
SUPPLY CHAIN MANAGEMENT: A REVIEW

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Abstrak

Supply Chain *Management* (SCM) is a very dynamic upstream to downstream distribution system that aims to produce a service, a better product, and a minimum cost. To achieve this, there are new concepts for the development of SCM, namely Lean Supply Chain (LSC), Supply Chain Quality Management (SCQM), and Supply Chain Network Design. Where LSC applies lean to address waste in the distribution chain, maximizing production, so costs will be reduced, and competitiveness will increase. Whereas SCQM in its application has the term internal dimension, namely quality management and external dimension, namely the context of supply chain management. Then for supply chain network design is a technology that can support the development of SCM to realize the connectivity and integration of distribution data so that all parties must feel benefited, both the producers, the shipping service, and the end users.

Keyword: LSC, SCM, supply chain network design, SCQM

Introduction

This paper will discuss the Supply Chain Management (SCM) whose scientific concept is very important to know because the case of the supply chain is inherent in the daily life of mankind and there will always be new cases from day to day.

Supply Chain Management (SCM) is the science that discusses suppliers and customers from upstream to downstream to get lower costs and superior value for customers (Boateng, 2019). As defined by the supply chain council, supply chain is a network of organizations that work together, and are connected to control, manage, and improve the flow of materials, and information from suppliers to end customers (Jaklic et al, 2006). Supply Chain Management can also be defined as the strategic and systematic coordination of traditional business functions (Nakov et al, 2014) which facilitate the distribution network between customers, and the company's internal activities (Barraza et al, 2016).

Changes in the distribution of supply chains are very dynamic, the things that affect it include direct customers and also announcements of new regulations (Bastas and Liyanage, 2018).

From the statements that have been mentioned, the changes in the supply chain distribution are very dynamic, making the SCM topic will continue to evolve and continue to adapt as needed in an effort to provide better alternative solutions. For this reason, it is obligatory to know any new concepts in the discussion of SCM scientific concepts.

Supply chain practices greatly influence company or organizational performance. Competitive advantage shows that the supply chain is correct, because it includes supplier management, customer management, inventory management, distribution, development, and design of new products (Truong et al, 2016) (Psomas et al, 2014).

SCM in manufacturing occupies a position that is widely studied by researchers compared to SCM in other fields. Of the 100 articles reviewed, 39% study SCM in manufacturing (Burgess et al, 2006). However, it should also be noted that the facts show that in theory, SCM lags behind in developing its scientific base compared to other scientific disciplines (Durach et al, 2017). So that, a systematic review is needed to add theoretical shared insights in the field and sub-field of SCM science (Tranfield et al, 2003). Therefore, in this paper, we try to write down terms or theories from the scientific development of SCM.

Supply Chain and Lean Supply Chain (LSC)

Supply Chain Management (SCM) is an important process of the company that is planned through systemic coordination, such as procurement, purchasing, conversion and logistics (Chakraborty and Gonzalez, 2018). This important process covers various areas of the company such as information systems, logistics, production, sales,

purchasing, finance, and so on (Crumbly, 2015). Therefore, to deal with changing market conditions, SCM must have a reliable analysis tool that is able to adapt to supply chain variables in the field (Salah et al, 2011).

Lean implementation is a way to deal with waste in the supply chain and can maximize production, so that the efficiency of the production process will be obtained, reduced costs, greater flexibility, and increased competitiveness (Nimeh et al, 2018). The use of lean in supply chain distribution allows the system to be more optimal and efficient, meeting customer demand, supply to customers, and of course with minimum waste (Arif-Uz-Zaman and Ahsan, 2014).

By considering the SCM principles, Lean Supply Chain (LSC) must use the concept of Lean Manufacturing in the supply chain. In table 1 below, it provides an overview of the differences between Lean, LSC, and SCM, which is important to consider the role of Value Stream Mapping (VSM) in three approaches (Nadal, 2017).

