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Integrating E-Commerce and Supply Chain Management: A Study of Online Shopping Companies in India

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Abstract

Supply chain management includes the key processes likewise, planning, operations, managing physical, financial and informational flows, and finally adding value for consumer. The intention of any organization is to achieve minimum cost, better quality and timely delivery of goods. This is a common view of online businesses on effective supply chain system. E-commerce has a number of applications, such as e-mail, fax, electronic catalogs, shopping cart model, electronic auctions and e-banking. There are various business models used in online business, namely, B2B, B2C, C2C and C2B. Majority of online shopping websites are using these models. India's top three online businesses, Amazon, eBay and Flipkart have successfully integrated e-commerce into the supply chain. In future it is necessary to maintain an up-to-date supply chain system in order to attain competitive advantage and for companies' survival.

Key Words: E-Commerce, Supply Chain Management, Online Shopping Companies

INTRODUCTION

Kevin Plank, CEO, of Under Armour, "One of the big themes you hear right now is virtual reality. Imagine the day when you can put on a headset and actually walk through a mall. That's how you have to think about selling online in three or four years."

Earlier the term supply chain management was confined to logistics and operations management. But over the time period it has evolved many functions apart from managing movement and storage of goods. It includes the key processes likewise, planning, operations, managing physical, financial and informational flows, and finally adding value for consumer.

According to Bowersox (1997), "Supply Chain Management is a collaborative-based strategy to link cross-enterprise business operations to achieve a shared vision of market opportunity."

Another important definition by Klaus (1998), "Supply Chain Management (consequently) is defined as the active design and permanent mobilization of the total channel within an industry with the goal to maintain and to increase the success of the companies involved."

The concept of supply chain management has evolved over the time period. During the 1960s it was confined to warehousing and transportation with main focus on operations, performance and efficiencies. In the 70s total cost management approach was adopted with main focus on optimizing operations cost and customer service. Towards the 80s, it was called the integrated logistics management focusing on strategies and logistics planning. 1990s saw the main focus shifted to supply chain strategies, channel co evolution and goals. Lean supply chain management is the new stage of supply chain management which includes internet, e-marketing, SCM synchronization and e-business.

Objectives of Supply Chain Management:

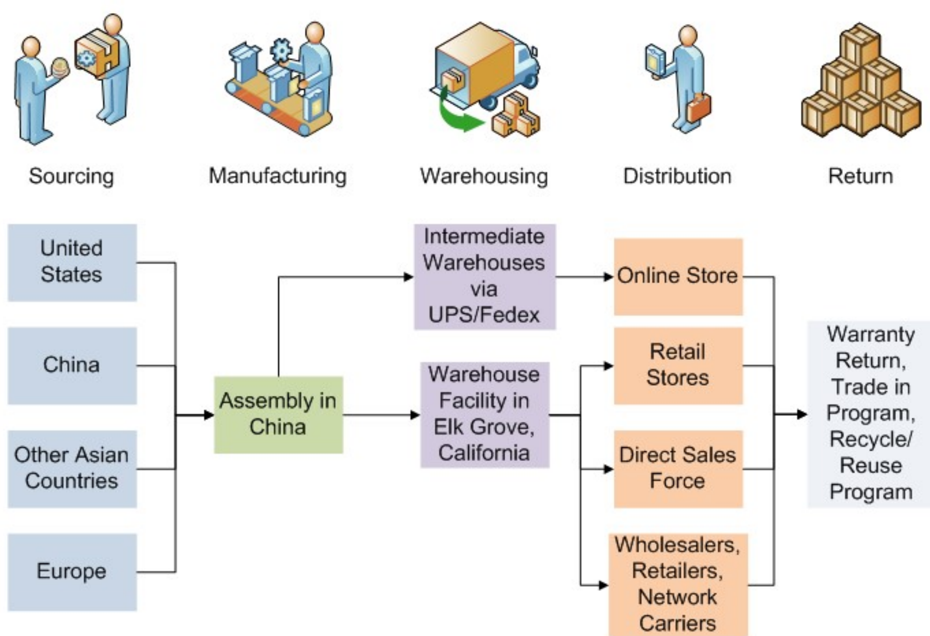
a) To minimize the cost of materials

b) To reduce inventory investment

c) To ensure timely delivery of raw-material to suppliers and final goods to customers

