E-Commerce And Value Chain Model

Mirunalatha

Assistant Professor, Anurag Group Of Institutions, CSE Dept, Hydrabad, India

Abstract— The value chain model, as originally demonstrated by Porter (1985), identifies nine strategically relevant activities that create value and reduce cost in a specific business. These nine value-creating activities consist of five primary activities and four support activities. Successful implementation of e-commerce in an organization should be based on a thorough understanding of the areas in the value chain where e-commerce can add value most. More importantly, to succeed in gaining competitive advantage, ecommerce is to be based on the overall corporate strategy

Keywords: *role of intermediaries, value pricing, logistics/purchasing, fulfillment, and value nets among others*

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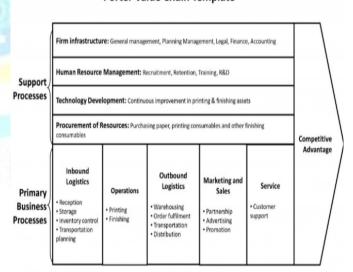
I. INTRODUCTION

All companies undertake series of activities in order to deliver a product to the customers. These series of activities like procurement of raw material, storage, production, distribution, etc. are referred as value chain activities. The function of value chain activities is to add value to product at every stage before it is delivered to the customers. There are two components, which make value chain - primary activities and secondary activities. The primary activities are directly associated with the manufacturing of products like supply management, plant operations, etc. The secondary activities are referred to as support functions such as finance, HR, information technology, etc. In the era of advanced information and communication technology, many businesses have started operations on the internet as its medium. Through the internet, many commercial activities like buying, selling, auctioning is taking place. This online commercial activity is known as ecommerce. E-commerce value chain has series of activities like electronic fund transfer, internet marketing, distribution channel, supply chain etc.

II. RELATED WORKS OF VALUE CHAIN

A value chain for a product is the chain of actions that are performed by the business to add value in creating and delivering the product. For example, when you buy a product in a store or from the web, the value chain includes the business selecting products to be sold, purchasing the components or tools necessary to build them from a wholesaler or manufacturer, arranging the display, marketing and advertising the product, and delivering the product to the client

Porter Value Chain Template

The value chain model, as originally demonstrated by Porter (1985), identifies nine strategically relevant activities that create value and reduce cost in a specific business. These nine value-creating activities consist of five primary activities and four support activities. The primary activities represent the sequence of bringing materials into the business (inbound logistics), converting them into final products (operations), shipping out final products (outbound logistics), marketing, and service. The support activities include procurement, technology development, human resource management, and firm infrastructure. This model is very helpful for identifying specific activities in business

where competitive strategies can be applied and where information systems are most likely to have a strategic impact. Successful implementation of ecommerce in an organization should be based on a thorough understanding of the areas in the value chain where ecommerce can add value most. More importantly, to succeed in gaining competitive advantage, e-commerce is to be based on the overall corporate strategy. Among a host of critical areas/ factors in the value chain that major organizations have taken into consideration for establishing a sound e-commerce strategy include role of intermediaries, value pricing, logistics/purchasing, fulfillment, and value nets among others. Following sections present an analysis of these areas.

III. BACKGROUND OF STUDY

Intermediaries may be more important now than ever before because most of the rapidly growing Internet businesses are essentially middlemen. For example, companies such as Amazon, CD-Now, Egghead.com, Cisco, and E*Trade can all be thought of as middlemen-resellers of products provided by some other source. Intermediaries will continue to be important because they provide consumers with selection, specialized distribution, and expertise. Some internal disintermediation may take place, in which employees will be removed if they add little value or even negative value to the distribution channel. For example, Dell, Cisco, and some online brokerages have eliminated staff in an attempt to realize cost savings in certain areas. Exhibit 1 illustrates an example of the role of intermediaries in the process of purchasing a book online from Amazon.com.

2. Value Pricing In addition to employing e-commerce technology to enhance distribution channels, this technology is also used to redefine pricing strategies. Most companies pursuing a premium pricing strategy, for example, can use the Internet to better understand their customers. The Internet allows companies to price with far more precision than they can offline and to create enormous value in the process. Value pricing involves several approaches. One approach to pricing involves businesses offering heavily discounted prices in an attempt to attract customers to their web sites. Another approach involves businesses transferring their "off-line" prices to the Internet. Neither of these approaches is very efficient because they do not maximize value. An attractive alternative approach is to utilize the Internet to track customers buying habits and adjust prices accordingly, thereby uncovering new market segments.

