

Impact of E-commerce in the management of supply chain

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Abstract

Management of the supply chain delivers the right product in the right place, at the right time, at the right price and is one of the strongest motors in business processing. It is currently one of the leading strategies for cost saving and revenue improvement. SCM aims to integrate the internal systems of the company with its suppliers, partners and customers in order to complete the trends initiated from reengineering, total quality management and ERP, all of which address only the internal operations of an organisation. Electronic trade, commonly referred to as e-commerce or e-commerce or e-commerce, comprises the acquisition and sale of electronic systems for products or services such as the Internet and other computer networks. It is not just e-commerce that means Internet trading and shopping. This means efficiency of business at all levels of operation. Managers know it is important for business operations, but until now the number of corporate managers who have heard from the term "supply chain management" has been just as small as quantifiable performance measures (SCM).

Keywords: SCM, Total Quality Management, E-Commerce, Guarantee asset Management, Electronic data Interchange

Introduction

The supply chain is a network of facilities and distribution options performing the tasks related to the procurement of materials, material transformation to medium and finished products, and the distribution to customers of the finished products. Service and manufacturing companies have supply chains but the chain complexity may differ greatly from industry to industry and business to business. A supply chain is the sequence of events that take the goods to the final destination.

Supply Chain Management

Management of the supply chain delivers the right product in the right place, at the right time, at the right price and is one of the strongest motors in business processing. It is currently one of the leading strategies for cost saving and revenue improvement. SCM aims to integrate the internal systems of the company with its suppliers, partners and customers in order to complete the trends initiated from reengineering, total quality management and ERP, all of which address only the internal operations of an organisation. SCM has the ability to adopt a versatile strategy by technology such as the internet, electronic interchanging data, transport and warehouse management software, including plant planning software, demand forecasting, procurement. Supply Chain Management (SCM) is the combination of art and science that enhances the way in which an enterprise finds and delivers the raw components needed to make a product or a service. Five basic parts of SCM are provided below.

1. Planning:

This is SCM's strategic part. Companies need a strategy to manage all the resources required for their product or service to meet customer demand. A large piece of SCM planning develops a series of standards in order to monitor the supply chain to be effective, cost less, and to provide customers with high quality and value.

2. Source: Companies are required to choose suppliers with which to supply their products and services. Therefore, provider chain managers must develop a range of supplier pricing, delivery and payment processes and create measurements for controlling and improving relations. SCM managers can then develop their inventory management procedures for goods and services including shipment collection and verification, transportation into factories and payment authorisation from suppliers.

3. Make: Supply chain managers plan the preparations for manufacturing, testing, packaging and delivery. Company quality, output and employee productivity can be measured as standard within the supply chain.

4. Deliver: The part that many SCM insiders call logistics is where companies coordinate order receipts from their clients, develop a warehouses network, select suppliers for product delivery to customers and establish a payment invoicing system. This part is called Logistics.

5. Return: A reactive and flexible network for customers is necessary for supply chain planners to receive defective or extra products and customers with problems.

E-Commerce

Electronic commerce or e-commerce consists of the purchase and sale of electronic systems, such as internet and other IT networks, for goods or services. It doesn't simply mean e-commerce on the Internet trading and shopping. This means efficiency of business at all levels of operation. Managers are well aware of the importance of carrying out business operations, but until now measurable performance measures were as scarce as the number of managers who heard of the phrase "supply chain management" (SCM).

With widespread Internet use, the amount of electronic commerce has increased extraordinarily. This encourages the use of businesses and uses innovation in transfer of electronic funds, supply chain management, internet marketing, electronic data exchange (EDI) and automatic data collection system. At least at some point in the life cycle of the transaction, modern electronic business uses the World Wide Web, although it can include a greater variety of technologies, for example e-mail.

Elements of Supply Chain Management

Supply chain strategy

The imminence of the electronic connections is a characteristic that distinguishes e-commerce from more traditional channels. If a consumer buys an item in e-commerce, the details of this transaction can be seen on each e-commerce supply chain link. A classic shop front can take one or more days to add point-of-sale (POS) sales information. The aggregation process necessarily loses certain information. Different organisations often 'massage' this data before it is converted into the demand signals that are then again transmitted to the supply chain by losing additional information.

Supply Chain Planning

Compounding, globalisation and the fact that performance is more difficult to predict, organisations are progressively adapting to supply chains. Supply chain planners and managers now have roles that go beyond traditional operational tasks, and need to adopt more strategic measures to build fully integrated and durable supply chains that generate competitive benefits while at the same time mitigating the risks posed by extended supply networks. Safety networks are put in place to deal with failures by supplier or supplier partners, and too often lead to increased inventories, which not only increase working capital but also block warehouses and do not necessarily lead to higher levels of service. Air cargo is at a new cost, affecting not only the bottom lines, but also margins. Therefore organisations need to examine their ability to become more agile internally, using intelligent refuelling processes, inventory optimization technology and advanced distribution planning capabilities to handle the unexpected.

