance measure, which enables an organization to ascertain how efficient, effective and responsive its supply chain is, in meeting the needs of an organization to have a seamless flow of material right from supplier to the store” <sup>(3, 26, 38,58)</sup> .
Firm Performance (FP)	“A performance measure, which enables an organization to ascertain how they are performing in terms of profitability, turnover, market share, operational efficiency, customer satisfaction, etc” <sup>(19,36,38,59)</sup> .

enables the development of long term relationships with the suppliers to leverage the capabilities of the partners in the supply chain to achieve mutual benefits, which in turn drives performance<sup>(35,36)</sup>. Two-way IS among the supply chain partners is critical for implementing successful SCMPs<sup>(46,47)</sup>. The overall supply chain can work effectively, when the supply chain partners perceive their own objectives (GC) are satisfied by accomplishing the supply chain objectives<sup>(47,48)</sup>.

Environmental pressures act as driver for successful SCMPs. Today retailers operates in a dynamic and competitive environment, where if the retail firm does not ensure smooth flow of products right from supplier to store, it will force the customer to experience new retail stores and thus the customer will move to the competitor. In today's era where brand loyalty is shifting fast, it is imperative for retailers to ensure that the right product is available at the right time and at the right place at the right price. For this to happen, the backbone of the organization, which is the logistics and supply chain management has to be in place and should be in sync with the customer requirement.

Based on the extant literature review, it is conceptualized that the various SCMPs have a significantly positive impact on the SCP and FP for a retail firm. A number of previous studies have measured FP using Profit, Revenues and Return on Investment<sup>(19,27)</sup> and SCP using forecasting and material planning accuracy, on-

time delivery, delivery reliability and consistency, precise supply chain cost knowledge and control, fast customer response time and rigorous inventory management and rationalization<sup>(23,46)</sup>. In line with the above literature, the same items will be adopted to measure SCP and FP in this study.

## 7. Conclusions

This paper, through a structured and systematic review of literature, provides insights into the definition of SCM, the various SCMPs adopted by various researchers and the research methodology adopted by different researchers. The review enables us to succinctly describe the relevant SCMPs applicable to Retail-SCM. The paper also proposes a conceptual model which can be later tested using multivariate data analysis.

The review suggests that, there is a growing interest in the SCM area among the researcher community. SCM is an evolving area and therefore there is a lot of diversity from definitions all the way through to theory and research methods. However, when it came to the research methods, the diversity narrowed down. This can be explained in terms of the dominance of the operations management discipline, which in turn is focused on manufacturing sector. This has prevented wider acceptance of ideas outside the functional areas

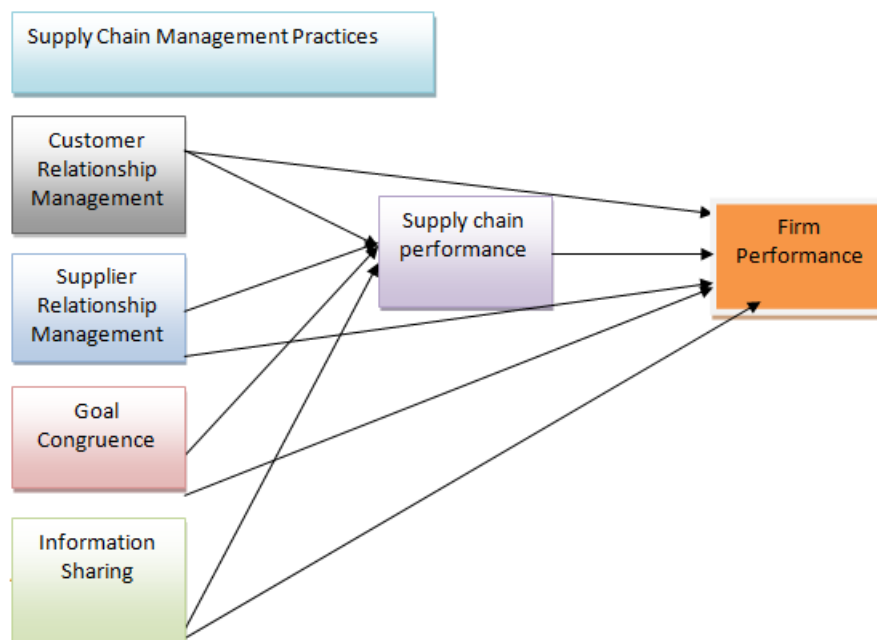


Figure 1. Proposed Retail-Supply Chain Management Model.

that SCM research has traditionally been associated with. Researchers from other areas apart from operations management have recently started taking slight interest in the SCM area. Very soon, SCM should move in the direction of becoming a multi-disciplinary area.

The scope of Supply Chain research has broadened over time and researchers are giving importance to various aspects, when they talk about Supply Chains, which include inter-organizational technologies<sup>(18,36,46,47)</sup>, supplier performance<sup>(26,47)</sup>, top management leadership<sup>47</sup>, information sharing<sup>(47,48)</sup>, long term relationship<sup>3</sup>, customer relationship<sup>(47,67)</sup>, agreed vision and goals<sup>(23,47)</sup>, joint knowledge creation<sup>48</sup>, human resource management factors<sup>25</sup>, sustainability and green<sup>(20,68)</sup>, and many more.

There is a difference between operational performance and alignment of the initiative with the business strategy of company. Supply chain initiatives with the sole purpose of reduction in costs and improvement in efficiency cannot provide sustained results to a company unless they are interwoven with the business strategy of the company, which drives down sustained differentiation from the competitor. Such a Supply Chain strategy would be difficult to replicate for the competitor. Thus, a company needs to decide, which set of activities it needs to perform with more focus in the Supply Chain area so as to build a strategic position and value for the company. This paper tries to identify all the relevant SCMPs, which have an impact on SCP and FP. Based on the identified SCMPs, the ones which are particularly relevant for the retail sector were identified and a conceptual model was proposed for further validation. The SCMPs selected for the purpose of the model are Supplier Relationship Management, Customer Relationship Management, Information Sharing and Goal Congruence. These SCMPs are proposed to impact the Supply Chain Performance and Firm Performance of the firm.

While the researchers feel that the discussions presented in this paper provide useful insights into the SCM and specifically Retail-SCM body of knowledge, we feel that further insights are possible. The proposed model could be tested in different markets and the results could be compared for further deliberation.

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