d) To ensure quality of materials used in manufacturing

The online businesses consider many points while managing supply chain system. Firstly, they try out on several suppliers and not depending on one supplier as it will adversely impact the business. Secondly, keeping a balance between required stock to fulfill orders and managing inventory avoiding over working capital. Thirdly, look for local warehousing for storage purpose. Fourthly, reliable record keeping software is required to keep track of product at every stage. The reason for growing online business is growth of online channels, more use of smart phones by consumers, and increased process re-engineering and technology initiatives by retailers.



Supply Chain Planning at Apple Inc (http://www.supplychainopz.com)

During earlier days, the retailers would list each product on their website but today they don't even touch such products. Online orders for such products are directed to the third party for completion. Such goods are packed and shipped on behalf of the retailers by the third party logistics provider and position e-commerce discharge houses. "Drop shipping" is also famous these days. It refers to when a customer places an online order; the retailer splits the order into multiple orders. Such orders are then relayed to the various suppliers through EDI. Afterwards each order is then packed and shipped directly to the given addresses of consumers.

LITERATURE REVIEW

Gunnasekaran and NGgai (2004) attempted to study the literature review on implications of virtual supply chain (VSC). He also developed and tested a conceptual framework through a case study of a Hong Kong based company for VSC comprising of components such as, plan, source, make and deliver. Strategic alliances, web-based information systems, automation for business process re-engineering, supply-chain visibility and performance measurement system were the key factors for a successful VSC.

León-Peña (2008) discussed the current e-commerce business models in SCM, namely, B2C, B2B, C2C AND P2P. A case study on Levis Strauss has been discussed whereby the company, in the light of falling sales, introduced new distribution channels to make its product more accessible and suitable for the target population. The result of using e-commerce led to replenishing demand and forecasting technology for Levis.

Golicic et. al (2002) studied the impact of e-commerce on supply chain relationships among eight e-commerce companies. Using grounded theory, it is found that speed and connectivity are the primary dimensions of e-commerce. Since e-commerce environment is quite uncertain due to dynamic market structures and increased information visibility, therefore, it is important to maintain and manage relationships with customers and suppliers in order to succeed. E-commerce aids companies to maintain supply chain relationships for its success and survival.

Objectives of study:

1. To study the existing e-commerce business models used in supply chain system.
2. To study the supply chain management of top three online shopping websites, namely, Amazon, Flipkart and eBay.

E-BUSINESS AND SCM

E-commerce (electronic commerce) is the buying and selling of goods and services and transferring funds through digital communication. It includes inert and intra company transactions, likewise, finance, marketing, manufacturing, selling etc. It has a number of applications, such as e-mail, fax, video conferencing, file transfer and internet banking. It is mostly used in B2B models, where companies sends newsletters, e-mails etc. to customers. It has been predicted that by 2020 the supply chain will undergo radical changes so the companies must be prepared with a flexible and adaptable supply chain system. Online buying has matured over the time. The consumer demands instant satisfaction. New e-commerce is facing a challenge of reducing the gap between placing an order and delivering the order at the right time into the hands of the customers. Prompt deliveries compliment the convenience of online shopping as consumer doesn't have time for visiting brick and mortar models. Copying your competitor is not a strategy as such companies are moving to black holes. There is a need for blue ocean strategy in supply chain management. The new supply chain is innovation, omni-channels and creating competitive differentiation.

