RESEARCH STARTERS
ACADEMIC TOPIC OVERVIEWS

B2B Business Models

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Abstract

Information technology is not only revolutionizing the way that enterprises do business with consumers, but also the way that they do business with each other. In addition, many experts predict that business-to-business transactions will exceed those of business-to-consumer e-commerce. However, just as there are different business models for non-electronic businesses, there are also more than one model for business-to-business e-commerce. Two revolutionary new business models that have come out of this movement are the business-to-business e-commerce models of Dell and Cisco. However, these models are not appropriate for every organization. In addition to these new paradigms for individual firms, other changes in business-to-business e-commerce are occurring that are revolutionizing the traditional paradigms.

Overview

Traditionally, when one thinks of business paradigms, one of the first things that springs to mind is the concept of companies selling to consumers. The department chain store or the big box store down the street are prime examples of this business model. Historically, this meant that the business had a brick-and-mortar location where it employed its own personnel. Even with the advent of the Information Age, this model changed only slightly, with information technology being used to support the way that business was done by making standard operations more efficient. For example, manual cash registers have been replaced in most modern businesses by high tech models that keep track of various aspects of transactions including tender type (i.e., whether the transaction was cash, check, charge, etc.) and amount paid as well as inventory control information or other administrative data. Such automated information collection makes closing the store at night and balancing the books a much easier task and can also help store and chain managers to make decisions about the type of inventory to carry, new services that could be offered to customers, and demographics that can be used in marketing efforts.

However, information technology not only allows organizations to perform various business processes more efficiently, in many cases it also allows them to reengineer organizational processes by improving the effectiveness and efficiency of the various processes within an organization. With advances in information systems, however, this model can now be taken a step further. Electronic business-to-consumer paradigms allow a business to market and sell directly to consumers. Examples of this business model include Amazon.com, (the online purveyor of books and a wide variety of other items) and Travelocity (the online travel agency) businesses that sell electronically directly to consumers.

However, not all businesses sell directly to consumers, nor should they. Automobile parts manufacturers frequently sell to the automotive industry rather than to the car owner. Precious stones' miners sell to the gem industry where the stones are cut and sold, in turn, to jewelers and suppliers who, in turn, sell to suppliers. Pharmaceutical companies sell to directly or indirectly to pharmacies and hospitals who sell the products to customers. As with business to consumer paradigms, the model of business-to-business (B2B) commerce has been revolutionized by advances in information technology and systems.

Keywords

Business Model

Business Process

Business-to-Business (B2B) E-Business

Business-to-Consumer (B2C) E-Business

E-Commerce

Electronic Exchanges

Enterprise

Hub

Information System

Information Technology

Just-in-Time Manufacturing (JIT)

Portal

Target Market

Despite the increasing popularity of business-to-consumer e-commerce with its ease of ordering and comparing items online, many experts predict that business-to-business transactions will exceed those of business-to-consumer e-commerce. This makes sense. For example, although a consumer may order a book over the Internet, the business from whom the book is purchased not only has to interact with the purchaser but also with the publisher who printed the book. The publisher, in turn, needs to interact with the paper and ink suppliers, the maintenance firm that keeps the printing presses running, the authors who submit their manuscripts online, and so forth.

Business Models for Conducting B2B E-Commerce

Just as there are different business models for non-electronic businesses, there is also more than one model for business-to-business e-commerce. In general, a business model is an organization's approach to doing business. Although there are many different business models available, most business models have several core concepts in common.

- At the level of the most basic business model, an organization must have something of value to offer to the marketplace, whether it be goods, products, or services. A bookstore, for example, may offer books and magazines as well as various services such as special ordering. To be successful, the thing which the organization offers its customers needs to be of value – something that the customer either wants or needs (or both).
- Another part of the business model is the customer – the target market to whom the organization is trying to sell its offering. The business model needs to articulate how the business will gain, maintain, and foster relationship with customers.
- In order to get the product into the hands of the customer, the organization also needs an infrastructure in place. The infrastructure includes such things as having the right mix of people and skills necessary to produce the product as well as to run the business. This may include not only the people working directly for the organization, but partners as well who provide skills or services that that business does not provide for itself but that are necessary to get the product into the hands of the customer. This may include companies that provide complementary skills necessary to make the product (e.g., suppliers) as well as supply chain partners that provide raw materials, supplies, or components or that distribute, warehouse or sell finished products.
- The business model also needs to include consideration of the company's income and cash flow as well as its cost structure.

