

Innovation in Supply Chain and Logistics Management

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ABSTRACT

With the passage of time the innovation in the field of operations has been changed. Now the term supply chain management (SCM) has been used quite often in recent times, with many connotations. Having made the goods accessible at the point of origin, the physical movement of the products enters the logistics phase. This is where many innovations take place. Supply chain management adopts technology such as a simple standalone warehouse management system or a fully integrated ERP system. Logistics today is still observed as a contract service provider. We should be an industry and which implies logistics as an independent autonomous player. The elements of Sourcing, Logistics and Supply Chain Management are available in almost all sectors of the economy. Putting clients first means understanding their inclinations at a granular level and offering a decent affair that incorporates a wide choice, competitive pricing, a convenient purchasing process, and reliability. Beside from the issues it is also vital to see where the field is going. The future of SCM is bright, but certainly evolving. Making productive processes for supply chain management is essential to the success of overall manufacturing operations. This paper endeavors to propose an innovative performance measurement method to contribute to the development of supply chain management.

1. Introduction

A. Supply chain management links a significant business procedure to make a high performance of business model that drives competitive advantage. Logistics is one of the activities that make up a supply chain. The term logistics and supply chain management are typically used interchangeably. Some say there's no distinction between the two terms.

"Supply chain management incorporates the sphere of logistics. Logistics may be a range of sub-processes at intervals SCM," said *Michael Kirby of National Distribution Centers*. A 'supply chain management' company is a third-party operator, who is managing an overall movement of product which consist of both inbound or outbound,"

Buying, materials and dealing with logistics transportation, stock control and supply chain management have continued to evolve, causing many of these functional areas to intersect with each other. This intersection has brought some of these terms such as logistics and supply chain management. While these two terms do have some similarities they are, in fact, diverse ideas with various implications. Inventory network administration is a general idea that connects together a different procedure to accomplish upper hand, while alludes to the development, storage and flow of goods, services and information within the overall supply chain.

B. Supply Chain Management

Supply chain management, as explained by *M. Bixby Cooper in Supply Chain Logistics Management*, involves collaboration between firms to connect suppliers, customers and other partners as a means of boosting efficiency and producing value for the end consumer. The supply chain

management exercises as a strategic decision, and set up "the operational structure within which the logistics are performed". It is the endeavors of various associations cooperating a supply chain that assistance deal with the flow of raw materials and ensure the finished goods provide value. Supply chain managers work over in a different capacities and organizations to guarantee, that a completed item gets to the end buyer, as well as meets all prerequisites also.

C. Logistics

The *Council of Supply Chain Management Professionals* defines logistics as "part of the supply chain process that plans, implements and controls the efficient, effective forward and reverse flow and storage of goods, services and related information between the point of origin and the point of consumption in order to meet customer's requirements."

2. Objective behind logistics

To ensure the customer, who receives the desired product at the ideal time and place with the correct quality and price. The process of this can be divided into two subcategories: inbound logistics and outbound logistics.

- Inbound logistics cover the exercises about getting materials and after that dealing with, storing and transporting them.
- Outbound logistics cover about the collection, maintenance and distribution to the customer. Alternate exercises, for example, packing and satisfying requests, warehousing, managing stock and maintaining the equilibrium between supply and demand also factor in logistics.

D. SCM differs from Logistics

It is vital to remember that while the terms should not be used interchangeably, they do supplement one another. One process can't exist without the other. Here are some key differences between the two terms that will enable you keep from blurring the lines between them.

- Supply chain management is an approach to connect major business processes within and across companies into a high-performance business model that drives competition..
- Logistics alludes to the development, storage and flow of goods, services and information inside and outside the organization.
- The principle focus of supply chain is a competitive advantage, while the main focus of logistics is meeting customer prerequisites.
- Logistics is a term that has been around for a long time, emerging from its military roots, while supply chain management is a moderately new term. Logistics is an activity taken place inside the supply chain.

3. The Complex Role of Innovation

Supply chain innovation (SCI) is critical for organizations and companies of all sizes. With new empowering advancements causing interruptions over the supply chain, the supply chain is ready for development. The transportation and logistics, most developments in store network administration expand on existing accomplishments and reconfigure known techniques and innovations as opposed to creating new ones. As it may be an incremental change utilizing, developing empowering advances speaks to an immense part of development used to remain in front of rivalry.

The virtualized advancement procedure will enable conceivable disturbance to the ordinary course of development improvement. Virtualized advancement can empower organizations to react substantially more quickly and cost-adequately to declining item life cycles, quickening innovative change and heightening rivalry, maybe even from non-traditional sources.

