Implementing E-Supply Chain Management in Enterprises — a Case Study

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Abstract—E-supply chain management (e-SCM) realizes the optimum of information flow, capital flow and logistics. This paper focuses on the strategies for enterprises to implement e-SCM and a specific case study is provided which highlight how eCommerce, and specifically the E-supply chain management, have become central to a number of activities in enterprises.

I. INTRODUCTION

Developing and managing mutually beneficial exchange relationships with other supply chain members are central to corporate survival and growth. And firms with inter-firm partnership arrangements with members of their supply chain experienced significantly higher growth rates.

The paper is organized as follows. We begin by examining electronic commerce applications in the supply chain and the content of e-supply chain management. We then focus on the strategies for enterprises to implement E-supply chain management (e-SCM). Finally, a specific case study is provided which highlight how eCommerce, and specifically the E-supply chain management, have become central to a number of activities in enterprises.

II. ELECTRONIC COMMERCE APPLICATIONS IN THE SUPPLY CHAIN

“Supply chain” is a generic term that encompasses the co-ordination of order generation, order taking, and order fulfillment/distribution of products, services, or information. It covers the flow of goods from suppliers to the end users through manufacturing and distribution chains. Material suppliers, channel supply partners (wholesalers/ distributors and retailers), and customers themselves are all key players in the supply chain management.

E-commerce is the way enterprises use to do business with customers, manufacturers and other trade partners by using information technology in order to improve service quality, reduce cost and add new value along the supply chain.

To apply e-commerce to the management of supply chain creates a new hot word that is e-supply chain management (e-SCM). E-SCM is to manage enterprises’ information, capital and goods effectively and efficiently, and to make information flow, capital flow and logistics run smoothly among their suppliers, the interior of their own and their customers.

A. Electronic commerce applications in the supply chain

It can be seen from Fig. 1 that eCommerce has potential impact throughout the supply chain with a host of trading partners. The central box in Fig. 1 shows a typical manufacturing company, with traditional internal applications and communications across various departments and functions. However, external communications and interactions are increasingly being conducted via eCommerce applications, such as classical electronic data interchange (EDI) with suppliers on a global basis, and Consumer-oriented eCommerce with customers.

B. The Content of E-Supply Chain Management

E-SCM includes order treatment, organizing production, stock management, match delivery and transportation management, inventory management, customer service and payment management.

1) Order treatment. Order treatment is to identify and manage the attainable orders. When orders come, enterprises must identify which can be done and then analyze the cost and benefit according to the production capability. In this way, e-SCM reduces the error and cycle-time, and improves the efficiency.
2) Organizing production. Organizing production improves the communication among suppliers, enterprises and customers, and removes the difficulties of production management. To some extent, E-SCM makes the forecast of sales more accurate and organizes the production efficiently.

3) Stock management. Stock management is to smooth the flow of information between enterprises and their suppliers. By using e-commerce, enterprises gather information about the sales and future demand, and offer it to their suppliers. At the same time, managing their stock through the internet, enterprises make the products’ range of stock wider and reduce the number of stock personnel.

4) Match delivery and transportation management. In match delivery, enterprises can integrate the total supply chain by monitoring the consignments in the match delivery center, and tracing the transportation of the goods. In transportation, enterprises can exert their effects on optimizing resources, reducing transportation cost, tracing the cargo and delivering them to the right place timely.

5) Inventory management. Through e-commerce system, enterprises can communicate with each other about the inventory, such as the information of orders delayed and stock status. This can reduce the inventory cost and enhance the efficient utilization of their warehouses.

6) Customer service. Through internet, to receive and adjust the complaints from customers will be more convenient. It reduces the cost of informing customers of the necessary replacement or repairing.

7) Payment management. With the development of the technology and the security management of the internet, enterprises can settle accounts with their trade partners and customers online.

III. E-SUPPLY CHAIN MANAGEMENT STRATEGIES FOR ENTERPRISES TO IMPLEMENT

With the integration of the supply chain, it becomes evident that enterprises should carry out some e-SCM strategies in their management. This part will give enterprises some enlightenment to implement e-SCM.

A. Suppliers and customers management through e-commerce

Managing suppliers well and keeping an excellent relationship with suppliers is a good cornerstone of excellent supply chain management. In order to attract the best and the most appropriate suppliers to become enterprises’ trade partners, enterprises must make full use of e-commerce to evaluate and choose the right suppliers quickly.

In this respect, enterprises should do two things to make their e-commerce relationship clear and operational. Firstly, enterprises should make the relationship clear and set the standards of offering information. Therefore, every member in the supply chain will have standards to evaluate its own and its partners’ behaviors in e-commerce. Then, all of them should fulfill their duties according to the contract and establish the credit. And they should try their best to change their e-commerce relationship into a long-term collaborative e-commerce partnership. Secondly, enterprises should perfect the information transfer system and widen the range of the suppliers for enterprises to choose from.

In order to manage customers well, enterprises can exchange information with their customers through e-commerce. By this way, enterprises can get the demand trend of customers and customers can take part in the forming of the product design in order to satisfy them better. What’s more, giving some trial products or gifts to customers is an efficient way to keep a good relationship with the customers. Also, responding to the complaints from customers and adjusting them properly is the foundation of keeping a harmonious relationship with customers.

B. Market demand forecast management through e-commerce

With the globalization of the market, the capability of forecasting the future market demand is becoming more and more important for enterprises. Acquiring information from their suppliers, customers and competitors is helpful for enterprises to forecast the market demand correctly. E-commerce helps enterprises reach this goal.