The Internet allows companies to test prices continually in real time and measure customer responses.

3. Brand Differentiation/Loyalty Pricing is just one of several ways for a company to differentiate itself from the competition. Another way in which a company can differentiate itself is by promoting brand loyalty. Brand loyalty encourages repeat customers and helps to create long-term profitability. A major benefit of customer loyalty is that loyal customers often refer new customers to a supplier.

4. E-Procurement E-commerce technology has provided organizations with the capabilities to improve the effectiveness and efficiency of the logistics and purchasing functions. Firms such as Wal-Mart and Amazon.com are currently outsourcing delivery, relying on logistics companies to deliver the product to the customer. E-procurement is the term currently used to denote the process of using the Internet to integrate supply chain partners through collaboration on key initiatives and to improve the purchasing process within organizations. A major benefit of e-procurement is the cost savings aspect. In fact, organizational costs of placing orders can be reduced by as much as 75% through utilization of the Internet. It also offers organizations the ability to use the Internet to search for the best pricing available. The overall advantage of practicing eprocurement is the fact the more automation allows partners quicker access to information. E-procurement also results in better communication among supply chain partners and consequently better supplier-customer relationships. Organizations are able to maintain tighter control over the purchasing process. Only those suppliers that organizations deem to be "preferred suppliers" will be able to transact business with the organization. Currently, e-procurement is being utilized primarily for the purchase of office supplies and items which are used for repair and maintenance of the organization's facilities (Smock, 2001).

5. E-Fulfillment Today's marketplace offers new challenges to organizations. A key initiative organizations have undertaken to better compete is that of "E-fulfillment". It can alter the way customers purchase as well as the manner in which manufacturers deliver the product to consumers. Technology has also allowed distributors and suppliers to focus on providing value-added services to complement their product offering. E-Fulfillment contrasts with traditional fulfillment. Suppliers are now capable of accepting order online via the Internet and having the information sent directly into their order processing systems, something not possible via traditional fulfillment. Orders placed via e-fulfillment tend to be smaller than those placed via traditional fulfillment channels. The expected and actual lead times are shorter than those witnessed via traditional fulfillment. 6. Value Nets Firms are continually seeking out new ways to attract and maintain customers. A development that has proven to be effective in attracting and servicing customers is that of the Value Net. A value net is a network consisting of partnerships, which assists in the transfer of information among supply chain partners on a regular basis.

The main benefit of a value net is the competitive advantage it offers to all participating organizations. The primary concept behind a value net is its ability to allow firms to address and solve customer problems, rather than just selling a product.

A popular trend in the marketplace to address niche markets is that of the onlineservice company. This form of business interacts directly with the customers primarily via the Internet. The advantage of this form of business is that it provides enhanced service to the customer in the form of direct door-to-door delivery for customers. This is a distinct competitive advantage that firms are looking to exploit In the world of e commerce companies can use the internet technology to improve the efficiency and effectiveness of particular value chain activities. There are commercially available hardware and software specifically meant to address management problems associated with the supply and distribution chain or the value chain system as a whole.

Specifically, the Internet technology benefits business organizations in the following ways: 1. It is a powerful tool for better supply chain management. 2. It is critical to internal operations such as just in time inventory, gear production schedules and production quantities to buyer orders, more accurate monitoring of buyer preferences and shifts in demand and It is extremely useful for collaborative data sharing with distribution channel partners-online systems reduce transactions costs. Value Chain and E-Strategy Every activity within a physical value chain has an inherent information component. The amount of information that is present in activities determines, company's orientation towards e-commerce. It has been observed that companies with high information presence will adopt e-commerce faster rather than companies with lower information presence. For example, a computer manufacturer has high information presence, i.e. they can provide a great deal of product information through their website. Consumers also have flexibility to determine the product configuration using the website. Such computer manufacturers and companies with comparative business model are also likely to adopt ecommerce. Activities which comprise of the value chain are undertaken by companies to produce and sell product and services. Some of the activities done within the value chain are understanding customer needs, designing products, procuring materials for production, production, storage of products, distribution of products, after sale services of products and customer care. Understanding Information Presence There are two ways to assess information presence. The first way is by looking at the industry, and second way is by looking at the product. In an industry with high information presence,

it has been observed that: ♣ Industry will have large number customer base. ♣ Production process is complex. ♣ Order turnaround cycle is long. For a product with high information presence following is observed: ♣ Product is simple to manufacture. ♣ Product has multiple functionalities. ♣ Product requires in dept end user training. Industry and product which satisfy above conditions are likely to adapt e-commerce. E-Strategy Companies with high information presence were the first to look at e-commerce as an alternate way of conducting business. For example, software companies, much of there is business is done through the internet. Their website provides in-depth product information through e-brochure, video, client opinion, etc. Sales leads are generated online; purchase and fund transfer is done, and also after-sales service is done online. These high information companies have made substantial investment in human resources and information/communication technology.