New advances can totally rethink the idea of competition, for example, the internet of things, versatility, telematics and sensors, cloud, profound learning, artificial intelligence, drones, and 3D printing. New businesses are regularly propelling with innovation driven advancement.

New administration models and availability are disintermediating plans of action and traditional dissemination/marketing channels, such as on demand, peer-to-peer, crowd, always-on, dynamic routing, and real-time visibility. Indeed, even with R&D spending constantly expanding, R&D all alone is never again enough to drive development.

1) Virtualized Innovation

Virtualized development is the way toward utilizing a deliberate innovation and a creation that carefully selected in a

situation where a specific idea/creativity tools to leverage invention as well as utilizing the entire resources of the internet to create product or service change, alteration, modification, transformation, metamorphosis, or breakthrough at the business, market, product, or technology level, and to document and claim the new items/benefit manifestations through fast IP security and to utilizing a patent processing factory approach.

4. Applying Techniques to the Supply Chain Space

In the first place, we require a system for advancement, development, and IP abilities. An IP strategy is only the information and input that goes into it. Align the business issues with the content and direction of the competitive landscape, and the IP strategy methodology will bolster the objectives. Record the greatest concerns of business for clarity and consensus. Capture a unique business issues in a structure of communications. Deliberately target and gather the correct arrangement of IP for the business concerns. Comprehend the business effect of IP inclines in a convenient space. Reveal new income and cost reserve funds through IP strength analytics. Extensive examination of external IP to comprehend a better understands and informs investment or acquisition decisions. Construct a key IP portfolio, and utilizing best-in-class innovation creation forms. Gather, reinforce, design, and archive business-basic IP. Bolster adaptation objectives all through the innovation lifecycle.

2) Virtualizing Innovation – Systematic Process

The Virtual Innovation Process and Patent Factory approach can yield up to 30 vital items or administration developed in 90 to 120 days.

- Find the Innovations Types Needed in Business
- Search the Patent Literature for Insights
- Search the Non-Patent Literature for Insights
- Develop Innovation Strategy – Cross Map

With new enabling technologies causing disruptions across the supply chain, supply chain space is ripe for innovation. Applying Virtual Innovation to the supply chain space can generate hundreds of inventions.

Virtualized Innovation will empower conceivable interruption to the ordinary course of advancement, improvement (e.g., R&D, M&A, Open Innovation, JVs, permitting, and so forth.), enabling organizations to react considerably quicker and cost-successfully to declining item life cycles, quickening mechanical change and increasing competition.

E. Supply Chain and Innovation

Advancement can enormously affect supply chain performance. The supply chain innovation to meet consumers' needs and save money on costs. The designs for innovations as follows:

- **Manufacture Design:** Design the item to make it simple to create, along these lines decreasing the expenses of assembling.
- **Assembly Design:** Design the product to limit the quantity of segments, facilitating the assembly process. Regularly, this outcome in building subsystems those are less demanding to assemble.
- **Product Serviceability Design:** Design the product for simplicity of gathering, dismantling and segment reuse. These products are often easier to repair, contrasted with items that are gathered with greater segments, making individual parts harder to get to.
- **Six Sigma Design:** Design the product to eliminate failures, enhance consistency and diminish costs. For instance, a manufacturer chooses to utilize one sort of electric cord – rather than twelve kinds – over the majority of its products. Institutionalizing parts all through the supply chain is the greatest case of outline for Six Sigma.
- **Environment Design:** Design the product to decrease its ecological effect all through its life cycle. This may be accomplished through less packaging, a more efficient supply chain or by recycling/ by reusing waste.

F. Innovation and Supply Chain are Connected

Supply chain and innovation may appear as two distinct activities, yet the truth be told, they produce significant interaction. Once a product is composed, the supply chain comes in to source materials, make the item and get it to the market. As product travel through the life cycle, effective

services of supply chain are sufficiently adaptable to respond to the quickly evolving needs.

5. Scope for Further Studies

The cloud can enable organizations to ensure their advantages by giving visibility over the whole supply chain, permitting versatility for a different number of information focuses, and giving a solitary perspective for disaster recovery testing. Migration to the cloud can take into consideration and expanded versatility by empowering global organizations to back up IT frameworks of remote workplaces without putting huge entireties into introducing the underlying foundation to get it going.

6. Conclusion

Changing business condition has pushed the organizations to focus on their core activities and offload a large group of logistics capacities of experts in the field. It's certain that an abnormal state of process in innovation and a quick cycle of new product improvement can make it conceivable to fulfill customers' needs in a brief timeframe. In the supply chain it tends to be accomplished through a collaboration with external entities. In spite of the fact that the innovation in supply chain management uncovers positive and critical effect on business execution, the logistics are still at an early stage.

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