Electronic Data Interchange & E-Commerce Models

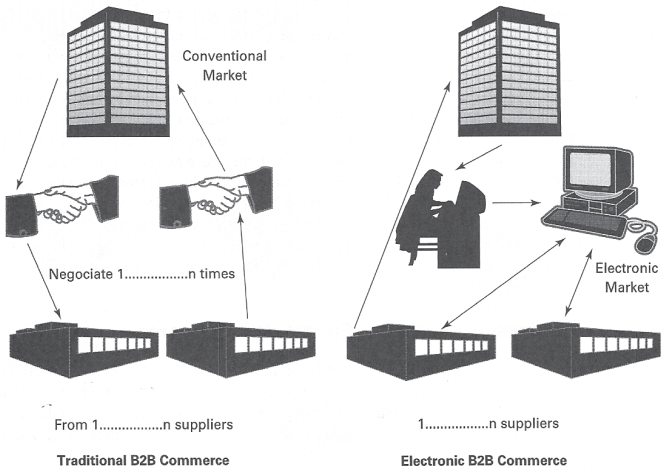
One of the outgrowths of information technology that has enabled the development of new business-to-business e-commerce models is electronic data interchange, a standard format used in exchanging business data such as price or product identification number. Electronic data interchange is a standard format that is used to exchange business data including price or product identification number. Electronic data interchange technology is particularly important for in international commerce where paperwork required for international trade creates costs that can be up to seven percent of the value of the items being traded. With electronic data interchange technology, on the other hand, shippers, carriers, customs agents, and customers all can send and receive documents electronically, thereby saving both time and money for international transactions.

Advantages of E-Commerce for B2B Businesses

As shown in Figure 1, the traditional business model for business-to-business operations involves a procurement staff that negotiates with various suppliers. For example, a bookstore may procure books from several distributors and office supplies from one or more other suppliers. In the e-commerce business model, a procurement staff (typically smaller than the staff necessary in the traditional business-to-business model) shops online for supplies and other items necessary to the business. Just as it does for the consumer in the business-to-consumer business model, the Internet allows businesses to comparison shop online in order to find the most appropriate product at the best price. This reduces many of the front-end costs for finding goods and products that are incurred in the traditional model.

Figure 1: Business-to-Business Business Models

(From Lucas, p. 52)



Electronic Exchanges

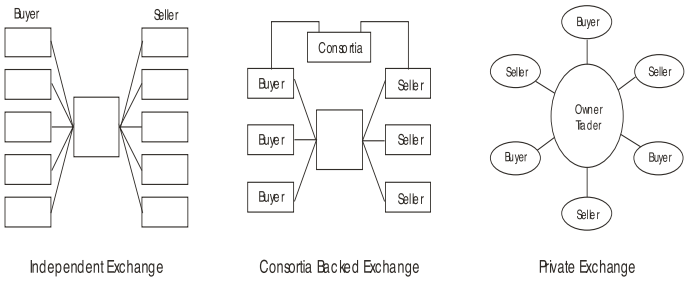
Another way that this can be done is through the use of electronic exchanges (also known as electronic markets or B2B hubs). These hubs are sites on the Internet where buyers and sellers can come together to exchange information and buy and sell products and services. As shown in Figure 2, electronic interchanges typically have one of three structures.

Public Exchange

In a public exchange (also known as an independent exchange), a third party market operates the electronic market, displays information, and provides the tools necessary to conduct e-business. Independent exchanges may be vertical (i.e., serving members of a specific industry) or horizontal (i.e., simultaneously serving businesses in different industries). Public exchanges are independently owned by the third party that displays the content and provides electronic tools for conducting business.

Figure 2: Electronic Exchange Structures

(Adapted from Senn, p.415)



Consortia-backed Exchange

The second general type of electronic exchange is the consortia-backed exchange. These are e-markets created by consortia of traditional firms within an industry who band together to create a common forum for business-to-business transactions of goods and services. One of the primary purposes of consortia-backed exchanges is to drive down costs for all participants.

