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Literature Review And Critical Analysis On Supply Chain Management

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Abstract: ***Any company, wishing to improve its flows and delivery times while controlling costs, should integrate in a SCM perspective.***

In fact, SCM is extremely important practie, especially in today's increasingly competitive environment. Thus, our article aims to provide a wide literature review on the SCM especially for companies who want to master the processes and phases of implementation of this concept.

Keywords: SCM, literature review, process, composents, implementation, crical analysis.

I. INTRODUCTION

Supply chain management (SCM) is a very important part of every organization. Indeed, Supply Chain Management is the active management of the supply chain's activities in order to maximize customer value and obtain a sustainable competitive advantage. Supply Chain Management also handles the movement and storage of the materials needed to create a product, as well as inventory management and the monitoring of finished products from the place to the place where they will be distributed.

Traditionally, supply chain management (SCM) is also a melting pot of various disciplines, with influences from logistics and transport, operations management and materials management and distribution, marketing, as well as purchasing and information technology (IT). Ideally, the MGS global philosophy encompasses each of these functions to produce a global supply chain strategy that ultimately improves the company's performance (Croum, Romano, & Giannakis 2000; Wisner & Tan, 2000).

In reality, however, the literature is still very fragmented and although several studies claim to discuss supply chain issues, most existing research examines only one link in the chain, Indeed, they only focus on one ingredient of the supply chain performance combination.

The SCM is also a source of competitive advantage if, only if, the companies participating in it formalize a strategic partnership between them beforehand. The GCS, on the other hand, could be a catalyst for powerful future strategic partnerships that could gently break the arm's-length competition.

We note that, strategic planning and control is about resource acquisition, while tactical planning and control focuses on resource allocation and development, and operational planning and control relates to the execution of activities.

Therefore, supply chain management in a commercial environment has a major financial impact on all parties involved in the chain. For this reason, research and implementation of supply chain management principles to improve the supply chain is of paramount importance for any global company today.

ISSN: 2394-4404

It was noted that one of the prerequisites for effective supply chain management is organizational change. To ensure that the supply chain is managed as an integrated process, logistics processes at different locations must be combined into a single process called DH Operations.

We note that key strategies to achieve business objectives such as reducing costs and increasing the level of service include:

- ✓ Reducing the cycle time from suppliers to production units, from production units to distribution centers and from distribution centers to the market.
- ✓ Increased flexibility of suppliers and production.
- ✓ Increased reliability between supply chain partners to increase confidence.
- ✓ The integrated planning process, to coordinate efforts across the supply chain.

There are four main enablers of the synchronized supply chain which is:

- ✓ IT integration: Advanced planning and planning system (APS), to manage and optimize the supply chain from raw materials to deliveries.
- ✓ Works with world-class suppliers and logistics service providers.
- ✓ The use of Web, EDI and VMI commands for the integration of all parties in the supply chain.
- ✓ Fast distribution and replenishment: 48 hours internal delay from receipt of customer order to manufacturing and distribution at regional storage points.

The current supply chain performance does not yield the expected results in terms of total logistics cost and service level in the desired time.

Disruptions to the global supply chain (CGC) began after the World Health Organization (WHO) declared the coronavirus disease epidemic a global health emergency at the end of January 2020. In the first half of 2020, the virus spread to almost all countries in partial or total containment (McKenzie, 2020).

Such a crisis affects the supply network at the source and destination, to extreme effects on CGCs and interrupts the production process (Chaudhry, 2020). According to the Institute of Supply Management (ISM), about 75% of companies reported supply chain disruptions (SC), 80% expected disruptions in the near future, 62% reported delays in receiving goods and 53% of companies reported difficulties in obtaining information from China (Maccrae, 2020a, 2020b).

Over five million businesses with Tier 2 supplies have been impacted by the pandemic (Dun and Bradstreet, 2020). It is estimated that of the 450 million people working in CSGs, many have experienced reduced income or even job loss due to COVID-19 (Kippenberg, 2020).

Globally, organizations have closed stores, removed orders and suspended production. Sectors such as clothing, mining, jewellery and automotive have suffered as employees in these sectors are among the most vulnerable and affected by the pandemic (Kippenberg, 2020).

II. MGS CONCEPTUAL FRAMEWORK

Before we begin our topic, which is essentially based on the SCM between generalities and Covid-19, it is essential to remove any conceptual ambiguity regarding our "Supply Chain management" concept. in fact, by relying on the articles selected in our research we can clearly remember a plurality of SCM definitions that can be presented as follows:

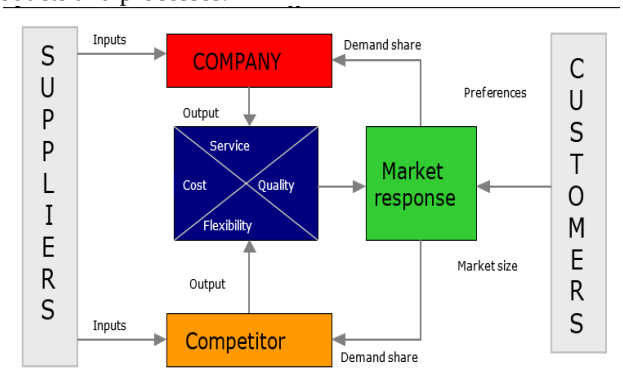
Many organizations are now forced to increase their share of the global market in order to survive and support their growth goals. At the same time, these same organisations must defend their share of the national market against international competitors. The challenge is how to expand the global logistics and distribution network, in order to ship products to customers who demand them in a dynamic and rapidly changing set of channels. Strategic stock positioning is essential, so products are available when the customer wants them (Handfield, et al. 2002, p. 38).

Domenica (2002, p. 8) also states that the supply chain should be effective and efficient. In this case, an effective way to minimize the use of resources to achieve specific outcomes is an effective way to design distribution channels. Efficiency is measured by delivery performance, product quality, outstanding orders and inventory levels, while effectiveness is measured by service quality and service requirements.

Long-term competitiveness therefore depends on the extent to which the company meets customer preferences in terms of service, cost, quality and flexibility, designing the supply chain, which will be more effective and efficient than competitors. Optimizing this balance is a constant challenge for companies that are part of the supply chain network.

To optimize this balance, many strategic decisions need to be made and many activities need to be coordinated. This requires careful supply chain management and design. Supply chain design is a distinct way in which companies innovate, differentiate and create value (Longitudes 04, 2004, p. 8).

The challenge of supply chain design and management lies in the ability to design and assemble assets, organizations, skills and competencies. It includes the team, partners, products and processes.



Source: Ernst, 2002, p. 120.

Figure 1: Competitive framework in the supply chain

To clarify the term supply chain management in depth, first the term supply chain will be explained, as management and the role of management as a basis for the full definition of supply chain management.

