

Electronic Commerce and the Transformation of Marketing

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INTRODUCTION

As trade barriers fall and global markets emerge, companies are adopting electronic commerce practices in order to remain competitive or to increase their market share. Although previous forms of electronic commerce such as Electronic Data Interchange (EDI) had existed for years, we are now witnessing the rapid adoption of the Internet as a new commercial medium. The Internet allows businesses to participate in a truly global, electronically mediated marketplace (Auger and Gallagher, 1997; Hoffman and Novak, 1995a; Quelch and Klein, 1996). Conventional, wired Internet is being supplemented by wireless access – both at the leading edge of e-commerce (Scandinavia, United States, Japan) and at the lagging edge of e-commerce (Bangladesh).

Companies such as Sun Microsystems, Cisco Systems, and Dell Computers have successfully managed the transition of a significant proportion of their business into the electronic medium and, as a result, report Internet related revenues in billions of US dollars (Means and Schneider, 2000). Many other companies with prosperous businesses in the physical marketplace, however, have found it difficult to translate their traditional forms of marketing into the realm of the Internet. For examples, Borders – America's most profitable chain of bookstores and the leader in creating the book "superstore" concept – fell behind its physical and virtual rivals when it came to the Internet and eventually outsourced its e-commerce operations to rival Amazon.com. Finding such slow transition to be an opportunity, upstart firms such as Amazon.com, eBay, E*Trade, and Webvan have taken the lead in developing marketing strategies that seem to work well on the Internet (Berst, 2000).

This raises the question: Does the traditional marketing mix no longer apply in the age of electronic commerce? Evidence seems to abound that the time-honored four P's – product, place, price, and promotion – are increasingly coming under pressure. Several authors argue that virtually every aspect of marketing in electronic marketplaces differs from the way companies used to do business (Cash 1994, Cronin 1994, Hoffman and Novak 1995c, Rayport and Sviokla 1994). New marketing concepts are needed that may help companies successfully deploy electronic marketplaces for electronic commerce.

This paper provides a framework for new, emerging marketing theories for the age of electronic commerce. It discusses the logic of electronic marketplaces and gives a definition and typology of the key terms used in the context of electronic commerce. It then looks at the economic characteristics of electronic marketplaces and the implications for businesses. Next, successful approaches to conducting electronic commerce are

reviewed. Based on this analysis a new marketing framework for operations in electronic marketplaces is developed and the findings are summarized.

THE LOGIC OF ELECTRONIC MARKETS

The concept of electronic markets is not very new. Electronic marketplaces have been around since the 1970s. Consider the computerized airline reservation systems such as United Airlines' Apollo or American Airlines' Sabre. These allowed customers to book flights on almost every airline via travel agents around the world. Access to these systems, however, required the special expertise of travel agent. Or, consider J.C. Penney's Telaction, an electronic home-shopping system that allowed customers to shop via a cable television channel and a push-button phone (Malone, Yates, and Benjamin 1989).

Growth of the Internet

None of these electronic marketplaces, however, created an air of excitement comparable to that created by Internet-based markets. The tremendous growth of the Internet has led millions of companies to set up shop on the Internet and over 100 million consumers worldwide are eagerly participating in the global online marketplace. The arrival of easy-to-use Web browsers transformed the Internet from a specialized, text-oriented medium to the multimedia, massive, and global cyberspace. Internet traffic is approximately doubling each year, which represents extremely fast growth, much faster than increases in other communication services (Goffman and Odlyzko, 2000). By December 1997, about 1.5 million domain names had been registered (Friel 1997). By early 1999, the registered domain names numbered 5.3 million and by February 2000, there were about 11 million sites (Tschong, 2000). By mid-2001, the number of Internet sites exceeded 100 million (<http://www.isc.org/>) and Internet users globally were almost 500 million (. Easy, inexpensive wireless access could push the number of global users beyond 1 billion in just a few years. The number using the Web in English had fallen below 50% by 2000 and would reduce to fewer than 30% by 2003.

Electronic Marketplaces: Various Roles

Internet has created a new electronic marketplace that no longer requires firms to invest huge amounts in the development and maintenance of task-specific trading systems. This makes it compelling for companies, small and large, to take advantage of the benefits of this new medium. Electronic marketplaces eliminate much of the paper handling and clerical work, decreasing the high costs of creating, processing, distributing, storing, and retrieving paper-based information. This reduces processing time and allows increased automation, thereby lowering overhead and inventory. Consequently, it permits just-in-time production and payments. Furthermore, companies of every size can now participate in a truly global market and reach customers in remote locations [Adam, 1997 #9; Dholakia, 1998 #1634]. Electronic marketplaces constitute not just a medium for marketing communication but also offer a means of distribution, especially for digital product categories (Hoffman and Novak 1995a). Software companies such as Network

Associates and Adobe use the Internet to offer their products in directly downloadable form. They encourage people to download and test their software on a free, trial basis and subsequently collect site license fees from corporations that decide to use it continuously (Cronin 1994). In short, in electronic marketplaces companies can reduce the marginal cost of interorganizational coordination and handle larger volumes of market transactions (Bakos 1991).

