Supply Chain Management

in Thailand - A Personal Perspective

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Supply Chain Management fever is a recent phenomenon in Thailand with more and more business people being exposed to the concept and idea. This article offers a historical perspective and recent developments as to what will likely be the steps that a manager will have to take to transform a company into an SCM-savvy organization.

There are many definitions of Supply Chain Management (SCM) but the tenth edition of the APICS (American Production and Inventory Control Society) Dictionary defines SCM as: *"The design, planning, execution, control, and monitoring of supply chain activities with the objective of creating net value, building a competitive infrastructure, leveraging worldwide logistics, synchronizing supply with demand, and measuring performance globally."*

Supply chains have existed since Day One of trading among partners. However, supply chain management is a more recent phenomenon, fuelled by the progress of information technology development. Upstream supply chain players include raw material suppliers, manufacturers, distributors and wholesalers, whereas downstream players are retailers and the consumers. Traditionally, these trading partners conduct their businesses independently, without sharing much information about the true demand at the consumer level. Today, great advances in information technology have made such sharing of information possible, giving rise to a new paradigm in management practices whereby trading partners collaborate in order to better serve their ultimate customers downstream, while at the same time avoid costly undertakings such as overstocking of inventories.

The evolution of SCM has its roots in the knowledge of materials management, physical distribution, functional logistics, and integrated logistics. Internal control of supply functions as well as external coordination with upstream and downstream entities, are necessary to create an integrated logistics system. J.B. Houlihan, author of "International Supply Chain Management" in 1985, has been credited with coining the term "Supply Chain Management." Because SCM includes management of day-to-day operations, which tend to be activities for less senior people, Houlihan suggests that there should be some differentiating elements that distinguish SCM from past research that belongs to the domain of integrated logistics. That differentiation is the strategic decision-making of supply chain management. This is the reason why SCM has been elevated to upper level management where those decisions and policies affecting the corporation are made. SCM is now seen as an important corporate strategy and an effective way of creating value for customers.

Right Supply Chain Designs

Indeed, if one examines the definition of SCM closely, one can see that the design, planning, execution, control, and monitoring of supply chain activities all require strategic decisions by top management. M.L. Fisher, in his article "What Is The Right Supply Chain For Your Product?" published in the Harvard Business Review, suggests that if the product is of the innovative type, its supply chain should be designed to be market-responsive in order to capture as much as possible the rising demand and at the same time, fend off competitors who might want to take a share of the business if the supply chain is too slow to satisfy the demand. This has many implications in management decisions from choosing suppliers, selecting manufacturing strategies (e.g. high enough production capacity), and deciding on proper inventory levels (e.g. enough inventory should be maintained to avoid stockouts), etc. Short life-cycle products such as computers and other hi-tech products tend to fall into this category. Companies such as Dell Computers, CISCO, Intel, and many others have been cited in literature as having designed highly responsive supply chains. For example, Dell plans its production by taking all of its orders received via the internet every two hours. Information about the orders and part requirements are shared with its suppliers continuously on a real-time basis. Synchronization among parts suppliers, manufacturing plants in Asia, Europe and the USA, and logistics providers to handle normal and peak demands are well executed. SCM practice has been credited with cost reduction and increased market share.

For functional products, the design of the supply chain should be aimed towards making it physically more efficient rather than making it as market-responsive as possible. This implies that manufacturing facilities should aim to be highly utilized, inventory lead time should be reduced as long as it does not increase cost, and suppliers should probably be selected on the basis of cost and quality rather than responsiveness. Campbell Soup has been cited as practicing SCM using a technique called Vendor-Managed Inventory (VMI) whereby stocks of major retailers are continuously monitored by Campbell through daily transmission of electronic data interchange (EDI) messages that let Campbell know about the retailers demands. Such collaboration enabled Campbell to plan production and delivery efficiently and resulted in reduction of stocks throughout the supply chain. Campbell was able to offer everyday low prices to its retailers. Prior to such practice, Campbell used to offer low prices to attract big purchases. Retailers would purchase in large quantities and store them in huge warehouses to be used gradually throughout the entire year. During peak production periods, Campbell deployed a large workforce and paid overtime as well as employing large fleets of trucks to haul the merchandise to retailers. Such non-value practices stopped after all players in the supply chain realized the benefits of collaboration.

Thailand's SCM Development

Thailand has now emerged from the 1997 economic crisis. No industries were unaffected by the shock. Only through a huge devaluation in currency and heavy borrowing from the International Monetary Fund did the nation slowly recover. Surviving businesses made adjustments to the new exchange rate. The devaluation helped boost exports and, in recent years, the proportion of exports to Gross Domestic Products (GDP) rose from less than 60% in 1997 to more than 90% in 2000. Clearly international supply chains currently play a significant role in our economy.