According to Mentzer et al. (2001, p. 5), the definition of "supply chain" is more consolidated as a definition of supply

chain management. In his paper, he attempted to develop a common definition of a supply chain, based on an extensive research study conducted by several co-authors.

They came up with the following definition: "A supply chain is defined as a set of at least three entities (organizations or individuals) directly involved in the upstream and downstream flows of products, services, finances or information from one source to a client."

The supply chain may include internal divisions of the company as well as external suppliers who provide feedback to a focus company. A supplier for this business has its own set of suppliers who provide inputs (also known as tier two suppliers).

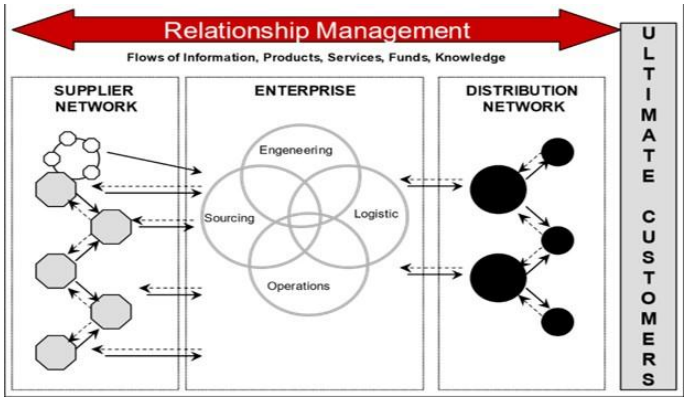
Supply chains are essentially a series of suppliers and related customers until the products reach the end customer (Handfield, 2002, p. 9).

A company's supply chain includes an upstream supplier network and its downstream distribution channel (see Figure 2-2). Organizations can be part of many supply chains. Danfoss, for example, is part of a supply chain for district heating components, district heating stations and HVAC components.

On the other hand, Alfa Laval can find Danfoss to be a supplier in one supply chain, a partner in another (develop components for their substations), a competitor in the fourth supply chain of stations, and as a customer in the heat exchanger supply chain.

Based on the complexity of the supply chain, Mentzer (2001, p. 22) identified three types of supply chains:

- ✓ Direct supply chain, which includes a company, a supplier and a customer.
- ✓ Expanded Supply Chain, which includes immediate supplier suppliers as well as immediate customer customers.
- ✓ The ultimate supply chain, which includes all organizations involved in all upstream and downstream flows.



Source: Handfiled, 2002, p.9.

Figure 2: Supply chain or supply chain network

Supply chain management therefore requires active management efforts on the part of supply chain organizations.

What is an organization? Lipovec (1987, p. 35) defines organization as the composition of relationships between people, who through relationships become members of a formed social unit. The organization ensures the existence and specific characteristics of the social unit and the rational realization of objectives.

According to Rozman (2000, p. 15), there are three processes in an organization that ensure the rational achievement of goals: organizational process, coordination process and decision-making process.

Organizational processes are defined as goal-oriented processes aimed at ensuring rationality in people's actions and behaviors and rational achievement of the goal of social unity. Rationality is achieved through coordination. And coordination is done by taking care of the problems and making appropriate decisions. Coordination in this context is the essence of rational behavior in an organization. It encompasses the coordination of activities, goals, interests and relationships. At the corporate level, we discuss the coordination of business functions, business units and projects.

And what is management? Longman dictionary of contemporary English defines management as:

The activity of controlling and organizing the work of a business or organization.

The people who are in charge of a business or organization.

The way people control and organize the various situations that occur in their lives or work.

Most authors define management as the coordination of divided activities (who does what) or management processes or functions in an organization (Rozman, 2000, p. 7). Donnelly et al (1995, p. 4) define management as the process undertaken by one or more people to coordinate the activities of others to achieve results that one person cannot achieve. Hellriegel and Slocum (1996, p. 302) define coordination as the integration of activities performed by separate individuals, teams and departments.

There are two interrelated processes in an organization that need to be coordinated: a business process and an organizational process (Rozman, 2000, p. 6). A business process consists of: planning, executing and controlling the business and organizational process consists of: planning the organization, operating, controlling the organization. They are also shown in Table 1.

Plan	Business planning	Planning organization
Exécute	Exécution of business	Actuation (Staffing/leading)
Control	Control business	Controling organisation

Source: Author, based on Rozman (2000, p.7)

Tableau 1: Relationships between management, activities and organizational processes

As we can also see in Table 1, the result of the division of labor between people in an organization is that managers take charge of the organizational process and part of the operational process (planning and control), while the execution is delegated to non-managers.

From this perspective, Pučko (2005, p. 2) defines management as a formal organizational process that defines the company's goal(s), its policies, and the process of carrying out the tasks performed by others, through planning, organizing, directing, and controlling.

Most authors do not make the same distinction between organizational and operational processes. Therefore, management is generally defined as planning, organizing, directing and controlling. These authors use the meaning of

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planning only for business planning; by organizing they mean establishing or planning an organization.

Execution of activities is not part of management, but implementation of the organization is part of management and is also known as staffing and directing. By control, most authors include corporate control and organizational or audit control (Rozman, 2000, p. 6).

Ernst (2002, p. 107) is a case in point. He defines management as a correspondence between organizational processes and management processes. As organizational processes, he defines: work processes, behavioral processes and change processes. Within work processes, he defines operational processes (producing goods and services that external customers consume) and administrative processes (generating information and plans that internal groups will use).

Work processes define the essential activities required to accomplish the work and objectives, behavioural processes describe the ways in which the work is done, interact and shape the way in which decisions are made. Change processes are defined as a sequence of events over time that change the organization based on business requirements.

Ernst defines management processes as the establishment of management, negotiation and sale, and the monitoring and control process. The purpose, main tasks and core competencies of a management process are described in Table 2.

The primary purpose of setting direction is to establish direction and objectives (as part of the business planning process described above). Managers must be able to synthesize and make the right decisions based on analysis, set priorities and communicate plans.

	Processus d'établissement de la direction (Planification)	**Négociationet vente (Organisation et direction)**	**surveilleret contrôler**
objectif	Établir l'orientationet les objectifs de l'organisation	Obtenir le soutien et les ressources nécessaires	Suivi des activités et du rendement
tâche principale	Élaborationd'un programme	réseau de construction	collecterdes informations
compétences critiques	Synthèse, établissement des priorités, communication	Timing et séquençage, cadrage et présentation	matc Questionlonner et écouter, interpréter les données org

Source: Ernst (2002, p. 107)

Tableau 2: Management process, purpose, tasks and skills

The main purpose of negotiating and selling is to obtain the resources and support needed in an organization (can also be described as planning and actualizing an organization). The essential skills required are timing and sequencing of activities, and the ability to present plans and motivate people to carry them out.

