



"Assessing the Significance of Logistics within Supply Chain Management"

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ABSTRACT :

Supply Chain Management (SCM) integrates core business processes and coordinates various components to synchronize production and distribution, adding value for the end user and eliminating inefficiencies. It focuses on optimizing the entire system, not just enhancing individual business segments, to deliver high-quality service at minimal overall cost. This paper, based on secondary data, examines the critical role of logistics in SCM. Additionally, it addresses the complexities and challenges faced in implementing effective SCM practices. Through this exploration, the paper highlights the importance of logistics in achieving efficient and cost-effective supply chain operations.

1. Introduction:

Logistics operations are significantly influenced by market changes and competitive conditions. To respond effectively, companies must systematically plan, design, and reconstruct their logistics systems, considering the current environment and potential development options. A new approach, project logistics, is evolving into a global format known as supply chain design. This format aims to reduce costs, increase profits, improve customer service, and mitigate uncertainty. Effective supply chain management requires a comprehensive understanding of supply chain concepts and classifications. By embracing this new logistics system, companies can enhance their responsiveness to external changes, optimize their operations, and achieve greater overall efficiency and profitability. Understanding and managing supply chains effectively is crucial for adapting to the dynamic business environment.



Fig. 1 Supply Chain Management

The supply chain differs from traditional freight traffic in several key ways:

1. It forms a network of partner companies rather than competitors.
2. Its goal is to enhance the value and profitability of all participating companies.
3. It comprises a variety of autonomous entities.
4. It operates according to shared strategies and tactics, working in concert.

Objectives

1. To comprehend the concept of logistics within supply chain management.
2. To examine the challenges encountered in implementing supply chain management.
3. To understand the complexities of supply chains.

Research Methodology

This study is based entirely on secondary data, utilizing various research journals and articles as references.

Logistics in Supply Chain Management

In logistics management, the concept of the supply chain is crucial. The term "supply chain" parallels "supply chain management" and includes numerous companies that move products to the end customer. These supply chains coordinate various companies to bring products or services to market, involving stages that directly or indirectly contribute to customer satisfaction. Typically, a supply chain includes three or more organizations or individuals who supply products, materials, and services to customers, always incorporating the end customer in its definition.

A supply chain is essentially a network of partners, reflecting the collaborative nature of the process. It consists of production and distribution points where goods move from suppliers to finished product customers. This network of organizations engages in upstream and downstream relationships, various processes, and activities that create value through the delivery of products and services to end users.

Importantly, multiple supply chains can coexist within a single company at the same time. This multiplicity highlights the complexity and dynamic nature of supply chain management, as companies manage various networks to optimize efficiency and value creation. The integration and coordination of these supply chains are key to achieving seamless operations and customer satisfaction.

Process approach in SCM

This method represents a contemporary and efficient approach to analyzing and refining technical goods and financial systems. Within the context of the supply chain, it delineates two primary processes: supply chain function (work) processes and supply chain design and manufacturing processes.

Supply chains exhibit complexity in both their structural composition and operational functioning.

The overarching systems theory posits that any object or process, whether technical, economic, social, biological, or physical, can be dissected and constructed as a system. This system comprises interconnected components striving towards a common goal. To attain this objective, the components within an entity consist of constituent parts or elements, establish structures through various relationships, exhibit behavior in terms of activity or performance, interact with the external environment, and ultimately achieve outcomes aligned with the defined goal.

Classification in Supply Chain

Supply chains can also be classified depending on the number of links, there are Three levels of supply chain complexity:

- **Direct supply chain:** A direct supply chain typically involves a central company, often an industrial or trading firm, along with suppliers and buyers/consumers. This structure facilitates the flow of products, services, finance, and information both externally and internally. Usually, the central company dictates the supply chain's structure and manages relationships with its business counterparts.
- **Extended supply chain:** The extended supply chain encompasses additional suppliers and secondary tier customers.
- **Maximum supply chain:** The maximum supply chain encompasses the focal company along with all its components on the left, extending up to the suppliers of raw materials and natural resources. On the right side, it includes the distribution network, extending up to the tire supplier tier of the focal company. This chain further extends to encompass up to 14 individual customers, as well as logistics, institutional, and other intermediaries. Essentially, the supply chain represents a sequence of suppliers and customers, where each customer becomes a supplier for subsequent actions until the finished product reaches the end user.

Supply Chain Strategies for the Supply Chain Partners

- In a **competitive relationship**, pricing is determined independently based on market forces, primarily negotiating power among partners. Markets characterized by low prices or a multitude of small customers typically operate competitively, as switching to a new supplier is relatively easy and cost-effective. Consequently, there's little incentive to maintain long-term relationships, as partners can be replaced without additional costs. In such scenarios, partners engage in profit-driven competition, with pricing reflecting the relative strength of each party. Notably, supply chain management is not feasible within such competitive dynamics.

- In **cooperative relationships**, interdependence fosters the creation of new value. These relationships often involve crucial investments, such as in comprehensive information systems, with returns typically realized over the long term. Before cooperative relationships within a managed supply chain can be deemed suitable, several prerequisites must be met.
- In **team-dependent relationships**, one side typically holds dominance, influenced by factors such as market position or ownership structure, enabling them to impose decisions. Either the buyer or the seller can employ any of these strategies based on their strength, strategies, plans, and available options.

Supply Chain Management Challenges

Supply chain management is a complex process involving multiple companies and influenced by various factors. According to the Logistics Coordinating Council's annual survey, companies primarily aim to implement supply chain management systems in the upcoming years. The main challenges stem from:

- Material flow, encompassing the movement of cargo, stocks, and finished products.
- Information flow, including electronic data exchange and communication between individuals.
- Relationships, where human factors are crucial, offering enduring advantages that cannot be easily replicated. These relationships should not be overlooked, as they play a significant role in supply chain success.

Conclusion

The company actively seeks, cultivates, and leverages all logistical capabilities to fulfill critical customer needs at an optimal total cost. A sophisticated logistics strategy aims to minimize total costs or maximize customer service levels. A well-established logistics system is characterized by swift responsiveness to customer demands, built-in mechanisms for monitoring operational changes, and minimal inventory requirements. Industries gaining strategic advantages through logistical prowess shape competition within their sectors. Successful enterprises prioritize the continual development and enhancement of their logistical capabilities.

Supply chain management entails integrating core business processes and coordinating actions across the chain to synchronize production and distribution activities, thereby adding value to end-users and eliminating inefficiencies. It encompasses optimizing the entire system to deliver high-quality service at a competitive overall cost. Companies must explore innovative communication methods with supply chain partners, fostering collaboration in product planning, forecasting, production, and distribution. Viewing a company not just as a fixed structure but as an interconnected system of business processes facilitates achieving strategic goals and satisfying customer needs effectively.

Adopting a control-oriented approach allows companies to accurately describe their actions and swiftly adapt to changes in the external and internal environment. This enables the reduction of non-product costs, optimization of resource utilization, and strategic alignment with customer needs in specific market segments, ultimately enhancing operational efficiency and competitiveness.

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