Through e-commerce, Enterprises can gather information both from the interior and from the exterior by using the
more attainable information sources. From the interior, enterprises can gather the information about the demand from their branches accurately and timely through internet. From the exterior, enterprises can gather the latest information from their trade partners, competitors and customers through internet. From their customers, enterprises can know what their customers’ real demand is. From their suppliers and competitors, enterprises can know the probable market changes through information exchange.

C. Outsourcing management through e-commerce

The production of all parts of the goods is not completely possible and beneficial for an enterprise. So the production becomes specialized. Therefore, enterprises should identify and remain the productions of the key parts, and left the production of other parts to others. Outsourcing brings difficulties and complexity into enterprises management. It makes e-commerce become the necessary means to implement the supply chain management. After selecting the qualified outsourcing cooperative partners according to the standards such as the production capability, product quality, terms of delivery and timely information sharing, enterprises should stick to monitor outsourcing process by tracing control. The tracing control can be done by setting standards and checking the performance periodically. This secures the product quality and the production synchronization.

D. Inventory management through e-commerce

Enterprises can realize the sharing of information, resources and risks under the backup of e-commerce. Enterprises should adjust their inventory according to the market demand changes. On the other hand, enterprises should improve their inventory management by gathering information such as information about production capability, logistics and other related information for inventory management through e-commerce.

IV. A CASE STUDY: THE E-SUPPLY CHAIN MANAGEMENT OF WUHAN ZHONGBAI GROUPCO., LTD.

Wuhan Zhongbai Groupco., Ltd is a successful example of implementing e-SCM. From the time when it decided to build an e-commerce platform, Zhongbai has been building the B2C platform and B2B platform. In a few years, Zhongbai has been very successful.

A. The implementation of e-SCM strategies in Zhongbai

During the period of building B2C platform, the company applies e-commerce in the supermarkets, specialty stores and discount stores. B2B e-SCM is also being built step by step and it is the keystone of e-SCM development in the future.

Zhongbai carries out some e-SCM strategies when it implements e-SCM. Zhongbai has a good relationship with its suppliers and customers. By applying the advanced technologies into the information management in the company, all members of the supply chain can acquire the latest raw data and have the ability to coordinate their plans and offer the timely information to satisfy the partners' demand better. Sharing information makes Zhongbai and its trade partners to depend upon each other and forges them to adopt a more cooperative attitude to collaborate. Offering some small gifts to customers and adjusting their complaints and advice in time can make the customers have the interest in doing some shopping there.

Information also makes the market demand forecast become more accurate and timely, and guides Zhongbai's logistics. Zhongbai gathers data about the sales in the shops and the inventory in the warehouses and then transfers them to other members. Outsourcing management by using e-commerce promotes Zhongbai’s profit maximum. Some collections of the goods are outsourced to some qualified suppliers and the outsourcing is monitored through the internet. In this way, the efficiency is secured and the profit is maximized.

Stock management helps Zhongbai to reduce the related cost to the minimum and improve the operation efficiency. In e-SCM, the company arranges the logistics to let physical flow from warehouses to customers in a timely and economical way.

B. The efficiency of e-SCM in Zhongbai

The application of e-SCM in Zhongbai strengthens the management of supply chain. In the stock center of the company, Zhongbai implements the management by computers completely, monitors all the stock change and creates good condition for the company to manage the stock according to the status quo. By doing so, the company improves the reliability and quick-response capability along the whole supply chain.

E-SCM reduces both the cost in the chain-stores of the company and the trade cost with its partners. From the interior, the company solves the problem of having to pay a lot of money to the financial personnel to complete the financial reports by streamlining and automating the process with computers. And the company reduces the cost which comes from unnecessary leftover and insufficiency in the stock. From the exterior, through efficient cooperation, the company can reduce its cost used in the negotiation, stock and transportation.

C. The guide of e-SCM in Zhongbai

1) Industry-university collaboration. The guide of industry-university collaboration forges the success of
Zhongbai. Wuhan is a big city with a lot of famous and excellent universities. There are lots of advanced technologies and outstanding scholars here. Zhongbai utilizes these advantages of Wuhan. Zhongbai does the research and development in the standardization system and security system involved in e-commerce. And Zhongbai actively upbrings its own talented groups by making use of the universities’ and the company’s own resources.

2) Cooperation produces profits. Cooperating with others actively lays down a solid foundation for the supply chain’s efficient operation in Zhongbai. Information sharing, mutual trust and the fulfillment of the contracts bring substantial profits for Zhongbai.

By adopting e-SCM, Zhongbai achieves success in improving the supply chain management, enhancing the efficiency and reducing the cost. As far as Zhongbai is concerned, in the future, it should pay more attention to the technology development on its B2B e-SCM.

V. CONCLUSION

From the above discussions, we know that through e-SCM, enterprises manage suppliers and customers, forecast the future market demand more accurately, control the outsourcing and manage the stock in a more efficient way.

In the case study, Zhongbai implements e-SCM in its business and makes a lot of profits from it. This creates a good opportunity and good condition for the implementation of e-SCM in Zhongbai.

By using internet, medium-sized and small-sized enterprises can enter into the global supply chain with low cost. What’s more, B2B e-SCM is the direction of e-SCM. In the future, the cooperation among enterprises will be the leading and dominating content of the e-SCM.

REFERENCES