Electronic marketplaces provide consumers with a plethora of information and choices, but they also create the risk of information overload (Pitcher, 1999). When consumers are inundated with information they soon get frustrated because they can no longer make a rational decision within the time they have. Here easy search mechanisms are helpful. Directories and searching tools on Web portals such as Yahoo, Google, Lycos, Excite, and Snap make it particularly easy to locate a company or find information on a certain product or service. Specialized search sites exist for categories such as automobiles (e.g., Auto-by-tel) and travel services (Travelocity.com, PreviewTravel.com, Expedia, TheTrip.com). Yet, the problem of selecting among many different offerings often remains. One solution to this problem was BargainFinder, the “mother of all Shopbots”, developed by Andersen Consulting (Jasco 1998). Shopbots are shopping robots or agents that take a user’s query, visit the shops that may have the desired products, bring back the results, and present them in a consolidated and compact format, adding value for the consumer by reducing search costs [Bakos, 1997 #2161]. Other shopbots followed: Pricewatch for computer hardware, Priceline.com for airfares, Bottom Dollar for general merchandise categories (Jasco, 1998). By decreasing the time and cost of obtaining information and enabling customers to find the products that best match their needs, such sites have begun to tackle the problem of information overload [Hoque, 1999 #1631].

Electronic marketplaces can facilitate online product trials. The DEC division of Compaq, for instance, allowed customers on the World Wide Web to “test drive” its Alpha AXP computer. Such simulated trials lead to reduced uncertainty in the decision-making process and ultimately stimulate purchase (Hoffman and Novak, 1995a).

All these benefits of electronic marketplaces translate either directly or indirectly into savings for the customer and increased efficiency for the business. Therefore, some authors argue that the development of electronic marketplaces is inevitable and ultimately, many, if not most, transactions will be conducted electronically (Malone, Yates, and Benjamin 1989). One leading industry observer, for example, projected that by 2003, half of the U.S. firms will conduct over 80 percent of their transactions by electronic means (Fernandez 1999). The economic and social impact of such a massive transformation is self-evident.

Barriers to Electronic Marketplaces

Despite the rapid growth of the Internet, some problems associated with electronic marketplaces remain. These need to be addressed before electronic markets will find general, mass acceptance. While the World Wide Web is far friendlier than the older

interfaces, about 50% of the people report difficulties in using computer-based technologies (Katz and Aspden, 1997). Many Internet users still perceive the risk associated with sending a credit card number over the Internet or using any other form of electronic payment as too high. As with any new direct marketing channel, the risk associated with product delivery and return still acts as another constraint to a wider use of electronic marketplaces for commercial activities (Dholakia, 1995). In addition, research shows that online shopping is perceived to be relatively convenient and efficient but not yet very fun to use [Clemons, 2000 #2327; Wikström, forthcoming 2001 #2166]. Compared to store, catalog, or TV shopping it is also viewed as a somewhat intimidating way to shop. Such negative hedonic perceptions appear to be another significant barrier to the greater use of shopping in electronic marketplaces (Dholakia and Pedersen 1994). Moreover, shopping is still a predominantly female activity [Dholakia, 1987 #1264] and in most countries, men dominate the online demographics. The US is to date the only country where women have surpassed men online. In Europe, some countries such as Sweden and Finland also have a high female Internet participation. In most European countries – such as Germany where women account for only 35% of the entire online population (Rickert and Sacharow, 2000) – electronic marketplaces might not be able to reach a critical mass of customers as long as there is a heavy male bias. Moreover, electronic marketplaces still lack many of the useful services encountered in physical marketplaces (such as easy return, layaway, alterations) and cannot provide the kind of socialization people are often looking for when they are going to a mall. According to Jarvenpaa and Todd (1997), although shoppers were impressed with the number and variety of online retailers, in most product categories they were disappointed with the depth of product lines being offered. Even though not all of these shortcomings of electronic marketplaces can be overcome at the moment, it is expected that new methods to effectively deal with these constraints will evolve quickly and lead to an increased acceptance of electronic marketplaces. Connection speed will be one of the chief challenges as consumers are unwilling to accept long waiting times for sites to load. In some countries high-speed Internet access has become broadly available but the majority of the global online population will be using slow modems for years to come. As a result we see a curious digital divide within online markets where companies that launch websites of ever-increasing complexity will poorly serve consumers with slow connection speed.