Table 1. The difference between Lean, LSC, dan SCM (Nadal, 2017)

Topic	Lean	LSC	SCM
Continous improvement and cultural aspect	*	o	o
VSM	*	*	*
Logistics			*
Marketing			*
Production methods and quality	*	*	
Relationship management	*	*	*
Work practices	*		
*	Essential		
o	May be considered		

The discussion in this section obtained the SCM concept which is more focused on the production floor and quality assurance. The mention is Lean Supply Chain (LSC), which can be concluded that the SCM concept develops in the application of waste management in the supply chain so as to enable the system to be more optimal and efficient in meeting customer needs, offering to customers.

Supply Chain Quality Management (SCQM)

SCM is a distribution management design that aims to provide more satisfaction to consumers through good coordination in network companies, information systems, and higher performance processes to produce high quality services and products (Marcineková and Sujová, 2015) (Zhou, 2016).

Based on SCQM theory, there are two dimensions in distribution, namely internal and external dimensions. The internal dimension comes from Quality Management, and the external dimension comes from the context of supply chain management (Schuster and Maertens, 2016).

SCQM is a system based on a productivity approach that creates satisfaction of supply chain partners with middle and final customers (Siomos, 2018).

Having previously discussed minimum waste in the LSC concept, this strongly supports the SCQM concept which aims to create satisfaction of supply chain partners with middle and final customers. Although the SCQM concept has a different way from the LSC concept.

Sustainable Supply Chain Management (SSCM)

SSCM is a tool to improve company effectiveness in terms of environmental management and social performance to gain added value. The SSCM perspective is in the form of environmental, social, economic, governance, and performance measurements (Panigrahi et al, 2019). The core functions of SSCM can be seen in Figure 1.



Figure 1. SSCM core functions (Panigrahi et al, 2019)

Supply Chain Network Design

The supply chain network must be seen as a whole, which considers purchasing, production, inventory, distribution, logistics areas together, and is easy to reach. Where with the supply chain management can carry out all the tasks and planning involved in the purchasing and logistics process of the company. Supply chain networks can also facilitate coordination and relationships with partners both suppliers and customers (Grant, 2017). Locations that can influence customer orders such as marketing, new product development, and accounting are included in the supply chain network. Parties involved in this process include suppliers, manufacturers, retailers, customers, warehouses, operators, and others (Melo et al, 2009).

Data connectivity and integration of companies or organizations arise from technology, making the construction of supply chain networks consistent for companies (Radzhabova et al, 2019). The use of tools such as ERP (Enterprise Resource Planning) and optimization software is a solution in facilitating the ease of effective and efficient decision making in supply chain networks. This is because technology can store large amounts of company data (Hazen et al, 2014). Use of this optimization software as a necessity for the development and innovation of a structured supply chain network (Eskandarpour et al., 2015).

In the current 2020 era, it is certainly already being felt by some people especially young people who can buy products online through online shopping software applications and online transportation service applications. The application has brought distribution chains from upstream to downstream. Producers who create a product can directly offer their products to end consumers or end users, so that transportation of products is not so much thought of by producers, because purchasing or ordering online involves shipping services that focus on moving in the shipping field. From all parties, both the producers, the shipping service, and the consumer all benefit from this system.

Conclusions

1. SCM has the aim to produce a service, a better product, and a minimum cost that can not be separated from the discussion of distribution from upstream to downstream. All parties must feel disadvantaged, both producers, shipping services, and end consumers.
2. The development concepts of SCM, there are the terms Lean Supply Chain (LSC), Supply Chain Quality Management (SCQM), and Supply Chain Network Design.
3. LSC serves to minimize costs and increase competitiveness. Its application includes addressing waste in the distribution chain, maximizing production and others.
4. SCQM in its application there is the term internal dimension, namely quality management and external dimensions, namely the context of supply chain management.
5. SSCM has a perspective in the form of environmental, social, economic, governance, and performance measurements.
6. Then for supply chain network design is a technology that can support the development of SCM to realize connectivity and integration of distribution data.

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