To be able to monitor and control an organization, in terms of how ongoing activities are carried out, the key skills required of managers are: the ability to ask questions and listen to people, and to interpret the information received in these conversations to be able to make the right decisions.

Therefore, planning is one of the main functions of management and, as Pučko (2005, p. 3) states, the main role is to define the company's goals and the means to achieve them. Ansoff (1990, pp. 2-16) defines planning as the conception of the desired future and the effective means to achieve it. According to Rozman (1993, p. 24), planning is the process of thinking creatively about the future that ends in a plan. This means the desired outcome and the means to achieve it. Furthermore, Rozman (1993, p. 72) describes planning primarily as a process of coordinating goals, strategies, and targets, as well as making decisions and delegating.

The main purpose of planning is to solve and prevent problems, by evaluating different possible scenarios. On the other hand, organizational processes create a certain structure of permanent relationships between the company's employees. These relationships allow the execution of the company's plans and objectives. Most important in this sense is leadership, i.e. communication and motivation of employees to execute planned activities. Control focuses on auditing the behavior of employees and the achievements observed in relation to those planned and acting in case of deviations.

We can conclude that management consists of planning (business planning and organizational planning; e.g., defining goals, policies, and processes), leading people (e.g., delegating activities, communicating plans, and motivating people), and controlling (auditing organizational behavior and accomplishments).

Business processes ensure efficiency and organizational processes ensure rational achievement of goals. The essence of rational behavior is the coordination of activities, goals, interests and relationships to resolve conflicts in the organization by making appropriate decisions. As business requirements are constantly changing, only a good h of business and organizational processes can ensure g-term effectiveness.

The supply chain is defined as a set of three or more anizations directly involved in the flow of products or services to the end consumer. This means that supply organizations are large and management is traditionally divided among many functional managers. To ensure effective coordination of decisions across the supply chain, integrated supply chain management is essential.

The essence of integrated supply chain management is supply chain planning and control, which has three important dimensions. The first dimension is functional integration, which involves decisions about purchasing, manufacturing and distribution activities within the company and between the company and its suppliers and customers. The second dimension is geographic integration of these functions through physical facilities located on one or more continents. The third dimension is the inter-temporal integration of strategic, tactical, and operational supply chain decisions (Shapiro, 2001, p. 1).

Functional and geographic integration are very closely linked to organizational processes, including the definition of

processes needed to execute the business. Inter- temporal integration of strategic, tactical and operational supply chain decisions is linked to business planning and control.

In a very simplified way, management can also be described as the art of getting things done by organizing others in accordance with business plans. In terms of supply chain management, this refers to all businesses that are part of a supply chain.

Supply Chain Management to Logistics:

Before we talk about supply chain, we start by defining the word logistics once again. According to the Association of Corporate Logisticians (ASLOG), logistics is "the set of activities whose purpose is the least costly placement of a quantity of product at the place and time where the demand exists. The supply chain is a "network of companies linked together by exchanges of products, services and information in order to meet the demand of an end consumer". When the supply chain is in motion, it takes the form of the logistics chain.

We note that the global supply chain - or "force chain" according to the Anglo-Saxon term which deserves rather to be translated by chain guets-suppliers - covers the whole of the mechanisms allowing to provide products or services at the good time, with the good quantities and at the good place - It deals with the whole of the architectures, the organization, the processes figures and the information necessary to the provision of these products-services, from the raw material to the final consumer; - It includes the processes of purchasing-supply, production and distribution, and must operate in a fully integrated way with sales, marketing and new product development.

We would add that the fundamental difference introduced by this global chain management approach with respect to the classic operation lies in the transversal character of the company's functions and organization.

In other words, the "force chain" (or supply chain) represents the entire network that enables the delivery of products or services from raw materials to final customers. In fact, the supply chain covers the flow of information, distribution and financial transactions.

In other words, the force Chain designates all the links of the logistics of supply, purchase, inventory management, handling, storage, distribution and delivery.

This network therefore includes organizations upstream and downstream of the production process.

We note that the organizations share a common objective, that of engaging in a value creation process represented by the product or service delivered to the consumer.

A Brief History of SCM (Supply Chain Management) The term SCM was introduced by its founding fathers in the early 1980s.

Since the early 1990s, academicians have tried to give it a structure. The first work was done by Christopher (1992, 1994). Who considers that the MGS is part of the continuity of an integrative strategic logistics to which the MGS contains many elements. It focuses on the evolution of organizational structures both internally and externally.

Companies must thus move from a system structured in terms of functions to a logic in terms of processes, from a notion of profit to a notion of performance (financial and non-financial elements), from a management of products to a management of end customers, from vertical to virtual logic (Christopher, 1997).

We note that in 1999, Christopher introduced the concept of "nimbus supply chain" that fosters "rapid, strategic, and operational adaptation to large-scale and unpredictable changes in the environment.

Thus Agility implies reactivity from one end of the chain to the other. It focuses on the elimination of organisational and technical barriers" (Christopher. 3).

Recently, Meltzer et al. (2001, pp. 14-15) defined the MGS as "systemic, strategic collaboration, traditional operational functions and their respective tactics within a single enterprise and between partners within the supply chain, with the aim of improving the long-term performance of each member company and the entire chain".

Figure.1 (p. 15) shows the critical role of value creation and customer satisfaction in gaining competitive advantage and improving individual and collective profitability. This implies a seamless inter-functional and inter-company collaboration.

III. SUPPLY CHAIN ISSUES

Traditional models of strategy have become more complex with the development of global competition. From a dichotomous approach to competitive advantage - domination by price (and therefore costs) or differentiation - we have entered the era of price and differentiation.

We must now be leaders in all areas: price, quality, lead time, flexibility, and service level.

A. PRICES/COSTS

The permanent pressure on prices forces producers to regularly improve their productivity and to review their industrial organization. This trend has led them to act on all costs, whether they are direct in the factory (labor, machines, etc.), indirect or overhead costs at headquarters.

B. PRODUCT QUALITY

Quality is no longer really an objective insofar as it is presented as a prerequisite for being competitive. The unit of measurement used reflects the progress made in this area from the percent, the level of quality has passed to the "per thousand %0" and more recently to the P.P.M (defective parts per million %0000). The question is no longer disguised as the level of quality to be achieved but rather as the cost to achieve it.

The delay The delay is defined as the time elapsing between the request of the Customer and the reception of the ordered product. In the company, industrial or not, for the user, it is more often perceived as the time between the need and the moment when he can start using it. This gap includes operations carried out by the supplier (preparation of the order, shipping, etc.) but also internal tasks (identification of the need, contact with the purchasing department, placing the order, then receiving and checking it).