ELECTRONIC COMMERCE: DEFINITIONS AND TYPOLOGY

So what exactly does electronic commerce in electronic marketplaces mean? It includes the notion of paperless exchanges of business information using EDI (electronic data interchange), electronic mail (E-mail), electronic bulletin boards, electronic funds transfer (EFT), and other similar technologies (Strader and Shaw, 1997). Electronic data interchange is often seen as the foundation cornerstone of electronic commerce. “EDI is a common industry standard for preparing, processing and communicating business transactions electronically with other companies, regardless of their different computing platforms” (Anon., 1995a). Although electronic commerce can be conducted over many different systems – cable shopping networks, the French Minitel system, various Videotex systems, or online services such as the America Online – none of these

mechanisms has the far reaching scope and potential for transforming the marketing function as the generic, Web-based Internet (Hoffman and Novak 1996; [Weiber, 1998 #2271]).

Definitions of electronic commerce have been around for while and have evolved over time, resulting in ever more sophisticated characterizations [Greenstein, 2000 #2297]. One of the early definitions for electronic markets was given by Malone, Yates, and Benjamin (1989, p. ES24) who referred to it as “networks that let customers compare and order offerings from competing suppliers.” Later, Bakos (1991, p. 296) introduced the terms “electronic marketplace” and “electronic market system” which he defined as “an interorganizational information system that allows the participating buyers and sellers to exchange information about prices and product offerings”. These definitions were still somewhat vague but Rayport and Sviokla (1995, p. 75) rendered a much more comprehensive definition of what they called “marketspace”. They saw marketspace as “a virtual realm where products and services exist as digital information and can be delivered through information-based channels.” This definition reflected to a greater degree the rapid development of the Internet, the new global medium that no longer limited the environment of electronic commerce to organizations as Bakos’s definition did. Even more precise were Hoffman and Novak (1996) who introduced the term hypermedia computer-mediated environments (CME) which they defined as “a dynamic distributed network, potentially global in scope ... which allows consumers and firms to 1) provide and interactively access hypermedia content (i.e. ‘machine interaction’), and 2) communicate through the medium (i.e. ‘person interaction’).” While this definition is clearly restricted to hypermedia environments of which the World Wide Web is certainly the most popular at the moment, all the other terms encompass a wider spectrum of platforms for electronic commerce. For the remainder of this paper the term electronic marketplace is used for networks that allow the exchange of digital information for the purpose of conducting business. This includes global networks such as the Internet as well as local, proprietary networks.

ECONOMIC CHARACTERISTICS OF ELECTRONIC MARKETS

To grasp the implications of electronic marketplaces on businesses one must first understand their economic characteristics [Smith, 2000 #2299]. As consumers obtain easier access to more information about price and product offerings of alternative suppliers, their search costs of obtaining the information decrease. By the same token suppliers’ costs of providing information about price and product characteristics to additional customers also decline. These benefits obviously increase with the number of participants joining the electronic marketplace as long as effective and efficient search mechanisms are in place to deal with the vast amount of information available. Consequently, the average price businesses charge in electronic marketplaces for certain products -- especially commodities -- decreases, as the proportion of customers with low search costs increases (Bakos, 1991). This clearly empowers buyers who are able to get a better mix of benefit-price bundles (Sarkar, Butler, and Steinfield, 1995).

Decreasing search costs also lead to lower profit margins for sellers of commodities as businesses can no longer command a price premium (Bakos, 1991;

[Rayport, 1995 #1937]). In addition, switching costs in electronic marketplaces approach zero, as participation in electronic marketplaces no longer requires large investments of money, time, or skill. This reduces even further the market power of sellers.

Sellers in electronic marketplaces also have the opportunity to substantially reduce their coordination and transaction costs. Although these might not always offset the smaller profit margins, companies may enjoy the benefits of increased volume (Benjamin and Wigand 1995). In addition, electronic marketplaces redefine economies of scale and scope. Even small companies can now provide additional product or service offerings at low incremental costs, particularly when the nature of the product or service is information-based like software, financial services, music, games, and video. This makes small players more competitive even in markets dominated by big companies. Once a product or service is offered in the electronic marketplace it does not matter whether a single person or millions of users request it, provided the server is powerful and scalable.

These new economies of scale make it possible to add new, customized services. FedEx, UPS, DHL and others allow individuals to track packages through their websites. For FedEx – the initiator of such online tracking – this brings a FedEx office to every desktop computer. Or consider the United Services Automobile Association (USAA), an insurance company, which makes use of the new economies of scale. USAA found that it could also use its customer information to create new value for its customers by serving a broader set of their needs. The company now offers, for instance, financing packages and shopping services for almost every kind of product in addition to its core business. Cross-selling results in a loyal customer base and new profitable business ventures (Rayport and Sviokla 1995). In the stock trading arena, Schwab and E-Trade started as providers of discount stock-brokering services but these firms have been augmenting their web offerings gradually and are now beginning to look like full-service financial firms.