Challenges Companies which are moving towards e-commerce need to have business model developed to support online activities. The dotcom burst of 2000 has served hard example about companies doing e-commerce. Enterprise undertakes several primary activities as well as secondary activities to deliver the final product to customers. Here primary activities are defined as activities, which directly support production of product or service. Secondary activities or support activities are activities which primary activities

Primary Activities Primary activities in the value chain are directly related with the production and delivery of the final product. The objective of these activities is adding value to product that is more than the cost of product. This will ensure that company can generate healthy margin and stay in business. Primary activities mainly consist of inbound supply chain, operations, dispatch, sales and marketing and service. Inbound supply chain is made up of activities like receiving raw materials, storing raw materials and inventory management. Operations consist of activities which convert different raw material into final product. Dispatch activities consist of sending final product to distributors, retailers etc. Sales and Marketing activities includes promotion of products to potential as well as existing customers, networking with channel partners etc.

Service consists of activities like solving customer issues before the sale of the product as well after sale of the product i.e customer care or customer support. Commercial Value Chain Commercial value chain is defined as any value chain used to achieve its organizational goal. Every company in any given industry will have its own value. However objective all the different value chain is to add value chain at every stage till product is delivered. The value chain of business includes activities:

1. Potential Customer Attraction and Existing Customer Repeat: For online business it is very important that they are able to generate visitors for their website. This will ensure

customers are aware of available products and pricing. Companies also want to ensure that website is able repeat customers also.

2. Customer Interaction: Website design and navigation should ensure that potential buyers are able to reach the required web page. Another option available is customers entering their requirement and website displaying potential products.

3. Order Processing and Payment: Once a potential buyer has selected the product, website should be equipped to display other product similar to purchase or pop a question whether customer would be interested in making another purchase. Purchase order should also highlight possible shipping date and number of days before product will arrive. After purchase transaction, the next important step is payment through secured fund transfer.

4. Order Delivery and Customer Care: Website should be able to provide online tracking of the product; it should also provide details about possible delays. Website should be equipped to solve any queries online through frequently asked question, email support etc. The Quantitative Approach for e-Strategy - Seven Dimensions of e-Commerce The way business or commerce gets conducted has undergone a great deal of change due to the advent of information and communication revolution. In the last two decades or so there has been a phenomenal growth in ecommerce. Electronic commerce or e-commerce consists of buying selling and auction of various products and services through an online medium such as the internet. The payment of transaction is done through a secure online payment system. All or majorities of today's companies either have websites or conduct e-commerce. In such a scenario, it becomes very important to have well defined business model and formulated e-commerce strategy.

E-strategy Formulation The two very important factors which determines a successful strategy is customer requirements and commercial scalability. Without either, business will fail in its venture. Customers expect superior quality in product and service they purchase. For e-commerce, quality means easy negotiable website, secure transaction and web-site management. For companies to develop and manage e-commerce sites, it has to invest in manpower and technology. Ecommerce sites consist of complex software and hardware structure. Companies make a choice for technology to run its site based on cost-benefit analysis and project scalability. Therefore, it is important for companies to undertake a quantitative approach towards e-commerce. Seven Dimensions of e-Commerce A successful e-commerce strategy model consists of organization structure policy and positional structure policy. Organization Structure Organization structure is building block of successful strategy. It consists of leadership, infrastructure

and organizational learning curve. A successful strategy starts with vision and mission statement. This vision comes from corporate leadership. Corporate leadership should keep open mind about prevailing new technology and should be flexible in changing strategy to tune with an ever-changing world. Another building block of successful strategy is technology infrastructure. The technology infrastructure has to be adaptive to constant innovation and requirements throughout the organization. The technology infrastructure needs to be cost effective, secure and manageable. The last important portion of organizational structure is organizational learning.