ISSN: 2394-4404

C. FLEXIBILITY

Flexibility, or the ability to react to variations in demand, has two aspects: volume or product mix. The volume indicates the company's ability to adapt to variations in demand in terms of quantity. The product mix specifies the time required, when a given product (or sequence of different products) is planned to be manufactured, to modify its manufacturing plan, reorganize its process and switch to another composition (or sequence).

D. SERVICE LEVEL

This is the probability of meeting the demand within a given time frame. While the concept is easy to understand, its operation poses some difficulties, particularly in the choice of variables. Should we compare the number of deliveries made to the total number of deliveries, or should we choose the number of order lines, tons or turnover? Of course, 95% on tons is not the same as 95% on the number of order lines...

We note that, in addition to the traditional criteria of price, quality, lead time, flexibility and service level, we have more recently added risks and potential for progress.

E. THE RISKS

At a time when technology allows everything, or almost everything, the slightest risk (delay, error, breakdown, supplier bankruptcy) becomes inadmissible. The Just in Time (J.I.T.) operation has only increased this fear of the hazard. The level or coefficient of risk has become one of the indicators to follow, for the company itself but also for the client company, in the context of the selection and audit of its suppliers. We analyze successively the potential external risks coming from the market, competition, exchange rates, legislation, and the internal risks linked to the organization, the technology used, the level of manpower, the product range and its renewal. Potential for progress:

The potential includes subjective and objective elements, allowing to judge the possibilities of improvement of the company's performance social climate, average age of the help, seniority, organization in technological factors, communication in the company, actuality of working groups.

After having optimized the different functions by separating product, distribution and more recently purchasing, companies have taken heart that the improvement of their performance necessarily passes by the integration and the global vision of their processes.

The logistics design then more recently of the Supply Chain made it possible to achieve this objective.

Important Issues in Global Logistics A poorly managed logistics often penalizes the company, devalues it and can even tarnish its brand image. Today, a company's logistics costs range between 10% and 12% of the cost price of its products.

As a result, the logistics function has undergone significant changes in its composition, in its role and in its hierarchical level. As a result, it has become more common to meet with logistics directors on management committees. Similarly, new functions that are more transversal and open to the outside have been created, such as the Chain Manager.

As a result, logistics needs and expectations have evolved, and the company embarking on a MGS initiative is primarily interested in improving its visibility on the global supply chain, anticipate flows, and optimise its processes in order to meet logistical requirements in terms of:

- ✓ Minimizing costs that have a direct impact on the company's financial profitability,
- ✓ Improved service quality that will have a direct impact on customer satisfaction,
- ✓ Improved productivity with a direct impact on asset utilization.

There are also other objectives, which vary from one company to another depending on its size, its sector of activity, its market, its business and, of course, its context and its history, such as: market shares, profit, time to market, quality, etc.

The idea is therefore to be able to define the optimal logistics that will define the level of involvement and investment in the SCM project and thus guarantee the rapid return on investment.

IV. SUPPLY CHAIN MATURITY LEVELS

Logistics has had a slow maturation to become a true strategic approach in the functioning of companies (Colin, 2002). The current trend in terminology is supply chain, which could translate into overall logistics.

It is called global because it brings together actors and tasks by acting on the flow of transformation of raw materials into finished products.

The following table summarizes the different levels of chain force maturity.

Niveau 0	Niveau 1	Niveau 2	Niveau 3	Niveau 4
Logistique traditionnelle	Logistique fonctionnelle	Chaine logistique intégrée	Logistique globale (supply-chain)	E- Chain
Fonction d'exécution des opérations physiques, d'entreposage et	Fonction opérationnelle de pilotage des flux de productions et de distribution	Fonction tactique de planification des flux approvisionnement/	Fonction stratégique d'intégration et d'optimisation globale des flux au niveau de la	
		production/distribution/vente	Le concept de supply chain Management	
-Qualité et fiabilité des livraisons peu prévisibles	-Vision linéaire de la chaine logistique	-Vision intégrée de la fonction logistique au niveau de l'entreprise	-Vision étendue de la chaine logistique entreprise étendue	
-Pas de réflexion approfondie sur les processus logistiques	-Chaque fonction est motivée par ses propres indicateurs	-Indicateurs commun	-Partage de l'information aboutissant à un partage optimisé des prises de décisions	
-Peu d'indicateurs et de suivi	-Une sous optimisation d'ensemble en résulte	motivant toute fonction	-Intégration des systèmes d'informations inter-entreprises	
		-Partage de l'information incomplet entre l'entreprise et ses clients et ses fournisseurs	-Commerce électronique /Gestion de la relation clientèle	

Source: Pache, 1994

Tableau 3: Supply chain maturity levels

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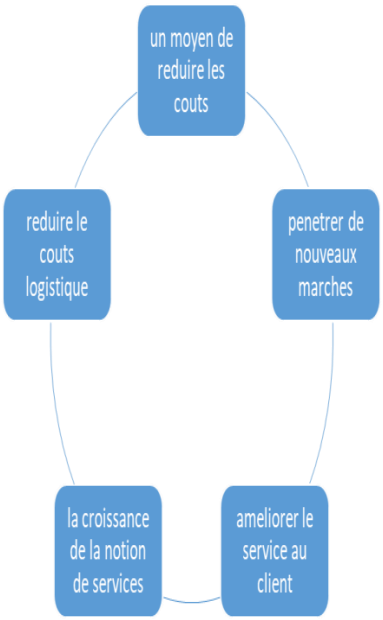
After World War II, business logistics developed mainly in industrial enterprises. It is thanks to the development of the marketing concept in the United States and then in Europe that «customer service» will become the cornerstone of the logistics approach (Pache, 1994).

Today, the integration of logistics into the company's strategy is widely recognized as a means of reducing costs, entering new markets and improving customer service (Fassio & Denier, 1997; Dornier, 2000). These new areas of development are based on the growing recognition of the concept of services and not only the notion of logistical costs; as well as the growing role played by information systems in managing all the company's flows.



Source: made by us

Figure 3: the Flows of the SCM

During the 1970s, logistics was seen as a set of methods, tools and techniques aimed at managing the physical flows of the enterprise. The aim was to achieve a certain degree of fluidity through the reduction of the capacity required for the circulation of flows (Colin, 1996). In the 1980s, it became a corporate function in the same way as other functions. His mission was to coordinate and improve the circulation of internal flows (Colin and Paché, 1988; Pons and Chevalier, 1993; Aurifeille et al. 1997).

The logistician becomes a mediator responsible for finding the best compromise between the interests of each of the company's functions.