IMPLICATIONS FOR BUSINESSES

The Race to Commoditization

The economic efficiencies of electronic marketplaces can constitute potential opportunities as well as potential threats for businesses. If a company cannot differentiate its products or services on any other basis but price it is likely to face fierce competition from firms participating in the electronic marketplace. As more and more goods and services are transformed so that they can be offered or even transmitted electronically, the number of companies involved in this new field of competition will increase dramatically. Eventually electronic marketplaces are likely to become a strategic necessity and part of almost every industry's infrastructure (Bakos 1991, Fernandez 1999).

But as many e-commerce retailers head toward commodity pricing, it becomes important for businesses to understand the market they are in. Only a few retail segments

will be profitable. The biggest differentiator among product categories on the Web is the ability to judge the quality of the product [de Figueiredo, 2000 #2318]. Books, CDs and air travel are quasi-commodity products whose quality is easy to judge. Produce, art, high-end clothing and homes are “experience” products with variable quality – the “look and feel” of the product is important in making a purchase decision. The difference between commodity and look-and-feel experience goods, however, does not only lie in the intensity of the consumer experience. As de Figueiredo (p. 44) points out, “a number of other aspects of the buying process change, such as how much more information the seller has about the product than the buyer, the need of the consumer to engage in a search for optimal goods, and the degree to which seller reputation is important.” While it is easy for businesses to enter the online commodity and quasi-commodity segments, profitability will be very hard to achieve there. The challenge to sell look-and-feel products with variable quality on the Internet is big but the potential rewards for those who succeed are large. Those and other aspects need to be considered by businesses trying to operate profitably in electronic markets.

Markets for Digital Assets

Companies competing with firms in the electronic marketplace have to appreciate the “law of digital assets.” Digital assets – text, graphics, audio, or video stored as digital information – are not used up in their consumption and allow a potentially infinite number of transactions with variable costs close to zero. One example of a company making use of digital assets is Image Technology Corporation, a company that captures, organizes, selects, manipulates, and distributes photographic images digitally. Image Technology can create a repeat customer’s order far more quickly at a fraction of the costs incurred by companies using traditional techniques. Having created a database of images the company can take advantage of tremendous economies of scale and scope and price aggressively while still making good margins. Needless to say that rival companies without digital assets have a tough time competing with Image Technology (Rayport and Sviokla 1995). Another example is BriefServe.com (www.briefserve.com), a first-to-market database and document retrieval service. This company provides immediate access to a comprehensive collection of briefs and appendices for all current California State Supreme Courts of Appeal decisions, United States Court of Appeals decisions from 1981 to the present and to rulings by the U.S. Supreme Court from 1984 to the present. Lawyers and other members of the legal community coming to the law.com website can access BriefServe.com from law.com’s Supreme Court Monitor page and through the Court Watch areas of the New York, California, and Pennsylvania State sites [Anon., 2001 #2380]. There is basically no limit to the scalability of this business.

Digital assets, however, have a major disadvantage. They are very easy to copy and re-transmit. This raises serious questions of intellectual property rights and commercial protection of these properties, especially in countries where the laws of the firm’s home country cannot be enforced readily. Innovative solutions to such problems are being sought worldwide. Examples of this include digital watermarks developed by Fraunhofer IHG, a German research institution, to indelibly inscribe digital documents with an electronic mark. More recent developments in steganography, caused by attacks

on earlier forms of watermark technology, are techniques such as gradual masking and fingerprinting, where the copyrighted information is hidden more deeply and in increasingly complex ways within the document [Johnson, 1998 #2381; Johnson, 1999 #2382].

Electronic Customer Relationships

In cyberspace, producing or service providing firms also have to stress relationship-based marketing plans in order to achieve customer loyalty. Electronic marketplaces offer a variety of ways to do this through direct technology links (Sarkar, Butler, and Steinfield, 1995). Establishing a site on the World Wide Web to advertise products, provide customer service, or elicit comments is just one option. Companies operating in both the electronic marketplace as well as in the physical marketplace have the unique opportunity to “sense and respond” to customer needs rather than to simply make and sell products and services (Haeckel and Nolan, reported in Rayport and Sviokla, 1995). USAA, for example, uses intelligent sensing methods to match a customer need to an appropriate source of supply (Rayport and Sviokla, 1995).

Successful actors in electronic marketplaces will also try to re-impose switching costs in the form of loyalty programs similar to frequent flyer accounts. E-Trade, for example, awards allows those customers who are heavy traders to use its convenient “Power E-Trade” site. Schwab provides its preferred customers with access to special stock research reports via its “Signature Service” link. New and innovative switching incentives like the idea of a “cool site”, a “sticky” site, or a must-visit portal have developed rapidly and are playing an important role in attracting new customers in the electronic marketplace. Such categorization may confer power to third parties or cybermediaries designating these sites, especially in a situation of information overload (Dholakia, 1995). For example, services such as Media Metrix (www.mediametrix.com), Nielsen Netratings (www.nielsen-netratings.com), and CyberAtlas-Watchfire (cyberatlas.Internet.com) have emerged to measure the traffic to, “stickiness” of, and response efficiency of leading websites.