Organization needs to maintain and encourage culture of organizational learning. This prepares company for adaption of new strategy and introduction of new technology. Organizational Positioning The second important factor of e-strategy is the organizational positioning in technology, brand, service and market. Technology leadership provides companies the competitive advantage. Therefore, it is important to identify emerging trend and invest in that technology solution. The internet has provided an alternate medium through which an organization can benefit in brand development. People are logging onto the internet more than ever.

This has provided golden opportunity for organization to reinforce it brand leadership or create brand awareness. Another dimension of successful organization positioning is service leadership. Service includes providing customer with delightful experience in pre and post sales scenario. Delightful service does not translate into revenue immediately, but helps in building relationship, creating brand awareness and creating brand ambassadors. Organizations have managed to achieve phenomenal growth using the internet. They have assessed market conditions preemptively and responded by providing correct market offering. Clearly from above in the current business environment, it is important to acknowledge importance of ecommerce and prepare a strategy which provides an organization competitive.

E-Procurement - Tools, Application and its Benefits In layman's term, e-procurement is nothing but electronic data transfer to support operational, tactical and strategic procurement. E-procurement has been existence for long time in one form or the other earlier it was done through electronic data interchange. In today's environment, most of the e-procurement is done through the Internet. Traditionally, procurement of supplies and material was done through paper, which slowly migrated to usage of an electronic medium for order printing and storing. With the advent of the Internet e-commerce flourished, and procurement was done through email and websites. As the Internet technology evolved e-catalogue came in the forefront thus traditional procurement was getting done

through the Internet. In the current market with data security and advanced tools whole process of e-procurement is done through the Internet. Procurement as a Function Procurement departments are found in most of the organization.

There are responsible for purchase of raw material, office supplies, office equipment, facility maintenance, etc. It is important for them to know and understand the e-procurement concept so that they can add efficiency and effectiveness to the whole process. Procurement managers must have complete understanding of various e-procurement applications. He must be able to identify processes, which can make procurement effective. He should have understanding of e-procurement benefit. He should understand risk associated with eprocurement implementation. E-procurement Tools and Application There are several tools and application which fall under eprocurement some of them are as follows:

♣ In electronic data interchange system, procurement messages are exchange between computers of two separate organizations. Message is exchange in batch and can be easily transmitted and stored. EDI is mostly used for order transmission, order confirmation, logistic information and order invoicing.

♣ Enterprise resource planning system have separate module to handle the procurement function.

♣ Internet based tools and resources help in the process of procurement. Some of the common applications are email, internet based EDI, XML based data exchange via the internet etc. Internet provides tools for e-sourcing, e-tendering, e-auctioning, e-ordering and e-catalogue.

♣ E-sourcing tool is used to identify potential suppliers during the selection phase. E-tendering tool is used to send out tenders with procurement requirements, supply schedule, contracting terms, etc. E-auctioning tools bring together potential supplier identified during selection phase under one umbrella to undertake auctioning process. E-auctioning tools operate under two separate mechanism, upward price mechanism for selling organization and downward price mechanism for the buying organization. Eordering tool is used procurement of office supplies and services; it is accessible by all employees within the organization and is mainly used for ad-hoc purchases. A web-based ERP tool is used for product-related purchases, is exclusively used by the procurement department, and falls under a planned process. A traditional procurement process starts with phase requirement definition, sourcing, solicitation, evaluation, contracting and contract management. In the internet based this steps are replaced by e-sourcing, e-tendering, e-reverse auction, e-ordering and web based ERP. E-procurement Benefits E-procurement influences the following:

♣ The cost incurred on goods and services associated with production.

♣ The cost incurred on procurement process such as ordering, administrative support etc.

♣ The cost incurred on specification formulation, supplier selection etc.

♣ The cost benefit in establishing relationship with suppliers.

♣ It promotes transparency in the process and therefore improves accountability. Enterprise Marketing Automation Enterprise marketing automation is part of customer relationship management module. Enterprise marketing automation can also be independent software installed by the company. The main function of the enterprise marketing automation module is to run different marketing programs in the organization. The enterprise marketing automation module also helps the given organization develop a business plan. An enterprise feeds from the customer data which is maintained by the company. Therefore, the module helps the company to maintain, manage and filter customer-related information. When a company decides to start a marketing campaign for a particular product than the enterprise marketing automation tool provides the company a short list of customer who could be interested in the product. This filtration of customer is done based on customer segmentation. Customer Segmentation Customer segmentation is an important parameter to consider when designing marketing campaigns. Customer segmentation technique splits the customer on various parameters. If the marketing campaign satisfies those customer parameters, then, enterprise marketing automation tool will provide their list. Parameters considered for customer segmentation are as follows:

♣ Homogeneity within a particular customer segment.