There is also another alternate model for ensuring better supply chain for e-commerce companies by partner with 3PL (third party logistics). Likewise, Amazon has its own logistics and also leverages its partnerships with 3PL's like GATI, Blue Dart and FedEx Corp. another option is to rely on specialized e-commerce fulfillment companies, like, Delhivery who provide unique transportation and fulfillment capabilities to E-commerce clients. Flipkart, Amazon, Jabong, Snapdeal and Myntra are among its top 5 clients in India. Thirdly they also use postal services which provide better service than the 3PL's. Amazon started a pilot project with India Post which has nearly 155,000 post offices in India. Post offices or convenience store chains could also act as pick-up point which could cut down delivery costs. Offering services of in house logistics arm to third party is also used. This is increasingly going telecom tower model way to better utilize capacities. eKart was opened up to 3rd party services in 2014. Similarly Haier's Goodaymart logistics provides logistics services to e-commerce companies such as Alibaba. According to a study conducted by KPMG and Internet and Mobile Association of India, "the Indian e-commerce market was worth Rs. 75,000 crore, in 2013" and according to McKinsey Report (2012), "it has the potential to double its economic contribution via Internet, from 1.6 percent GDP at present to 2.8 and 3.3 percent by 2015". Indian E-commerce is also most likely to generate employment for 1.45 million people in the coming years. Incorporating e-commerce into supply chain process leads to the following advantages: minimizing purchasing cycle time and transaction cost, decreasing purchasing cost, enhanced tie-ups among suppliers and buyers, keeping fewer inventories and fulfilling customers' demand on time.

MAJOR TYPES OF E-BUSINESS MODELS

1. B2C (Business to Consumer)

In this model, a consumer visits the website displaying product information, selects a catalog, orders the catalog and an email is sent to business organization. After receiving the order, goods are dispatched to the customer. It applies to any business organization that sells its products or services to consumers over the Internet. The B2C model also includes services online banking, travel services, and health information. Key features:

- Increased advertising expenditure to attract more customers
- Huge investments in hardware/software
- Good supporting customer care service

2. B2B (Business to Business)

It mainly refers to transactions between the businesses. Under B2B model, websites sells products to intermediate buyers who finally sell goods to final customer. Likewise, in case of brick and mortar models, wholesaler places an order with the manufacturer. After receiving the final consignment, such goods are sold to final consumer in the form of retail outlets. In online selling, many virtual companies have come up who do not have any physical existence and such businesses are conducted through internet only.

3. C2C (Consumer to Consumer)

C2C model involves transaction between consumers. Example, eBay, quikr.com, olx.com etc. where consumers advertise and finally sell their products to another consumer. However, it is essential that both the seller and the buyer must register with the auction site. The seller is also supposed to pay fixed fees to the auction sites to sell their products online. Consumers can sell products like, cars, property, and other second hand goods.

4. **C2B (Consumer to Business)**

In this model, a consumer approaches website showing multiple business organizations for a particular service. Consumer places an estimate of amount he/she wants to spend for a particular service. For example, www.policybazaar.com, where consumers looking for personal loan/ car loan can compare interest rates or other terms and conditions online. Similarly, business organizations also approach the customers according to their needs and preferences. In this model, customers offer to sell products and services to companies who are prepared to purchase them. For example, at www.monster.com, where job seekers can post their bio-data and any business interested in the candidate can hire him/her.

E-COMMERCE IN SCM OF ONLINE SHOPPING WEBSITES

1. **AMAZON**

Amazon.com is an American e-commerce company founded in 1994 by Bezos. It is the largest Internet-based retailer in the United States. It started its business by selling books online and later on diversified to selling DVDs, CDs, MP3, videogames, electronics, clothing, furniture, food, toys, jewellery etc. It also produces consumer electronics, namely, Amazon Kindle e-book readers, Fire tablets, Fire TV. Fire Phone is a major provider of cloud computing services. It works on three criteria's: low price product, large market share and wide range of choices. Many retailers are going for merger and acquisitions so as to reduce competition, likewise Amazon acquired- telebook, shopbop, zappos, Annapurna Labs. Eyc. It has also acquired Kiva Systems, which manufactures robotic systems, for its distribution centers. The inventory system will be mobilized by these robots. Fulfillment centers provide warehousing and order processing facility to third party sellers. The employees working in the warehouses are responsible for- unpacking, inspecting, placing goods, recording location of customers on computers and shipping of goods. The location of goods and routes for pickers is recorded in the central computer. Amazon Web Services (AWS) XML service helps the associates to access to Amazon catalog directly on its website.

Recently Amazon is also planning for drones deliveries. In order to expand its business Amazon has also planned to open brick-and-mortar store at Manhattan as it is not possible to sell everything online as for some products, photos don't do them justice, so they have a harder time selling online.