Disintermediation and Reintermediation: Cybermediaries and Infomediaries

As coordination and transaction costs in electronic marketplaces decrease, many companies have to reevaluate the make-or-buy decision. It is now often cheaper to buy than to make a product and this will ultimately result in more market activity and fewer vertically integrated companies (Malone, Yates and Benjamin 1989). Several authors argue that manufacturing companies in their search for competitive advantage will try to bypass one or more of the organizations within the traditional industry value chain (Benjamin and Wigand 1995, Orme et al. 1995). While this may hold true for certain classes of products – especially those where asset specificity is low, those which are easy to describe, or those which can be distributed in digital form – there are also factors that limit disintermediation in electronic markets. Sarkar, Butler, and Steinfield (1995) argued early that, contrary to the popular notion of disappearing intermediaries, we would witness the emergence of “cybermediaries” [see also; Bailey, 1997 #2155]. Indeed, the

commercial Internet has become so densely populated by such cybermediaries (electronic malls, electronic trade or auction sites such as eBay and Onsale, financial brokerage firms like E*Trade and Comdirect, and portals such as Yahoo or Lycos are examples) that Carr (HBR, 2000, DON'T HAVE EXACT CITE) has called this the age of hypermediation. Cybermediaries perform the new role of brokering relationships between producers and consumers in the world of electronic commerce. They will not, however, be able to command a margin as high as intermediaries in the physical marketplace because they do not incur the same costs for retail space and personnel. Providers and customers are simply unwilling to pay premium prices for the services of the cybermediaries (unless the services are very exclusive, see Axelson 2000). Whether they choose to go direct (such as Dell or Gateway computers) or rely on cybermediaries (such as book and music publishers), companies wanting to be market leaders and maintain market share in the global economy must embrace electronic commerce (Anon., 1995b).

EARLY SUCCESSES OF ELECTRONIC COMMERCE

Win-Win Auctions

One of the older, pre-Internet electronic commerce success stories is from Japan. Prior to 1985, used car dealers had to travel to one of the physical locations where used cars were sold to retailers. A proprietary computer and satellite communication system called AUCNET allowed used car dealers to participate in online auctions without having to travel physically. They could select the cars conveniently on a computer screen that showed the cars in digital formats. Car sellers also profited from the system because they incurred lower costs, as no cars had to be moved from one auction site to another. As subscribed car dealers all over the country logged onto the system, increasing the number of potential buyers, the bidding became more intense and sellers were even able to command a 6% to 7% premium over the price they would get at a physical auction. Buyers in the electronic marketplace were willing to pay more because they enjoyed the convenience of desktop shopping and got a better selection of used cars (Rayport and Sviokla 1994). In the consumer arena, eBay has been very successful in using the idea of convenient online auctions to build a thriving c2c (consumer-to-consumer) electronic marketplace.

Internet as the New Medium

Digital Equipment Corporation (now part of Compaq) used the Internet to publish press releases, product announcements, new services, sales promotions, and other information since the early 1980s. Then on October 1, 1993 it officially launched its World Wide Web server. The server was registered with the NCSA *What's New* list and the CERN *World Wide Web Servers* list. It provided its entire electronic catalog with product descriptions, pictures, and ordering information – some 4,000 documents. Electronic ads were sprinkled across World Wide Web magazines, which allowed the reader to click through to specific Digital advertisements. But DEC offered more than just graphics and information. It decided to allow all potential customers to enter an Alpha client-server, load on their own software and take it for a “test drive.” The result:

some 1,400 Alpha users were recorded daily, each filling out substantial demographic information for DEC's salesforce (until it had to terminate the offer in November 1995 due to legal restrictions). This rather unconventional marketing approach resulted in a total of 6.7 million log-ons to DEC's website in the first 18 months and made the site one of the most successful of its time, with more than 175,000 "hits" a day (Andelman 1995, Cronin 1994, Jones 1994). The "new media" strategy – pioneered as a customer communications strategy by companies such as DEC and Sun Microsystems – has proved to have worldwide appeal and represents an enduring road to success in e-commerce, with Yahoo!, AOL, and Web.de being major examples of new online media.

The Online Catalog

Hello Direct Inc., a telecommunications products mail-order company in San Jose, California, put much of its catalog on the Web and used an 800 number to take orders. Soon thereafter, the company averaged 4,500 "hits" a day, resulting in a growing number of E-mail inquiries. But the advantages of selling online went well beyond eliminating some postage and printing costs. The real benefit was the two-way flow of information between the company and its customers. While customers drilled deeper and deeper into the site, searching for additional information about Hello Direct's products, they were automatically tracked. When they encountered a problem they could conveniently use the E-mail buttons on the Web pages to ask for more detailed information, get technical support or suggest product improvements. This helped the company identify which products were getting the most attention and, perhaps, why that is so, thereby reducing the high expenditures for conventional market research. It also allowed Hello Direct to enter into one-to-one relationships with its customers, which could not be justified in the physical marketplace due to prohibitively high marketing and administrative costs. While Hello Direct's online customers are still a minority, the company's efforts seem to pay off, as online orders are about 10% higher on average than the print-catalog orders (Verity in Verity and Hof, 1994, Weston 1995). The online catalog model seems to have been picked up by a variety of merchants in industries as diverse as apparel, consumer electronics, book retailing, office supplies, and toys.