Private Exchange

Another type of electronic exchange structure is the private exchanges. These exchanges are structured around the needs of a specific sponsoring business and its trading partners and can be joined by invitation only. There are several advantages to private exchanges over other types of electronic exchanges. First, the owners of these exchanges can regulate access to both buyers and sellers. This means that the owners have the ability to exclude competitors and their suppliers from the exchange so that the exchange only benefits its members. The owners of a private exchange can also offer pricing incentives or alternatives so that they can streamline business processes and benefit participants. In addition, as opposed to public exchanges, most private exchanges can be tailored to serve specific products.

Applications

For many years, the traditional mass manufacturing (or Fordist) model followed the principles of assembly line manufacture that revolutionized production when first implemented by Henry Ford. Certainly, the assembly line allowed products to be made more quickly and cheaply than ever before, but it did so at a price. Assembly lines are set up to produce masses of products that are all the same; custom options were – at least in the beginning – difficult to acquire. Even though the assembly line process improved over the years, it was not until the flexibility and power brought about by information technology that a true revolution of the manufacturing process occurred. The use of the Internet to facilitate business-to-business transactions promises reduced costs, better access to buyers and sellers, improved marketplace liquidity, and more efficient and flexible transaction methods.

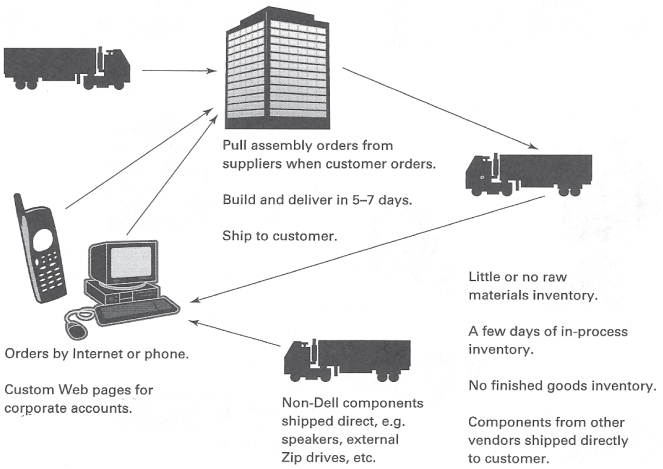
The Dell Business Model

One of the business models for business-to-business operations that has been enabled by information technology is the Dell business model. As shown in Figure 3, in this model, orders for computers are placed with Dell by telephone or through the Internet. Through a process called just-in-time (or lean) manufacturing, waste is reduced and productivity improved by only having the required inventory on hand when it is actually needed for manufacturing. This reduces both lead times and set up times for building a computer. Under the just-in-time philosophy, Dell only orders the parts for a computer when it has a firm (and in the case of non-corporate orders, prepaid) order. As a result, Dell operates with little in-process and no finished goods inventory: Products are shipped as soon as they are manufactured. This approach also enables Dell to forego having brick and mortar store fronts with inventory that must be kept on the books or that might become obsolete, thereby significantly reducing overhead. In addition, items that are not built by Dell are shipped directly to the customer by the manufacturer. These features help Dell to reduce the costs of production and sales. Far from being inflex-

ible, however, this process also allows Dell to custom design systems for its customer within certain parameters as well as to offer a range of items rather than a single system.

Figure 3: The Dell Business Model

(From Lucas, p. 53)

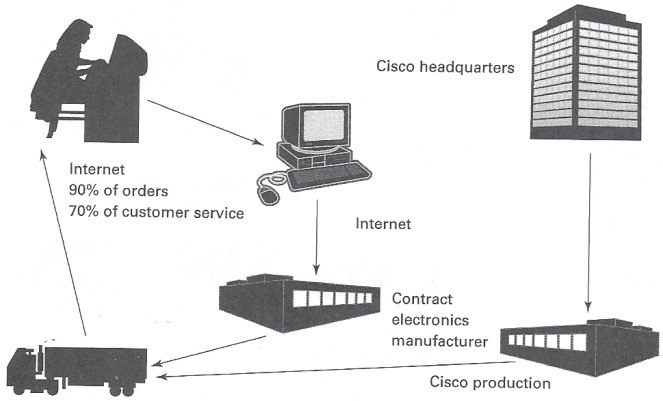


The Cisco Business Model

Another lean business-to-business model that has been enabled by information technology is the Cisco model (Figure 4). This successful network communications manufacturer receives approximately 90 percent of its orders over the Internet. The orders are routed to contract electronics manufacturers who build the products to Cisco's specifications. Not only are the majority of Cisco's orders received over the web, but 70 to 80 percent of their customer service requests are also dealt with online.