Although Houlihan wrote about SCM in 1985, it was not until around 1995 that the retail trade in Thailand began to embrace SCM through a practice called Efficient Consumer Response (ECR). This eventually led to the formation of ECR Thailand, an association of retailers and manufacturers pushing for widespread practice of supply chain management concepts in this industry. In fact, the ECR movement has probably made its group highly competent in SCM knowledge. Large retailers such as Tesco Lotus and Tops, and large manufacturers such as Nestle, Unilever and P&G all work together to reduce inventory and streamline their supply chain operations. This has led to substantial savings and increased market share. With superb supply chain execution, Tesco Lotus has grown into the largest retail distribution complex in South East Asia, with more than 53 hypermarkets and other types of stores throughout Thailand.

For the ECR community, many SCM initiatives have already been made. The use of EDI in Thailand began around 1997-8 as well. For example, the Thai Customs began EDI

implementation in 1998 for exports and in 1999 for imports. Many retailers and consumer goods manufacturers began to use EDI around that time as well, along with the internet boom. Note, however, that EDI is a proven technology that has been used for more than 20 years elsewhere.

The Department of Industrial Promotion of the Ministry of Industry began taking an interest in SCM in 2000 and was successful in conducting the APEC SME 2001 Conference on Strategic Alliances for Efficient Supply Chain Management in August 2001. Fifteen representatives of the twenty one economies in the Asia Pacific Economic Cooperation attended. This marked an important milestone in our learning about SCM. Subsequently, Thai academics began to introduce SCM in their curricula. The Ministry has now begun free training programmes for SMEs about SCM on a wide scale. Interested individuals should call the Ministry for more information.

The government has also encouraged wider adoption of SCM in the Garment and Textile industry to make the industry more competitive. The apparel export industry began to adopt EDI around 2001. However, this group still has a long way to go in terms of creating efficient and responsive supply chains. A recent interview with Nike in April 2003, one of the largest foreign buyers of Thai apparels, indicated that Thailand has the worst on-time performance in delivery. Research is underway to determine ways to improve the situation. Much work remains to be done. There are now several ongoing pilot SCM projects sponsored by the Thai Textile Institute that are aimed at improving supply chains in this industry. Companies that have participated include the Thanalongkorn and the Nanyang groups.

The food, automobile, electronics, chemicals, construction materials industries and just about any industry are now aware of the importance of SCM. There are even movements and awareness in the healthcare industry as well in late 2002, which is a good sign. This will lead to what is known as Efficient Healthcare Consumer Response (EHCR). Such movements should eventually lead to better healthcare services and more reduction in healthcare costs, especially for hospitals.

Many institutes and associations are offering knowledge on SCM. TLAPS, or the Thai Logistics And Production Society, is promoting SCM professionals through professional certification from APICS. There is even a consortium conducting research into value chain and supply chain management issues.

Enabling Technologies

As stated in the introduction, excellence in SCM is made possible through information technology adoption. The use of bar coding and automatic identification technology is fundamental to supply chain efficiency. This should be adopted if true efficiency is to be achieved. More sophisticated information management systems such as Enterprise Resource Planning (ERP) and Advanced Planning and Scheduling (APS) systems are becoming more common and are necessary for companies serious about SCM. ERP is used for gathering and organizing information. However, APS is used to provide supply chain visibility into complex manufacturing systems. For a while, these basic systems are likely to be adopted in order to improve internal supply chain processes. Other tools are also available but ERP and APS are by far the most fundamental infrastructures for efficient operation planning and control for today's manufacturing companies. In addition, there are other software such as e-procurement for sourcing over the internet, portals for collaboration and trading exchange, shipment tracking and tracing, warehousing, customer relationship management, demand management and supply chain planning tools, and many other software offerings to assist in product design and fulfillment.

Final Remarks

The key to SCM success is to achieve synchronization among trading partners as in Just-In-Time (JIT) manufacturing. But that is easier said than done. It requires serious investment in manpower, time, technology, and willingness to collaborate and share benefits with trading partners to create efficient supply chains. My observation is that the majority of Thai CEO's still need to be convinced of the benefits to adopt SCM. Current know-how of SCM implementation is limited. Thus, Thai industries will need more time to learn and adapt themselves in addition to finding enough money to invest in new technology and to discover new ways of doing things more efficiently through it. These steps will likely take some time. CEO's should take the attitude of taking action to invest and learn rather than hoping to find a single best solution or a panacea, which is likely to be nonexistent. The April 2003 study report by Professor Michael Porter of the Harvard Business School indicated that Thai industries still have a long way to go in approaching the productivity of world-class companies. I believe we should begin this journey in earnest.