CURRENT STATE OF ELECTRONIC COMMERCE

The euphoric phase of electronic marketing ended in mid-2000. Until then, at least in the United States, hundreds of e-commerce "business models" were being experimented with, supported by a very buoyant stock market that provided funding for almost any exciting e-commerce idea.

From the middle of 2000, the financial viability of e-commerce business models came under serious scrutiny. Stock valuations collapsed in a precipitous manner and only those e-commerce models that showed some promise of long-term viability attracted the attention of consumers, analysts, and entrepreneurs.

What happened in the period following July, 2000 was that *all* the benefits and risks of electronic marketplaces – low search costs, transaction costs, and coordination

costs coupled with intense competitive rivalry and the problems of providing “experiences” and some post-sale services – came into sudden and full view of everyone. What had been reported about electronic transactions in esoteric journals since the 1980s now became common everyday knowledge.

Anatomy of Failures

In simple terms, many e-commerce firms failed because of unsustainable business models. This may seem tautological, so it is necessary to probe further. According to Greenberg (2001):

There appear to be parallels among the deceased dot-coms, including massive overspending, reckless capital management ...and ...[the lack of a] ... “unique selling proposition.” A USP is an idea or concept that sets a business apart from all of its competitors, one that imaginatively fills a gaping void in the marketplace. Offline, not every business requires a USP. Location, sales strategy, impulse buying and smart advertising can keep several competing businesses alive, even if they all sell the same thing in similar settings. Online, however, the USP is oxygen.

Because the costs and benefits of electronic markets have become so starkly transparent, it is necessary to provide compelling ways for benefits to consistently exceed costs. For suppliers, this means finding consistent ways for revenues to exceed costs. For these revenues to happen in the first place, customers must have a compelling case to buy online. For customers, the benefits (product choice, price, and services) must exceed the costs and risks of buying online.

Outlines for Success

At the end of 2000, a curiously contradictory state of affairs existed in the United States: steadily rising online sales and plummeting stock prices of online marketers. This means online customers had crossed over to the *positive* side of their perceived cost-benefit tradeoff but online marketers remained mostly on the *negative* side of their cost-revenue.

In its brief history, the challenge of online marketing has shifted dramatically – from attracting users to making the business viable and profitable. From the few businesses that looked like long-time survivors in b2c electronic markets, and fewer still that were profitable in b2c markets, some important factors for success are emerging:

- As a medium, the Internet can connect more people to information and to one another faster and cheaper than any before it. Therefore – regardless of the success or failure of specific e-commerce companies – the Internet is here to stay as a new, interactive medium for marketing.
- Like television networks, the number of Internet-based media companies that can be profitable is few. Again, like television networks, these new media companies usually need a global network and a very rich, diverse content base to succeed.

- Like other successful media of the past, the overall impact of Internet has been to transfer power from marketers to consumers. Thus, even when they are not profitable, electronic markets enhance the customer orientation of firms,
- Products that follow the law of “digital assets” are far easier to sell on the Internet than products that do not. Sales of airline tickets took off after airlines started using paperless e-tickets.
- Simple online technologies such as email-based customer contacts and online filling of order forms and registration forms are likely to provide quick returns on investments while complex, “rich media” technologies (such as Flash, streaming video, and “push”) will take longer to establish themselves in mass markets.
- Offline and online formats – bricks and clicks – are not antithetical as many of the e-commerce pioneers believed. Even Amazon.com, the best known and a pioneering name in b2c e-commerce, has teamed up with the biggest toy retailer ToysRUs and is considering an alliance with the biggest retailer Wal-Mart.
- There are a few, special business models that could not simply exist in the pre-Internet world. eBay – the world’s biggest c2c electronic market – is the best example of this.
- Businesses that had long experience of “remote transactions” – catalog marketers, telephone-based marketers, TV-based marketers – have expertise that could be translated easily to online electronic markets.
- Electronic markets can work in all part of the supply chain. Both the sales and the procurement end of a business can benefit from electronic markets. Companies such as IBM, Oracle, and GE have reaped huge benefits by moving substantial parts of their procurement to the Internet.
- In b2b (business-to-business) markets where both transacting parties are sophisticated users of information technology, electronic markets bring immediate and substantial benefits. Companies such as Cisco, Intel, and Dell conduct very large parts of their marketing by online methods.