Figure 4: The Cisco Business Model

(From Lucas, p. 54)



Other Business Model Innovations

Although the business models used by Dell and Cisco have revolutionized the way that these and similar organizations do business over the Internet, these models are not appropriate for every organization.

E-Hubs

In addition to these new paradigms for individual firms, other changes in business-to-business e-commerce are occurring that change the traditional paradigms. Electronic hubs (also known as vertical portals) are business-to-business web sites that bring together buyers and sellers in a particular industry such as information technology or retail. These hubs facilitate business transactions within an industry and may charge a transaction fee for purchases. The value of hubs is that they reduce transaction costs by aggregating buyers and sellers in an electronic marketplace. As opposed to business-to-consumer hubs that are one-way networks that primarily create value for sellers, business-to-business hubs are two-way networks that mediate between buyers and sellers and create value for all parties. Business-to-business hubs create value in a number of ways including reducing search costs, standardizing systems, and improving matches for both buyers and sellers. Business-to-business hubs offer more choices to buyers and give sellers more access to buyers. For example, if five buyers and five sellers were potentially interested in doing business with each other, they would first have to locate each other. The sellers would have to determine who the potential buyers were through advertising or a direct sales force. The sellers would then have to make a contact with each potential buyer. This would involve 25 separate searches and 25 separate contacts each time a seller wanted to sell. With the hub system, however, this number is drastically reduced. The hub finds the potential sellers and buyers, reducing the total number of postings to ten: Five postings on the hub by the sellers and five views by the buyers. Hub systems also allow information such as credit checks, product descriptions, and evaluations to be transferred more easily.

Vertical Hubs

Vertical hubs are set up to specialize within an industry or other vertical market. They provide domain-specific content and relationships that are of value to their participants. Vertical hubs are particularly advantageous when there is much fragmentation among the buyers and sellers, and inefficiency in the existing supply chain. Vertical hubs that are successful tend to have a high degree of domain knowledge and industry relationships, create master catalogs and allow advanced search options. Examples of vertical hubs include Band-X for the telecommunications industry, Cattle Offerings Worldwide for the beef and dairy market, PlasticsNet.com for the plastics industry, and Ultraprise for secondary mortgage exchange.

Functional Hubs

Functional hubs, on the other hand, are horizontal hubs that provide the same functions across different industries rather than more functions within a single industry. Functional hubs are successful in situations where there is a greater degree of process standardization and sufficient knowledge about the processes and the ability to customize the business process to respond to differences in various industries. Examples of functional hubs include iMark which focuses on buying and selling used capital

equipment across industries, MRO.com for maintenance, repair, and operating procurement, Employease for employee benefits administration, and Youtilities for energy management.

Systems for Improving B2B E-Commerce

Business-to-business e-commerce is still in a state of flux as enterprises learn how to leverage information technology in general and the Internet in particular into systems that help them more efficiently and effectively do business. Observers are looking at several.

- First, to make business-to-business e-commerce worthwhile, systems need to evolve to handle not only simple transactions but complex ones as well. To facilitate this need, standards will need to be developed and put into place.
- In addition, as markets become more competitive, transaction fees will most likely decrease or even disappear. Among other implications, this means that providers will need to shift from dealing in transactions to offering more comprehensive solutions to business needs. For example, products can be bundled with related information and services in an effort to forge customer loyalty and long-lasting relationships.

New business-to-business models will continue to appear as technology continues to evolve and enterprises seek creative solutions. Among new business-to-business e-commerce models that are beginning to emerge are the mega exchange that maximizes liquidity and sets common transaction standards, the specialist originator that deals with complex and relatively expensive products, the e-speculator model that has a high degree of product standardization and moderate to high price volatility, the solution provider in which product costs are only a small portion of the overall costs, and the sell-side asset exchange with high fixed costs and a relatively fragmented supplier and customer base.

Conclusion

E-commerce and the information technology that enables it allow organizations to conduct business together in new ways. Two revolutionary new business models that have come out of this movement are the business-to-business e-commerce models of Dell and Cisco, which support lean manufacturing and improve transaction efficiency. In addition, new models for business-to-business e-commerce continue to evolve as enterprises find new and creative ways to do business with each other.