Reached maturity (1990s), "Logistics now favours its transversal dimension, which allows it to mobilise all the internal resources (those of the firm), but especially external resources (those of its partners), necessary for the implementation of a complex supply chain, made up of multiple closely interlinked and interdependent actors" (Colin, 1996, p. 104). Thus, logistics has evolved from an approach focused on intra-organisational interfaces to a multi-stakeholder approach taking into account inter-organisational interfaces (Pache and Colin, 1999, 2000).

According to Dhamija et al. (2020); Dumitrascu et al. (2020) Supply chain management has become a strategy used by companies. Because with an integrated relationship between the supply chain and the company can minimize the total cost.

Costs include raw material costs, transportation costs, installation costs, production costs, supply costs, and so on. For supply chain management companies can be competitive differences, the supply chain is a series of flows of goods/physical, information and the process used to deliver a product or service from a source location (supplier) at a destination location (customer or buyer).

So, the supply chain is a series of channels approach used to integrate suppliers, manufacturers, warehouses and stores so that goods produced and distributed are in timely quantity and time to minimize costs. According to Abdirad et al. (2021); Ardito et al. (2018); Attia et al. (2018); Dhamija et al. (2020); Dumitrascu et al. (2020) Each enterprise always reviews the survival of the enterprise at a certain period in order to know the status of the healthy enterprise and maintain the existence of the enterprise.

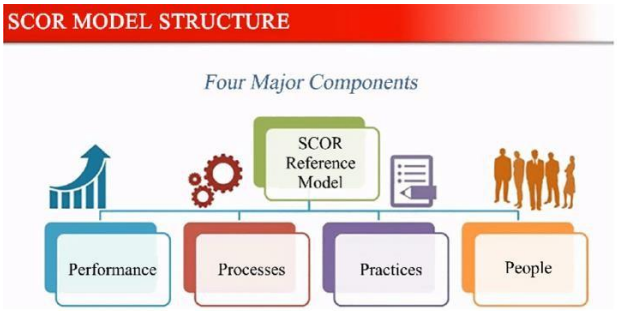
This activity is often also called company performance.

The company's performance has an understanding following a management activity in a company.

The results of these management activities are then used as parameters or benchmarks to assess the success of a company's management in meeting its objectives within a certain time frame.

V. THE COMPONENTS OF THE SUPPLY CHAIN

In order to clarify the content of this function, we will rely on the S.C.O.R. (Supply Chain Operations References) model, the only current reference in terms of Supply Chain.



Source: supply Chain Council (S.C.C); 1996

Figure 4: Scor Model Structure: The Interindustrial Standard.

In 1996, the Supply Chain Council (S.C.C.) was created, an independent, non-profit American organization with more than 400 members operating in all sectors of industry, commerce and services. Its first action consists of developing a reference model in the field of Supply Chain Management: the S.C.O.R. model, which is on the way to becoming the inter-industry standard.

This model, whose originality is based on a process structuring, is composed of four levels of analysis, which we will present successively. We point out that level 4 concerns the implementation of Supply Chain Management and does not appear on the figure of the "S.C.O.R" model.

A. PLANNING

This first level defines the scope concerned by retaining four basic processes (planning, procurement, production and distribution) as well as the structure of the overall system. In the following, we will explain each element of this process:

- ✓ Overall planning: under the term planning, the model groups together the aggregation of demand, the determination of material and component requirements, overall capacities, resource allocation and stock levels. The "make or buy" decisions, the long-term capacity planning, the management of ramp-ups, new product launches and end-of-life are all issues to be dealt with at this level.
- ✓ Procurement: this process corresponds to the planning of orders, receipts, controls and availability of materials and components required for manufacturing. It also includes the certification of suppliers and the monitoring of their performance in terms of lead time and quality.
- ✓ Production: Production includes the reception of materials and components, manufacturing, control and packaging as well as the management of production sites and equipment (layout, maintenance, quality, short-term capacity, scheduling, etc.).
- ✓ Distribution: the distribution process consists of order processing, warehouse and handling management, transportation and finished goods inventory.

NOTE:

The configuration of the entire Supply Chain must be defined at this level (e.g. number, location and specialization of warehouses, own account or outsourcing).

B. SUPPLY CHAIN CONFIGURATION

For level 2, we determine, for each major process, a mode of organization and a structure. For example: or to order or assembly to order, production from stock, direct delivery or via a platform, etc.

C. ELEMENTARY PROCESSES

The elementary phases are the previously specified processes (order processing, tour organization, production scheduling, etc.), the input and output flows (orders, delivery slips, invoices, planning, etc.), the performance indicators and the existing best practices.

D. IMPLEMENTATION

This last level, specific to each company, corresponds to the implementation of best practices and defines the procedures to achieve them.

Note: For the global level, the S.C.O.R. model mainly uses the following indicators: service level, order processing time, supply chain response time, production flexibility, global cost of the supply chain, value added productivity, cost of warranties and returns, working capital requirements (in days), inventory level and asset rotation.

Measuring these indicators in the company and comparing them to the best values obtained by the best performing companies will form the basis of the improvement process to be implemented.

The Global Supply Chain Forum defines supply chain management as "the integration of key business processes from the end user to the original suppliers who provide products, services and information that add value for customers and stakeholders" (Lambert, 2005, p. 28).

The following eight key supply chain management processes are included in the framework (Cooper, 1997, pp. 1-14):

- ✓ Customer Relationship Management.
- ✓ Customer service management.
- ✓ Demand management.
- ✓ Order fulfillment.
- ✓ Manufacturing flow management.
- ✓ Supplier relationship management.
- ✓ Product development and marketing.
- ✓ Returns management.

The eight key business processes take place along the supply chain and cross businesses and functional silos within each business. While functional expertise remains in place, the implementation of supply chain management requires a transition from a functional organization to a business process organization, first within a company and then across a supply chain. While the management teams of all companies in each supply chain must consider these eight processes, the relative importance of each process and the specific activities included may vary.

The Supply Chain Council has developed another framework called the Supply-Chain Operations Reference-model (SCOR). This process model is designed to ensure effective communication between supply chain partners.

The scope of the SCOR model is challenged by the statement “From the company’s supplier to the company’s customer” (Supply Chain Council, 2005). It is based on five distinct management processes presented in Table 4. This definition is also more useful from Danfoss’s perspective as the processes that have been implemented there are in fact based on this model.

Processus SCOR	Définitions
Plan	Des processus qui équilibrent l’offre etla demande globales pour élaborer un plan d’action qui répond le mieux aux exigencesen matière d’approvisionnement, de production et de livraison
Source	Processus qui procurent des biens etdes services pour répondre à la demande prévue ou réelle.
rendre	Processus qui transforment un produit en un état fini pour répondre à la demande prévue ou réelle.
livrer	Processus qui fournissent des biens et des services finis pour répondre à lademande prévue ou réelle, y compris généralement la gestion des commandes, lagestion des transports et la gestion de la distribution.

retour	Processus associés au retour ou à laréception de produits retournés pourquelque raison que ce soit. Ces processus s'étendent au soutien à la clientèle après la livraison.