According to McKinsey Amazon freight network is being used for pickups for 90 per cent of items by suppliers. Amazon can minimize delivery time and shipping expenses by strategically using distribution centers and technology, like Kiva systems. Through innovation, Amazon has significantly increased its market share and has put vast pressure on competitors.

2. **FLIPKART**

Flipkart was founded in 2007 in Bangalore, India, by entrepreneurs Sachin Bansal and Binny Bansal. It is the largest B2B e-commerce platform in the country.

It started with selling books online and later on diversified into ample range of products. It sells entertainment products—from movies, music to consumer electronics—as well as healthcare and personal products, home appliances, and clothing. Initially Flipkart used open source technology to support the launch, but soon found that open source business intelligence (BI) tools had limited functionality.

In August 2011, the company invested in its first licensed business discovery software with QlikView Enterprise Edition, which has since been upgraded to QlikView 11. By then, Flipkart was experiencing an increasingly complex data flow from different business units—for example, inventory and supply chain. Flipkart was impressed by the rapid time to business value achieved with QlikView. It is easy to use for sales people and managers to access data and find information quickly without any IT support. QlikView is also very useful for inventory management as it helps to optimize stock levels and reduce costs associated with excess stock. Flipkart has deployed QlikView 11 to 200 users, together with 35 named users, and implemented several applications analyzing 25 million rows of data which is increasing in line with the company's growth. QlikView has also transformed the way Flipkart does business. It's helping to make the company more agile and responsive to its customers. The QlikView business discovery platform's application-driven model works with existing data sources, which for Flipkart includes the open source MySQL data management system and Microsoft Excel spreadsheet software. Its benefits are:

- First application for sales was delivered in six weeks
- Provides transparent and up-to-date information
- fixed data-driven decision making at Flipkart
- optimum inventory utilization
- Delivered first application for sales in just six weeks

Flipkart also created a separate brand for its logistics arm eKart in April 2013. Flipkart started with inventory led model but shifted to marketplace model in 2013. The new model allows e-commerce companies to scale up faster, maximum storage and minimum inventory cost. In May 2014 Myntra merged with Flipkart, thus making Flipkart the largest e-commerce player in the country. 80 per cent of online shopping is done on Myntra and Flipkart. The merger happened because of Amazon's expansion in India.

Myntra continues to operate as a separate brand and its founder Mukesh Bansal will occupy a seat on Flipkart's board and will be heading the fashion segment and Flipkart will concentrate on customer service and technology. However, the companies will not integrate the back end and will continue to function separately.

3. **E-BAY**

eBay is The World‗s Online Marketplace. It was founded in 1995 by Pierre Omidyar, a French entrepreneur. It has been engaged in the buying and selling of goods and services by individuals and businesses. It provides a market base to more than one million people. After ebay, not just small but also large online companies have entered the online auction market. eBay also started acquiring new firms, likewise, acquiring Butterfield and Butterfield, engaged in buying and selling fine antiques and collectibles.

Later on it also acquired Billpoint, thus facilitating online bill payments; service facilitates and credit card payment between buyers and seller. eBay also bought PayPal to increase the number of services to consumers. It is the fast and safe and allows consumers to send money without sharing financial information, using account balances, bank accounts and credit cards. In 2011, it acquired GSI, a world known provider of ecommerce and interactive marketing services. The company had also acquired skype in 2005 in order to expand its moves into new markets, such as new cars, travel, real estate, and personal and business services. In B2C side of business, buyers and sellers get themselves registered with the company. In C2C model, eBay sellers and buyers provide feedback for each other, this resulting in strong relationships.

CONCLUSION

Chuck Fuerst, Director at HighJump Software says, "By 2020, a new direct-to-consumer model will change low-cost supply chain operations, which may lead to new warehouses operating 24/7 with the help of robotic labor, regional shippers flourishing with more short-distance truckload commutes, an increase in flexible delivery schedules, and new high-level job opportunities for managing e-commerce." Though e-commerce has made lives of consumer easy still they are posing new challenges on daily basis. A few companies have already started making supply chain changes: Amazon, Wal-Mart and e-Bay have already launched same-day delivery services. The companies using e-commerce incur the benefit of cost saving and improving performance. Therefore, in future integrating e-commerce into supply chain of business is necessary for competitive advantage and survival.

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