Terms & Concepts

Business Model: The paradigm under which an organization operates and does business in order to accomplish its goals. Business models include consideration of what the business offers of value to the marketplace, building and maintaining customer relationships, an infrastructure that allows the organization to produce its offering, and the income, cash flow, and cost structure of the organization.

Business Process: Any of a number of linked activities that transforms an input into the organization into an output that is delivered to the customer. Business processes include management processes, operational processes (e.g., purchasing, manufacturing, marketing), and supporting processes, (accounting, human resources).

Business-to-Business (B2B) E-Business: E-business in which a business markets and sells to other businesses.

Business-to-Consumer (B2C) E-Business: E-business in which a business markets and sells directly to consumers.

E-Commerce: E-commerce (i.e., electronic commerce) is the process of buying and selling goods or services – including information products and information retrieval services – electronically rather than through conventional means. E-commerce is typically conducted over the Internet.

Electronic Exchanges: Sites on the Internet where buyers and sellers can come together to exchange information and buy and sell products and services.

Enterprise: An organization that uses computers. Although this term is often applied to large organizations, the term can be applied to both small and large organizations.

Hub: A business-to-business web site that brings together buyers and sellers in a particular industry. Web hubs may charge a transaction fee for purchases. Also known as a vertical portal.

Information System: A system that facilitates the flow of information and data between people or departments.

Information Technology: The use of computers, communications networks, and knowledge in the creation, storage, and dispersal of data and information. Information technology comprises a wide range of items and abilities for use in the creation, storage, and distribution of information.

Just-in-Time Manufacturing (JIT): A manufacturing philosophy that strives to eliminate waste and continually improve productivity. The primary characteristics of JIT include having the required inventory only when it is needed for manufacturing and reducing lead times and set up times. Also called "lean manufacturing."

Portal: A web site that acts as a point of access to the World Wide Web. Portal sites typically offer a search engine or catalog of web sites as well as other features.

Target Market: The people or businesses to whom the entrepreneur wishes to sell goods or services.

Bibliography

Lucas, H. C. Jr. (2005). *Information technology: Strategic decision making for managers*. New York: John Wiley and Sons.

Sawhney, M. & Kaplan, S. (1998). Let's get vertical. Imagine Media Inc. Retrieved September 25, 2007, from http://www.gwu.edu/~ibus266j/Global%20B2B/Copy%20of%20models-b2b.htm

Senn, J. A. (2004). *Information technology: Principles, practices, opportunities* (3rd ed.). Upper Saddle River, NJ: Pearson/Prentice Hall.

Wise, R. & Morrison, D. (2000). Beyond the exchange: The future of B2B. *Harvard Business Review*, 78(6), 86-96. Retrieved September 25, 2007, from EBSCO Online Database Business Source Complete. http://search.ebscohost.com/login.aspx?direct=true&db=bth&AN=3712730&site=bsi-live

Suggested Reading

Huang, E. (2007). Entry to the e-commerce markets of China and Taiwan: An application of content analysis. *International Journal of Management*, 24(1), 82-91. Retrieved September 24, 2007, from EBSCO Online Database Business Source Complete. http://search.ebscohost.com/login.aspx?direct=true&db=bth&AN=25139349&site=bsi-live

McAfee, Andrew. (2000). The Napsterization of B2B. *Harvard Business Review,* 78(6), 18-19. Retrieved September 25, 2007, from EBSCO Online Database Business Source Complete. http://search.ebscohost.com/login.aspx?direct=true&db=bth&AN=3712522&site=bsi-live

Teschler, L. (2000). New role for b-to-b exchanges: Helping developers collaborate. *Machine Design*, 72(19), 52-57. Retrieved September 25, 2007, from EBSCO Online Database Business Source Complete. http://search.ebscohost.com/login.aspx?direct=true&db=bth&AN=3646644&site=bsi-live

Williams, D. (2007). Going from push to pull. *Brand Strategy*, 209, 36-37. Retrieved September 25, 2007, from EBSCO Online Database Business Source Complete. http://search.ebscohost.com/login.aspx?direct=true&db=bth&AN=24283270&site=bsi-live

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