

Relationship Between Effective Supply Chain Management & Inventory Management Towards Productivity Improvement In Industries

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Abstract

Inventory is any asset held for future use or sale. These assets may be physical goods, used in operations and includes raw materials, parts, sub assemblies, supplier tools, equipments or maintenance and spare parts. In some service organizations, inventories are not physical goods which customers take with them, but provide capacity available for service customers, Inventories can also be intangibles, e.g., many organizations maintain inventories of intellectual assets and best practice knowledge bases.

This paper discusses impact of efficient and effective SCM towards improved inventory management in industries towards productivity enhancement.

Key words : Materials Management, Supply Chain Solution Software, Supply Chain Operations Reference (SCOR) Model , Responsive Supply Chains

1.Introduction

Supply chain management is to coordinate the flow of materials, services, and information to maximize customer value. The key functions include sales and order processing, transportation and distribution, operations, inventory and materials management, finance, and customer service. A supply chain is an integral system and needs much coordination and collaboration.

Managing inventory is one of the most important functions of operations management in both manufacturing and service organizations. Simply maintaining large stocks of inventories is costly and wasteful. Better information technology and applications of quantitative tools and techniques for inventory management have allowed dramatic reductions in inventories.

The technology has the potential of promoting business with the various decision making capabilities such as:--

- capturing, manipulating and displaying business information that involves location and dimension, e.g. walking distance, travel distance, degree of spatial aggregation or dispersion;
- analyzing existing or creating new networks that are pertinent to the business concerned; this can be very specific like a fashion consumer network, or a general form like a shopping plaza network;
- simulation and projection of flow quantities along the network based on changing variables.

Constantly improving effectiveness in the workplace is the way to get ahead in manufacturing. Management, vendors and workers all need real-time access to the latest information - and to each other. With a customized voice- and data- connectivity solution, an organization can:--

- Lower production costs
- Streamline communications
- Increase communication
- Maximize your return on investment

2.Supply Chain Operations Reference (SCOR) Model

It is based on 5 basic functions in managing a supply chain. James Evans and David Collier have identified these as:

- **Plan:** This aims at developing a strategy, which balances resources with requirements and establishes and communicates plans with management policies and financial plans.
- **Source:** This includes identification and selection of suitable suppliers, schedules, deliveries, authorizing payments and managing inventory.
- **Make:** This includes production, scheduling, managing work-in-process, manufacturing, testing, and packaging and product release.
- **Delivery:** This deals with managing orders, transportation and distribution of goods and services. This covers order management activities, processing orders to routing shipments, managing goods at distribution centers and invoicing the customer.
- **Return:** This deals with customer returns, maintenance, repairs, and overhaul. This includes return, authorization, receiving, verification, disposition and replacement.

3. Supply Chain Components

The following are supply chain components:--

- **Customer service management:** Includes customer relationship management, and benchmarking and order fulfillment.
- **Product development and commercialization:** Includes the product data management, and market share, customer satisfaction, profit margins, and returns to stakeholders
- **Physical distribution, manufacturing support and procurement:** Includes Enterprise Resource Planning (ERP), with warehouse management, material management, manufacturing planning, personnel management, and postponement
- **Performance measurement:** Includes four types of measurement such as: variation, direction, and decision and policy measurements.
- **Outsourcing:** Adopting for particular strategic initiatives in key the areas of technology information, operations, manufacturing capabilities, and logistics.

4. Efficient and Responsive Supply Chains Streamlining Operations

Efficient supply chains are designed for efficiency and low cost minimizing inventory and maximizing efficiency in process flow. A focus on efficiency works best for goods and services with highly predictable demand, stable product lines with long life, regular and continuous cycles. Responsive supply chains focus on flexibility and responsive service and are able to react quickly to changing market demand and requirements. A focus on flexibility and response is optimum when demand is unpredictable, product life cycles are short and change often due to product innovativeness, customer requires customization, and contribution margins are high.

Here information technology plays an important role by providing real time, accurate information to managers across supply chain and use information to identify market changes and redirect resources. Thus, efficiency and responsiveness should go hand in hand by streamlining operations to improve efficiency and responsiveness.

Supply Chain Solution Software is a streamlined system that provides logistics, global freight, financial services, mail services and consulting to enhance customer's business performance and improve their supply chains.

Conclusions:

Effective communications throughout the world had commanded virtual world of e-business, e-integration, e making, e-commerce, e engineering, e-procurement, and e-services. General Electric , Wal mart , Procter and Gamble use e-commerce to communicate directly with suppliers and retail stores. E-commerce requires effective operations management decisions and skills. The goal of operations management is to provide a best synthesis of technology, people and processes. Geographic Information Systems (GIS) and Global Positioning Systems(GPS) are used extensively in location , site selection, land use planning, environment science , transportation systems, trucking companies now track their tracks via GPS technology. In vehicle

navigational system, vehicle location systems, emergency vehicle deployment and traffic management are using GIS and GPS for their value chains.

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