Source: Supply Chain Council, SCOR Version 7, 2005, p. 7

Tableau 4: Separate management processes

Each of these processes is implemented in four levels of detail. The first level defines the number of supply chains and the parameters that will be used. The second level defines the process of planning and executing the material flow. Level Three defines the inputs, outputs and flow of each transient element (Lambert, 2005, p. 29).

Each process is analyzed and implemented around three components: business process re-engineering, benchmarking and best practice analysis.

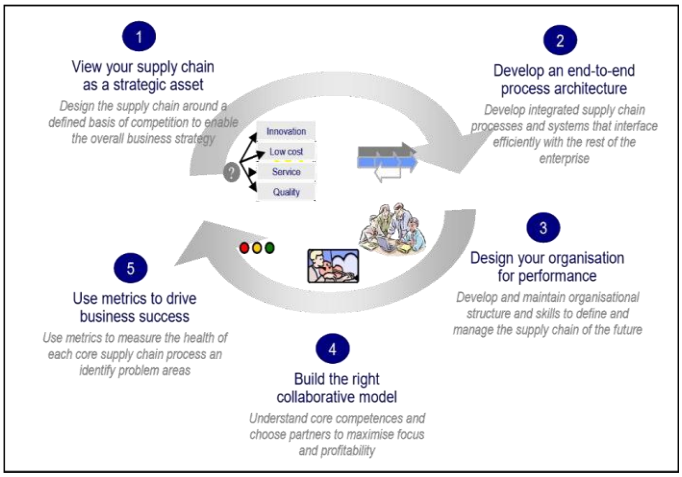
Both frameworks suggest the implementation of standard inter-functional business processes, but as Lambert says, only these two frameworks have sufficiently detailed business processes to be used by management to achieve inter-functional integration. The main differences between the two approaches are presented in Table 5.

critères		**GSCF**	**SCOR**
champ d'application	levier stratégique	Stratégies organisationnelles et fonctionnelles	stratégie opérationnelle
	Souffle des activités	Toutes les activités liées à la mise en œuvre réussie des 8 processus opérationnels	Toutes les activités transactionnelles liées à la planification de l'offre, à l'approvisionnement, à la production, à la distribution et à la logistique inverse
Connectivitéintra-entreprise		Intégration inter fonctionnelleà l'échelle de l'organisation	Interactioninter fonctionnelle et partage d'information
Connectivité interentreprises		gestion des relations	Efficacité transactionnelle
Facteurs decréation de valeur		valeur ajoutée économique	Réduction des coûts etutilisation des actifs

Source: Lambert, 2005, p. 37

Tableau 5: Comparaison des cadres de gestion de la chaîne d'approvisionnement (GSCF, SCOR)

As Lambert (2005, p. 41) concludes, the difference between SCOR and GSCF approaches is that SCOR treats symptoms through tactics. The CSEF framework, on the other hand, provides a strategic approach to address supply chain management processes by integrating the knowledge, expertise and objectives of all functions. Thus, the two frameworks represent different ways of doing business.



Source: Adapted by Cohen, et al. 2004, p.12

Figure 7: Five core disciplines for strategic supply chain management

VI. IT TOOLS AND SOLUTIONS TO MANAGE THE MGS

A. THE TOOLS OF SUPPLY CHAIN MANAGEMENT

The Supply Chain Management integrates all the tools developed by the companies that it is in the fields:

- ✓ Planning (MRP, JIT, DRP,).
- ✓ Manufacturing (OPT, CRP, Kanban,).
- ✓ Inventory optimization (endogenous method (historical analysis) or exogenous method (market study approach)).
- ✓ Transportation and warehousing (RFID, Cracking,).
- ✓ Information management (ERP, CRM, SRM, PLM, EDI,).
- ✓ Quality (TQM,)

B. IT TECHNIQUES ASSOCIATED WITH THE SCM

To set up a supply chain, the very first tool that is absolutely essential is the control of the information in the company. This information must be fluid, up to date, reliable, current, etc.

For this, several techniques must be combined:

EPRs (Enterprise Resource Planning) are integrated information systems for the different functions of the company (sales, sales administration, prospecting and quotations, production, procurement, finance, after-sales service, etc.). It reports on both transactions (orders, etc.) and the execution of these transactions (follow-up). This system must therefore allow each authorized user to have access to all the information necessary to efficiently process a customer request.

The EDI (Electronic Data Interchange) consists for a company to set up computer tools compatible with the systems of the various partners in order to exchange commercial data (orders) and accounting data (invoicing). We note that the

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platform, much more flexible, fast and simple, tends to replace more and more the old techniques of the EDI.

The APS (Advanced Planning and Scheduling) are computer systems that allow to plan in advance all the flows of the company (both physical and financial).

NOTE: The systems are coupled with the ERP and allow anticipation of customer requests and associated production.

This integration is done through the development of :

- ✓ A global vision of the structure of the logistic chain (factory, warehouses, distribution, transport) and of the partners and actors of this same chain (suppliers, producers, transporters, service providers for outsourced functions).
- ✓ The sizing and location of sites.
- ✓ The definition of flows and modes of flow between the sites and to the customers.
- ✓ The choice of the various operators.
- ✓ The choice of tools to implement and manage this chain.
- ✓ The choice of optimization tools and performance measures.

This integration, far from being static, must be constantly reviewed to adapt to

- ✓ To new economic constraints (cost evolution - for example the increase in oil prices) or legal constraints (evolution of the legislation on the protection of the planet).
- ✓ Market conditions (shifting of consumption centers - for example refocusing on emerging countries).
- ✓ Productivity gains in the face of competition (keeping the cost/quality ratio of products at an attractive level).