TRANSFORMATIONS IN THE MARKETING MIX

Regardless of stock market upheavals, electronic markets are here to stay. Companies wanting to maintain or gain a competitive edge can no longer neglect electronic marketplaces and the Internet. But how can companies make effective use of this new medium? Simply transposing traditional marketing strategies into the world of electronic marketplaces will not work. The Internet is not a place for sending out blatant advertisements to E-mail accounts around the world as fierce consumer debates on listservs and in discussion groups evidence. Where companies quickly see the benefits of “viral marketing” consumers see nothing but spam (unwanted email). Aggressive push marketing strategies not only prove inefficient but detrimental on the Web and will increasingly give way to some form of permission marketing [Godin, 1999 #2256]. Frustrated by the low click-through rate of advertising banners on the Web, companies become more aggressive again. Recently, many e-companies have changed their advertising policies and allow now for much larger banner displays on their Web-sites. It is too early to tell but chances are that this strategy is headed for another disaster. As Richard Mandeberg, President and CEO of iQ.COM puts it, “[T]he Internet was never

meant for spewing banners – it's at its best when it provides true interactive communication between brand and customer. The Net has already proven itself an effective, measurable direct marketing vehicle and will ultimately become the most efficient channel for managing two-way customer relationships" [Anon., 2001 #2383]. But for this to happen, it behooves companies to adopt an attitude that is in line with the culture of conversation that characterizes the Internet [Levine, 2000 #2282].

This global network has a strong culture of free discourse and a bias against anything resembling a sales pitch (Cronin 1994). Yet it is uniquely suited to develop strong relationships, establish dynamic customer communities, and enter into two-way communication with highly involved lead users of technical products (Cross, 1994; Levine, 2000). Internet and other electronic marketplaces, however, seem to pose opportunities and threats that do not fit very well in the traditional marketing concept of the four P's (see Table 1). What is needed is a new and extended framework. In electronic marketplaces, the boundaries of the marketing-mix elements are getting increasingly blurred.

[Table 1 About Here]

Products

Products for which electronic marketplaces are feasible can be determined by asking the following question: can the company help a customer in the purchase process by providing information about the product via an electronic medium? This is definitely the case for commodities and standardized products that are easy to describe and where asset specificity is low. But even products that are somewhat complex in nature can let customers narrow their search according to a few important product features and might, therefore, succeed in electronic marketplaces (Malone, Yates, and Benjamin 1989). In the United States, for example, over 30% of car buyers were "shopping" for cars on the Internet before shopping for them in the physical marketplace (Deck 1998).

Products with substantial transactional volume in electronic marketplaces include computer software, books, graphical designs, movies, music, and the like because they can be maintained in digital form and are easy to transmit over a computer network without any physical inventory movements. But also all manufactured goods sold through mail-order perfectly fit the requirements for being traded in electronic marketplaces (Benjamin and Wigand 1995). For such products, almost everything except the physical entity can be digitized. It should be noted that although digitized, multimedia representations of physical products assist the buyers in their purchasing decisions, such representations do not eliminate the uncertainties of electronic markets.

One of the greatest advantages of the electronic marketspace is its ability to provide value to customer through product versioning [Shapiro, 1998 #1934]. Information-based products such as books, music and video can be disassembled and reassembled according to the unique need of the individual customer. Songs on the Internet can be offered in different formats, varying in length, sound quality, number of

possible replays, price and other dimensions, leaving it up to the consumer to make the choice that fits her current needs. Or consider newspapers that are sold electronically. Unlike the physical version where the consumer can only choose between the whole newspaper and no newspaper at all, the Internet allows for an almost unlimited set of choices, adding value for the consumer. Why should a customer pay the full price when all she wants to read are only a few sections? Without getting too deep into a discussion of the implications of versioning for cost-based versus value-based pricing strategies, it should become clear that the Internet allows for product variations whose value need to be understood by companies and consumers alike.

Of course not all products sell in electronic marketplaces, especially not those that require extensive explanation and a face-to-face contact with a salesperson (Lowenthal in Andelman 1995). Before declaring a product unsuitable for electronic markets, however, one has to see the opportunities the electronic marketplace offers. Who would have thought of selling used cars over a computer network? Having inspected the used cars, collected photos, and verified the information, Japan's AUCNET was able to provide all the relevant information for used car dealers in digital form and stimulated online purchase decisions. The content of the transaction, the used car, was replaced by digital information in the electronic marketplace. In some cases this even allows for the complete replacement of a physical product with an information-based service. This happened to the answering machine which is being replaced by voice messaging services (Dholakia and Venkatraman 1999, Rayport and Sviokla 1994).