Supply chain enterprise application

Company applications are complex, scalable, distributed, based on components and critical to the task in today's corporate environment. They can be used across corporate networks, intranets or the Internet on a range of platforms. It is data-centered, user-friendly and must meet high safety, management and maintenance requirements. Briefly, they are very complex systems.

Enterprise Application Requirements

As with every modern application, a company application needs to be reliable, efficient and provide a user interface intuitive and efficient. But it can be characterised by three specific attributes beyond these common qualities.

Large:

Massive information and extensive parallel processing, networked resources and complex logic can be employed by a multi-user, multi-Developer and multi-machine application. Multi-user application multi-components It can be deployed on several platforms and has been in use for several years with many other applications.

Business Oriented:

It is intended to satisfy specific requirements of the business. It codes corporate policies, processes, rules and entities that are developed in an organisation and deployed to meet business needs.

Mission Critical:

To be operational continuously, a company application must be robust enough. Scalability and deployment must be extremely flexible and allow effective maintenance and management.

The task of enterprise development is obviously extremely challenging with these qualities and demands are growing rapidly. Computer hardware and software have quickly improved and created an environment in which business systems react quickly to unparalleled standards of performance in combination with international economic competition and opportunities. In order to meet these demands, developers must automate their business even faster, build software faster, serve an increasing number of users by creating the following requirements and processing an increasing amount of data.

- Your business objectives
- How soon it has to be delivered.
- How many people are going to develop, test and keep it?
- How many competitors must support it?
- Performance importance and ease of hardware on which it needs to be operated.
- Where it's going to be used.
- What safety is necessary?
- How long will you spend it?

It is difficult to know where to begin without a systematic understanding of the connections between these complex and often contradictory requirements. A simpler model can reduce this complexity and provide an orderly way of designing and creating applications to identify a course for operations between the many requirements. Supply Chain Asset Management Fulfillment's full supply chain management is the asset management guarantee (GAM). Companies of all sizes and categories with storage and inventory management expertise with GAM are optimised to save money and time by their supply chains. As the product arrives in the port to reach the customer, GAM Supply Chain Management is always in motion. GAM Services include account management, customer reports and a wide range of storage, transportation, inventory management, compliance and logistics solutions.

Procurement process of Supply Chain Management

With suppliers, a strategic plan is developed for the production flow, management processes and development of new products. The desired result is a win-win relationship in which both parties benefit, and time reduction is required for design cycles and product development. The procurement function also develops fast communication systems such as EDI and Internet connectivity to enable the rapid communication of possible requirements. The activities related to products and materials received from external service providers cover re-sourced planning, provisioning, negotiation, order placement, inbound transport, storage, handling, quality assurance and many include the responsibility for coordination of suppliers on planning, continuing supply, capturing and research into new resources or programmes.

Product lifecycle management in supply chain management

The business face changes with increased customer requests, competition, and rising development costs. To remain competitive, companies have to turn their supply chains into flexible operations from cost-based back office functions designed to meet today's challenges effectively. The broad optimization framework for this company is the product life-cycle management. In transforming supply chains throughout all industry, the Internet is proving the most effective tool. Suppliers, distributors, manufacturers, and distributors now work as a single, virtual organisation more closely and efficiently. As a result, companies will change both their conduct and their reception of products from suppliers as quickly as possible.

Supply Chain Logistics Management

One of the special characteristics of supply chain logistics management is lower logistics and transportation cost, which is from about 8-15%, and in turn increases the as-set turnover and reduces the inventory carrying costs. Better trade compliance of logistics in SCM, decreases custom fines and penalties. Further this would strengthen the customer relationship, and in turn will improve the goodwill and the customer's loyalty.

Electronic Supply Chain Management (ESCM)

It is not completely new to the relationship between e-commerce and the supply chain. The use of technology to improve the management of the supply chain is something new in the industry. Nonetheless, the profound influence in the supply chain management of e-commerce and new e-

business models has become obvious. It will probably be one of the most permanent and profound changes in modern business practises that ICTs play in the real-time or electronic supply chain management. During the first five years of the 20th century, a number of continuing changes in connection with the implementation of what was classified as an e-SCM strategy could be traced. Strategies aim to minimise total transaction costs through the process of direct ordering and delivery, which also strengthen processes that stimulate supply efficiency and eventually customer satisfaction.

To fully understand the role of e-commerce in the supply chain, certain concepts with defined parameters need to be developed. The role of e-commerce can blur with other business processes without any parameters. For e-commerce to be understood in the supply chain context the customer and the supplier need to model e-commerce.