C. THE IMPLEMENTATION OF SUPPLY CHAIN MANAGEMENT

Tendances	Enjeux	Freins et difficultés	Bénéfices souhaités
-Globalisation des marchés, internationalisation de l'économie et accroissement des	-Passage d'un marché local, régional, national à un marché global	-Résistance /adaptation	– Des procédures mieux définis et plus structurés
– Recentralisation et externalisation	– Maitrise des flux intra organisationnelle mais surtout inter organisationnelle,	– Développement de culture internationale et des synergies groupes	-Amélioration de la relation avec les tiers avals et amont
– Les alliances stratégiques	– Amélioration permanente du service	-Cerner les procédures stratégiques pour l'entreprise.	-Gains des parts de marché
– Supply chain collaboration	Réduire les besoins en fond de roulement	-Les réticences au partenariat	-Accélérer la circulation des flux
-Multiplication des prestataires spécialisés (transport, entreposage, informatique)	-Améliorer la rentabilité de l'outil de production	– Abondance d'outils informatiques insuffisamment adaptés ou performants	-Diminution des prix de revient
-Multiplication des nouvelles technologies de l'information et de la communication et des outils d'optimisation.	-La réduction des délais et la suppression des ruptures	-Insuffisance des outils de mesure de la performance globale	– Amélioration du niveau de service et de la productivité
-Marques distribution			

Source : étude logistique

Tableau 6 : La mise en place du SCM

It is in this context that logistics has become a transversal function. It must be in constant contact with the main functions of the production system and, in particular, with the Purchasing function to ensure reliable deliveries from suppliers, the Industrial function to carry out the reduction of the scrolling time and the permanent definition of the needs for raw materials and/or components and the Commercial function for the forecast of orders (Colin and Paché 1988; Pons and Chevalier 1993; Aurifeille et al., 1997).

The new information and communication technologies and optimization tools contribute to the revelation of a transversal and rational logistics within the company (Fabbes-Costes, 2000, 2002). However, a favourable environment is necessary for the emergence of a totally transversal model. It includes both an organizational and a computerized part.

VII. COMPONENTS OF LOGISTICS EXCELLENCE

A. THE EIGHT COMPONENTS OF LOGISTICS EXCELLENCE

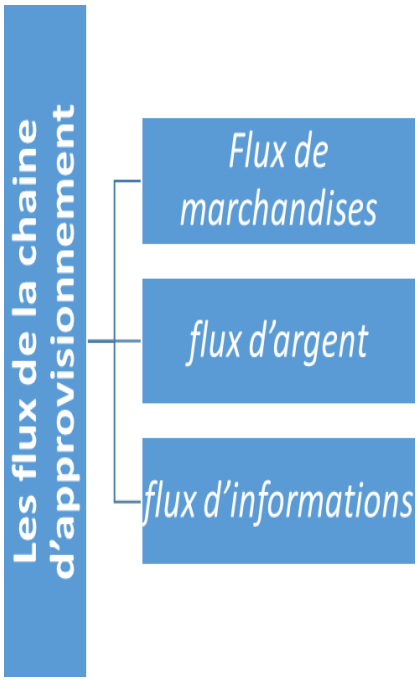
For an SCM to be effective, it is necessary to ensure that a few principles are operational:

- ✓ A very fast transmission of information from the customer to the last links of the chain (suppliers and manufacturing units in particular).
- ✓ Collaborate in a permanent and transparent way between all stakeholders.
- ✓ Differentiate the product as late as possible in the manufacturing chain to benefit from maximum economies of scale and experience effects.
- ✓ Implement control and improvement tools. A SC should not be fixed. It must evolve continuously according to changes in the company's environment.

Organizations now generally use one of two structures for their supply chains: Lean or Agile. Lean supply chains are often used for low complexity products or services and are used for high technology products, commodities or services with rapidly changing demand conditions (such as fashion).

In a lean supply chain, inventory is seen as a cost that reduces efficiency. Inventory costs are measured using cycle time, the time it takes for an item to move from supplier to customer.

Inventory that takes longer than necessary reduces cycle time and increases efficiency. For example, if a manufacturer uses a lean SCM, they will only produce products when an order is received and use just-in-time replenishment to ensure they always have enough on hand.



Source: notre propre recherche

Figure 8: Les flux de la chaine d'approvisionnement

According to Dumitrascu et al. (2020) in a supply chain network, there are three types of flows to manage. The first is the flow of goods from upstream (upstream) to downstream (downstream). For example, raw materials are sent from suppliers to factories.

Once the products are finished being manufactured, they are sent to the distributors, then to the retailers, and then to the end user. Second is the flow of money and other things that flow from downstream to upstream.

The third is the flow of information that can occur from upstream to downstream or vice versa.

For example, information about the inventory of products still available in each supermarket often required by distributors and manufacturers. Companies need to share information such as this so that interested parties can monitor for planning purposes what is more accurate.

VIII. CRITICAL ANALYSIS ON SCM LITERATURE REVIEW

Critical management studies (CMS) interrogate the structures of domination perpetuated by management within organizations. In a radical reflexive approach (Alvesson and Sköldberg, 1999), they evaluate managerial practices with regard to ethical criteria such as justice, equity or human development, by considering individuals and groups often ignored by management research.

By denaturalizing organizations and revealing the mechanisms that generate structures considered as "oppressive", they aim to identify possible ways of change. Supply Chain Management (SCM) research, like other management science disciplines, has focused on an interest in instrumental knowledge (Habermas, 1979) aimed at controlling physical flows throughout the Supply Chain (SC) in order to improve its overall performance (cost, service level, lead time, flexibility, responsiveness) through the deployment of management tools.

This control, because of the fragmentation of the value chains, supposes to coordinate a growing number of stakeholders. Agile, lean or leagile, SC management adapts to environmental characteristics (variability of demand, chrono-competition) by relying, in more or less collaborative approaches, on a set of legal, technical and organizational devices that have led SCM researchers, coming from its various original disciplines (marketing, logistics, operations management, purchasing), to borrow a number of concepts and theories from other disciplines (strategy, organization, information systems, management control, human resources management, organization, strategy). If, in these original and borrowed disciplines, a critical current has developed since the 1990s (Golsorkhi et al. 2009), questioning in particular the consequences of these systems on individuals and groups, organizations and/or society, the same cannot be said of SCM.

This article therefore wishes to deepen the reflection in SCM on the potential contributions of CMS.

Their questioning of the participation of science in the production of social systems invites, in the first part, to look at the conceptualizations of SC and SCM produced so far by focusing on the way in which social dimensions have been integrated into them. Although SCs are generally conceptualized as complex systems and SCM as the set of practices deployed to manage them, the understanding of their emergence, diffusion and evolution remains under-socialized. The second part of the paper, after presenting the main paradigms and theoretical perspectives that structure the field of CMS, discusses their potential contributions to enriching the conceptualization of SC and SCM and the understanding of their social production, also inviting reflection on the critical performativity of research and the commitment of researchers (Spicer et al. 2009).

While the social and political responsibility of researchers is central to critical perspectives, their engagement and posture towards the social system is debated. While the majority of authors recognize the importance of a reflexive approach, some advocate a position of disengagement or anti-engagement in order to preserve the purity of the critique and thus avoid the dangers of assimilation of the researcher into practice. However, with this positioning, "the risk then is that critical studies becomes cut off from the business world and is simply a forum where academic jargon, reflexivity, and the voice of the author dominate" (Corbett-Etchevers, 2011, p. 133). The risks associated with various critical postures have been previously discussed.