♣ Heterogeneity across different industry and customer segment.

♣ Customer should respond in an identical manner to a particular marketing campaign.

♣ Customer should be reachable through the marketing campaign.

♣ Organization should be able to create a marketing strategy for the group. Segmentation Strategy An organization looks to target a particular segment for following reason:

♣ Organizations are better able to understand and satisfy needs of the customer.

♣ Organizations are able to generate higher profits through segmentation.

♣ Segmentation provides a great opportunity of growth.

♣ Segmentation can create a long and fruitful customer relationship.

♣ Segmentation can lead to higher market share.

However, to devise a successful segmentation strategy is difficult. Organizations typically run into challenges around selection of variables to define segment. There is also a difficulty in identifying correct algorithms for segmentation. Components of Enterprise Marketing Automation There are about five components of enterprise marketing automation. They are as follows:

1. Promotions: These are the activities undertaken by organization to increase their sales. Promotions can be categorized as cross selling or up selling. In cross selling, customers are offered similar products to one they have already bought. The aim of cross selling is to satisfy all the customer requirements. In up selling customer are offered expensive product as well as an upgrade to the existing products. Up selling is more profitable, and it is in top up of existing sale.

2. Event Based Marketing: This involves registering customers for seminar and in case web cast via the Internet. Companies look forward to sponsoring events and include their products as part of the marketing event.

3. Loyalty and Loyalty Programs: Loyalty is defined as continued commitment of a customer to a particular product, brand or organization. Customer tends to maintain their loyalty if companies provide value to them and/or it is much expensive to change product brand or organization.

4. Partner Management: It is a marketing campaign organization joins hands to promote their and partner's products. This could also be referred to as joint promotion.

5. Response Management: This gives flexibility in marketing campaigns based upon the initial reaction from the customer. It is a response management in real time

IV. CONCLUSION

kness' without assessing the extent to which customers value these competences, so too we should not proceed to develop marketing strategies and plans based on these without also assessing how strong or weak our competitors are in these areas. The perspective that needs to be taken is from the market to the company and not from the company to the market, which is, after all, the essence of marketing orientation. The importance of assessing strengths and weaknesses in relation to competition, as well as to needs of customers, stems from the fact that a key reason for assessment of strengths and weaknesses is, as we have seen, to help in the delineation and selection of competitive marketing strategies. For example, the company might have

distinctive strengths in the areas of quality and after-sales service, and these might be strengths which the customer values, and hence are key factors for success in these areas. Stronger, weaker or equal; it simply does not make sense to evaluate our strengths and weaknesses without comparing ourselves to the competition. We can see from our discussion that the issues which arise in the process of evaluating strengths and weaknesses are complex. It might be said that weaknesses are easier to understand than strengths. Essentially weaknesses are constraints, but as with strengths we need to assess them in the context of customer and market needs and of the competition. A weakness in terms of after sales service would matter less if this factor were unimportant to business success and if our competitors were even weaker. Again, as with strengths, we also need to assess if our weaknesses are major or minor. A useful approach to the evaluation of both strengths and weaknesses relative to the competition is the use of a strengths and weaknesses profile.

The main pillar is the exchange of information with suppliers, distributors and customers. The information exchange has as a result the strengthening loyalty of suppliers and customers. Internet enhances the value offered to the customer through the value chain. This value is created through the cooperation of all parties. Consumers have the opportunity to participate in collaborative product design. Businesses personalize the information of each customer to produce products that meet their needs. Customer service and after-sales services are fulfilled electronically, as well as orders.

Parallel distribution systems, inventory management and monitoring of shipping of the product are used. Apart from the management of the company's relationships with its customers, the company is connected in real time with its suppliers to carry out the functions that unite them. Finally, management takes better decisions through systems for all segments of the business by having a holistic approach to matters that affect it.

The presence of businesses of Informatics and Communications studied in e-business allows them all above by automating their processes. The effect is that they benefit from the satisfaction of their customers and their suppliers, by reducing the cost of finding them and reducing the cost of inventories. In addition, it has strengthened their position in the market and has increased

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