The above exchanges can be more complexly represented if more than one business is involved in the process of an e-commerce transaction. S2S refers to the exchange of suppliers and L2L between each supplier and another supplier. The two types L2L and S2S occur when a provider outstrips a shipping or logistics company or when a provider, shipper or logistics company is cooperating with a different company to provide a supply chain services "integrator."

Customer's Perspective

As the Internet emerges, customers are looking for certain products that they want at the prices they are prepared to pay. The customer is the focus of modern supply chains. The manufacturers must accurately measure what their customers want, how to package and where to ship. If the customer wishes a change, he needs to be ready to move fast. Therefore, business and manufacturing processes must be agile and scalable. The ISC is a way to communicate and do business with suppliers and customers. It should be noticed that only one click away is the customer. Supply companies help business processes within and outside of the company's four walls to be optimised and new products to be supplied more efficiently where they want.

Need for e- SCM

The supply chain was seen as a rigid series of events that managed to get products out of the door somehow. Often questionable inventory predictions, rigid production plans and hypothetical shipping schedules were included. The Internet has all this changed. The old-fashioned process has become more like an ex-act science. A supply chain enabled by Internet helps companies avoid costly catastrophes

Reduce overhead administration

Reduce inventory unnecessary (thereby increasing working capital)

In order to make it easier

Remove outdated business processes

Profits to save costs and to generate revenue

Accelerate production and consumer responsiveness

Increased profit margins for finished products

Effective integration of a supply chain organisations can save millions, enhance customer service and reduce inventories. It is essential to make sure internal systems work well before they can be extended over the Internet to obtain optimal value from the automatic supply chain.

Facilitating Supply Chain Management with E-Commerce

In order to efficiently manage the supply chain, all functions and entities of the supply chain must be fully integrated. The use of communication networks that allow collaboration between various supply chain organisations and functions can allow this integration. This is possible. This communication network is at the heart of e-commerce. The Internet is a public and private communication network that connects businesses with consumers and businesses. The speed and ease of use of the Internet can make it easier for retailers to flow information from customers to customers, which can result in lower order processing and customer service costs. An important e-business network is the intranet company, based on Internet technology but mainly used by one company or organisation. The intranet allows internal users to share information and can cover various locations around the world. The e-commerce intranet can become an excellent tool to significantly reduce the costs of internal business processes, as information from different functions in the company is easily accessible. Intranets can also help the retailer to make the supply chain easier. Marketing, sales, accounts, finance and customer service are

all part of the company's intranet. To facilitate all the other functions of the supply chain two key e-business technologies, namely extranets and electronic data exchange (EDI). However, as with intranets, the extranet not only internally extends its intranet to other companies and organisations, such as suppliers, producers and distributors. EDI is a popular extranet information transfer technology. EDI is a key e-business technology, because it allows 'computer-to-computer' swaps in standard transaction documents between two companies via extranet.

Managerial Challenges of Implementing E-Business

With all the advantages associated with implementation of e-business, one would think that companies would benefit from e-business. The implementation of e-business and its components presents a lot of management challenges. The implementation of e-business may involve the use of significant amounts of capital. Initial investment, hardware and software needs, information system specialists' salaries and the maintenance and up-dating of the system are supported by capital expenses and resources. These costs may be significant, and some businesses may deter e-business implementation. Customers today expect to complete orders much faster than before. Many distribution centres and warehouses for handling pallet orders are not designed for many single and open-case shipments.

Tips to bear in mind while evaluating e-SCM initiative

Give Perspective: The entire business, including its current strategy, should be anticipated and where it will go. Increasingly, supply chain strategy is integrated into the corporate strategy.

Learning costs don't underestimate: There is no understatement of the cost of training people to use new software. It takes less time to send information around the world to anyone's mind.

Link to existing architecture. Link to existing enterprise resource planning applications in the supply chain. ERP acts as the organization's nerve centre. Ideally, inventory and order collection should be a single visibility point.

Conclusion

Through networked and integrated supply chain management, companies can reduce inventory and the cost of supply chain, make better real time forecast decisions, speed up supply and services delivery, simplify the payment cycle, increase revenues and enhance service. Customers can also manage their own purchase experiences and strengthen co-ordination and linkage between supply partners with today's technology-driven supply chain.

Reference

1. Waidringer, J. (2001) Complexity in Transportation and Logistics Systems - An Integrated approach to modelling and analysis, Report 52, Department of Transportation & Logistics, Chalmers University of technology, Gothenburg
2. The Review of Business Information systems Volume 6, Number 2
3. Tilanus B, (1997) "Information Systems in Logistics and Transportation", Elsevier Science Oxford.