Too much determinism or over-socialization, especially if the analysis remains overhanging, is not very pragmatic, especially when it comes to changing practices within and between companies. By rejecting all relativism, such a position can also lead, by cutting itself off from the experience of the actors, to an abusive generalization or even a radicalization, replacing one ideology by another. Conversely, too much relativism also runs the risk of an absence of consensus, even temporary, and can lead to a dead end.

Other authors claim a commitment, in the political sense, in recognition of the need to transform practices in SCM in the face of social issues (Meehan et al. 2016). These authors

emphasize the importance of encouraging practitioners to engage in critical reflexivity, particularly in the context of sustainable SC research, in order to identify and question the assumptions on which their practices are based (Touboulic and Walker, 2015; Matthews et al. 2016).

These debates on the participation of management researchers in the transformation of social practices and systems have been particularly revived in the context of work on performativity and, within CMS on the sterility of anti-performativity (Fournier and Grey, 2000) replaced by Spicer et al. (2009) by critical performativity. The latter is characterized by an affirmative posture valuing the existence of multiple representations, an ethics of care, a pragmatic orientation, the consideration of potentialities and a normative orientation. It "implies an active and subversive intervention in managerial discourses and practices" (p. 538).

The challenge is then to identify new "managerial" practices that generate a result in terms of improved well-being, recognition, and the ability to choose and decide one's destiny. Such undertakings, given the risks they represent for the actors involved in this reflective process, question the role and responsibility of the researcher. An ethics of empathy (ethics of care) is indeed necessary.

It presupposes that the researcher, as mentioned in the potential avenues of research, commits to exposing his values and epistemological presuppositions, to questioning thereby his motivations but also 120 Revue française de gestion - N° 277/2018 the impact of his research and, above all, to taking into consideration all points of view, especially those of individuals and groups who are "systematically oppressed, exploited and dominated" (CorbettEtchevers, 2011, p.134). As a result, engagement also calls for an in-depth knowledge of social systems (SS) and thus, theoretical perspectives capable of understanding their genesis, production and reproduction, institutional work, etc. It thus invites, in SCM, to question the dynamics of SCs, the legitimization of practices, their institutionalization with regard to criteria that go beyond the simple quest for efficiency of one or two stakeholders only.

This understanding of SCs and SCM, which also calls for more multidisciplinarity, responds to the current challenges that companies are facing as stakeholders in a society that fundamentally questions their role and the legitimacy of their productions.

The avenues of critical research in SCM, presented here in a synthetic way, aim at apprehending the relationships between knowledge and practices by empowering the researchers. They invite us to consider SC and SCM as real products of human activity in which researchers fully intervene by injecting the results of their work, and by which they are influenced at each stage of their approach. They reveal the epistemological, theoretical or methodological barriers that generate a certain status quo within the discipline.

The works presented are then as many possible ways of emancipation of the researchers. The CMS, whose positions are varied, open up ontological and epistemological avenues to enrich the conceptualizations of CS on the one hand, and theoretical (Marxism, feminism, gender and cultural studies, critical realism, structuration, etc.) and methodological (discursive approach, critical action research, deconstruction, etc.) avenues to understand the dynamics and to make practices evolve with and for all the actors concerned and/or impacted by their management.

IX. GENERAL CONCLUSION

Supply Chain Management (SCM) is a very important part of every organization. Indeed Supply Chain Management is the active management of supply chain activities in order to maximize customer value and achieve a sustainable competitive advantage.

Supply Chain Management also deals with the movement and storage of materials needed to create a product, as well as the management of inventory and tracking of finished products from where they were created to where they go.

Traditionally, supply chain management (SCM) is also a melting pot of various disciplines, with influences from logistics and transportation, operations management and materials management and distribution, marketing, and purchasing and information technology (IT).

Ideally, the overall SCM philosophy encompasses each of these functions to produce a comprehensive supply chain strategy that ultimately improves business performance (Croom, Romano, and Giannakis 2000; Wisner and Tan, 2000).

In reality, however, the literature is still very fragmented, and although many studies claim to discuss supply chain issues, most existing research examines only one link in the chain, or more importantly, focuses on only one ingredient of the supply chain performance mix.

SCM also provides competitive advantage if, and only if, the companies involved formalize a strategic partnership with each other beforehand.

The SCM could, in turn, be a catalyst for powerful future strategic partnerships that could smoothly break up arm's length competition.

Simply put, strategic planning and control is about resource acquisition, while tactical planning and control focuses on resource allocation and development, and operational planning and control is about activity execution.

Therefore, supply chain management in a business environment has a major financial impact on all parties involved in the chain. For this reason, researching and implementing supply chain management principles to improve the supply chain is of paramount importance to any global business today.

One of the prerequisites for effective supply chain management is organizational change. To ensure that the supply chain is managed as an integrated process, the logistics processes at different locations have been combined into a single process called DH Operations.

We note that the main strategies to achieve business objectives such as reducing costs and increasing service levels were:

Reducing cycle time from suppliers to production units, from production units to distribution centers, and from distribution centers to market.

Increased flexibility of suppliers and production.

Increased reliability between supply chain partners to increase trust.

The integrated planning process, to coordinate efforts across the supply chain.

There were four main enablers of the synchronized supply chain:

IT integration: Advanced Planning and Scheduling System (APS), to manage and optimize the supply chain from raw materials to deliveries.

Working with world-class suppliers and logistics service providers.

The use of Web Orders, EDI and VMI for the integration of all parties in the supply chain. Fast distribution and replenishment: 48 hours internal delay from receipt of customer order to manufacturing and distribution at regional storage points.

The current supply chain performance does not yield the expected results in terms of total logistics cost and service level in the desired time.

Disruptions to the global supply chain (CGC) began after the World Health Organization (WHO) declared the coronavirus disease epidemic a global health emergency at the end of January 2020. In the first half of 2020, the virus spread to almost all countries in partial or total containment (McKenzie, 2020).

Such a crisis affects the supply network at the source and destination, to extreme effects on CGCs and interrupts the production process (Chaudhry, 2020). According to the Institute of Supply Management (ISM), about 75% of companies reported supply chain disruptions (SC), 80% expected disruptions in the near future, 62% reported delays in receiving goods and 53% of companies reported difficulties in obtaining information from China (Maccrae, 2020a, 2020b).

Over five million businesses with Tier 2 supplies have been impacted by the pandemic (Dun and Bradstreet, 2020). It is estimated that of the 450 million people working in CSGs, many have experienced reduced income or even job loss due to COVID-19 (Kippenberg, 2020).

Globally, organizations have closed stores, removed orders and suspended production. Sectors such as clothing, mining, jewellery and automotive have suffered as employees in these sectors are among the most vulnerable and affected by the pandemic (Kippenberg, 2020).

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