Business WITHOUT Borders

JANET ATKINSON

by Eric J. Johnson

Every day we hear astonishing predictions about the impact electronic commerce is expected to have on the global economy. Internet stocks, and indeed all things Internet, are skyrocketing (and some may soon be collapsing) on a daily basis. These trends make the entire area of e-commerce complex and apparently problematic for managers. You may find yourself uncertain as to what path to take, yet convinced that if you don't proceed aggressively, current or future competitors will race by you and dominate the nascent electronic market. A growing number of businesses are moving forward, most with more than a little trepidation and uncertainty.

A HISTORICAL VIEW

It is often instructive to look backward in order to understand the future more clearly. By looking at historical analogies, we can see in retrospect the key benefits and difficulties in the relationship between new technology and business models. One analogy that strikes a number of observers as relevant is the introduction of broadcast radio. Much like e-commerce, its early practitioners were essentially technologists rather than business professionals. As radio got off the ground and established itself, many fortunes were made and lost. The erstwhile inventor of a key radio technology Lee de Forest was involved in multiple failed companies, arrested and tried for stock fraud, and died nearly penniless.

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De Forest's mistake? He had the wrong business model, thinking that manufacturing hardware (radios) would produce significant returns. Most programming (content in today's terms) was horrendous, and it was not until David Sarnoff understood the economics of the new medium that the first real business model appeared. He realized that the same program could be broadcast over many different radio stations and that in doing so the cost of the programming could be amortized over many stations and listeners, lowering production costs and increasing the quality of programming. For the first time, advertising could be sold to a national audience, changing fundamentally the cost of reaching a mass audience.

CHANGING COSTS AND CHANGING CHANNELS

To tame the beast of e-commerce, it is best to understand how these technologies change costs: in the words of Deep Throat, Bernstein and Woodward's informant in All the President's Men, "Just follow the money." Just as mass advertising generated new businesses and new business models earlier, so e-commerce is doing now. To understand these models, one must understand how the adoption of information technology by customers radically changes costs, in many cases by a factor of 10.

Some costs are changing because of changes in supply chains and channels of distribution. In many cases, reduced costs allow producers to go directly to customers, eliminating such intermediaries as distributors and physical retailers. This phenomenon, disintermediation, happens when e-commerce provides a lower-cost way for producers to reach their customers. This is particularly true in industries in which the principal product is already digital—or, as economists put it, information goods.

Consider the airline industry and its intermediaries, travel agents. The most salient products generated by travel agents are information goods: prices, departures, availability and the like. And the providers of these products are often the airlines themselves. The only physical product, a ticket, is being replaced in many cases by an electronic ticket. Some airlines have seized upon this as a profit opportunity, booking tickets directly using their existing information assets. United Airlines, for example, has introduced software and a Web site that allow customers to book their tickets on more than 500 different airlines through the existing online reservation systems, but using a very friendly front end. Similar efforts are being conducted by most major airlines. The benefit to the airline: it now collects the commission. According to published reports, an airline's cost for booking a transatlantic ticket through a travel agent is between $70 and $80. The online cost is about $20. In addition, United gains information about flights taken on competitors as well as information about hotel or auto-rental bookings, both of which are available through this online service. And United is likely to experience an increase in customer loyalty as familiarity with the online booking system grows.

Reduced costs do not, however, mean the elimination of intermediaries. They also create opportunities for both new intermediaries and new markets, which are being created because of cost changes. One example is the well-known online vendor eBay, which has established the equivalent of a national flea market. It has taken advantage of the reduced costs generated by information technology to increase the number of potential buyers and sellers. Currently, more than 4 million items are for sale on eBay. Can you imagine the cost of printing this catalogue? eBay uses sellers to generate the content and provides only information, about both goods and sellers. Interestingly, although there are reputable auction services run by major players like Amazon and Yahoo that charge nothing, eBay still commands an 80 percent share of the online auction market.

As impressive as eBay's success is, the real success stories among new intermediaries are likely to come from business-to-business markets. These markets have traditionally been very costly and, it could be argued, inefficient, with limited numbers of buyers and sellers and with information transmitted (and in many cases held) by brokers. Here, new intermediaries like Chemdex, E-Steel, MetalExchange and many others are competing to invent business models that leverage the reduced costs offered by information technology.

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THE BUYER'S VIEW: TIME IS MONEY

In any transaction, there are, of course, at least two participants: buyers and sellers. Many of the changes in cost we are describing are savings not only for the firm but also for the buyer in that most precious of commodities, time. Much of the research I have been involved in examines how e-commerce can save customers time. In one paper, my colleagues and I have shown that those who are most likely to buy online are those who are starved for time. For example, one predictor of who is buying online is the number of hours worked by each family member. In another project, we show that those Web sites that are easily learned generate more purchases. This runs a bit against the conventional wisdom that good Web sites are "sticky," holding their customers a long time. While that is true for some business models, we show that if you are making money by selling things, the faster your customers can close the purchase, the better. In many cases, Web sites seem to be designed by graphic artists who believe that a good site is like a good magazine page. Instead, our results suggest that a good e-commerce site is like a good, convenient store, where it is easy to find what you want to buy. More important, given that most electronic shopping baskets are abandoned, it should be easy to check out.

Above all, these effects are important not just for initial sales but also for continuing loyalty. A great fear in e-commerce is that people will use price search engines, or bots, to locate the goods they want at the lowest possible price. Again, our research suggests that such price shopping is limited and that, for now at least, buyers are more swayed by high levels of service than price.

FOR COLUMBIA BUSINESS SCHOOL: CHALLENGES AND OPPORTUNITIES

Understanding how to compete in this world of changing costs is challenging. For professors, this challenge is also an opportunity. Suddenly, the research that once seemed so theoretical has real-world relevance. But the need for new curricula follows closely as well. Columbia Business School is integrating e-commerce in meaningful ways throughout the core curriculum, new electives and executive education. There is great demand—for example, the first three sessions of the Executive Education course E-Commerce: Creating a Strategic Advantage are sold out. What is gratifying, however, is that many of the ideas that once might have seemed to be obscure academic research are, in fact, of value.

Eric J. Johnson, the Norman Eig Professor of Business at the School, teaches in the Marketing Division; the Media, Entertainment and Communications Program; and Executive Education. Coauthor of Decision Research: A Field Guide and The Adaptive Decision-Maker, he has a strong research and teaching interest in electronic commerce. For more details, visit http://ecom.gsb.columbia.edu.