An even greater opportunity arises for companies in service-based businesses. Having produced digital assets, companies can either create their own proprietary electronic marketplace or use their digital assets to expand the scope of their operations, or both. Bloomberg Financial Systems, for instance, offered a proprietary system with all the financial data an investment professional desired. Having developed a user base, Bloomberg started using its system to expand its scope. Users of the Bloomberg terminal could also display sports scores, purchase opera tickets, or preview vacation destinations. In this way Bloomberg was able to satisfy more and more of its customers' needs in its electronic marketplace (Rayport and Sviokla 1995). With the rapid growth of the Internet and the explosive growth in financial information available on the Internet, however, proprietary terminals became less attractive and Bloomberg had to reorient its strategy towards the Internet (Kover 1998).

Price

Because of new forms of value creation in the electronic marketplace the traditional cost-based pricing offers little guidance to marketers [Greenstein, 2000 #2297; Zott, 2000 #2272]. The main difference for companies that produce information-based products and services is that the value chain is no longer "vertical", like the chain found in most manufacturing. A vertical value chain implies that activities must be performed in a hierarchical sequence that is often characterized as linear, leading from upstream to downstream. Step 2 cannot be taken before step 1 is finished and all steps are necessary for completing the whole product (i.e. value). "Instead, the value chain underlying

electronic commerce is closer to being a "platform" [Greenstein, 2000 #2297, p. 154]. Components can be added and taken out of product arrangements in a non-linear way and can even be left out entirely as for slimmer software versions. The crucial aspect of a non-vertical value chain is that in many cases products that have less value in the marketplace (e.g., a trial versions of a computer application) is more expensive to produce than the complete program.

Another aspect is the decrease in search costs for customers. As search costs decrease, so do prices and profit margins for commodities and standardized products. Eventually commodity markets may even be destabilized by price wars that eliminate any excess profits once enjoyed in the physical marketplace (Bakos 1991). Other factors may also lead to lower prices in electronic markets. In many cases, sales or value-added taxes may be saved because goods are shipped across state or national boundaries. Elimination of intermediaries can save costs. By conducting up to 40% of its business over the Internet, Cisco Systems reduced its annual operating expenses by \$270 million (Ghosh 1998). Some of these savings may be passed on to buyers as lower prices.

This being the case it will become ever more important to distinguish one's offer from the competition by adding additional value and position it on dimensions other than price. If a high degree of product differentiation can be achieved in the electronic marketplace (e.g., through added value), buyers are less inclined to settle for anything else than their ideal product. The more an electronic product offering fits the buyer's ideal preference, the more desirable it becomes for the buyer and the higher the price the company may be able to charge for the product and services (Bakos 1991). For instance, commissions for Web-based stock trading services ranged from \$8 to \$30 per trade. Ameritrade, a no-frills web stockbroker, charged \$8 while Schwab and Fidelity, which positioned themselves as "life goals" oriented financial sites offering a range of services besides trading, charged \$25-30 per electronic trade (Brooker 1998).

The opportunities to add value to information-intensive products and services in electronic marketplaces become virtually limitless (Cash 1994). Phone companies with their voice mail services, for example, offer increased convenience and functionality over the answering machine. This translates into added value for the customer and allows the phone companies to charge – on a discounted cash flow basis – several times the cost of the competing physical product. In the AUCNET system, buyers were willing to pay a 6% to 7% average price premium because they got a better selection of used cars with greater convenience (Rayport and Sviokla 1994).

Place

Some of the most important structural changes in electronic marketplaces are disintermediation — elimination of wholesale and retail layers and selling directly to consumers – as well as reintermediation by "cybermediaries" that are specialized in electronic commerce. Such changes are most evident for digital products which can be distributed over the Internet itself, obviating even the need for physical distributors.

But how does one price products that can be delivered right over an electronic network? Distribution is a large cost factor in the physical marketplace but can approach zero for digital products in electronic marketplaces (Cash 1994). One way chosen by Network Associates, the anti-virus software developer, is to make its software freely available on the Internet and ask for license fees only after it had been installed and tested on an organization's computer system. New software releases are scheduled every six to eight weeks and are included in the two-year license fee. The combination of free software distribution to individuals and subsequent collection of license fees from commercial customers fits very well with the prevailing culture of the Internet (Cronin 1994). It is also conceivable that customers are no longer charged for product parts that they do not want. Companies can develop custom products – containing only the requested components and features -- and price them accordingly (Cash 1994). Dell and Gateway have shown that such BTO (build-to-order) methods not only result in happy customers but also in enormous savings in inventories.

The innovative method Network Associates and others use to offer and distribute free software is another indication for the disruption of the traditional marketing-mix in electronic marketplaces. What difference would it make if Network Associates was not located in California, but somewhere on the other side of the globe? Virtually none! In ubiquitous electronic marketplaces physical location becomes irrelevant and so do large amounts of retail space, or shelf space (Bosley 1994). It is as if all stores were at one location (Cash 1994).

This is especially appealing to small companies at remote locations and nichers that do not have a large enough market in their city or region. For companies with digital assets, distance does not even affect delivery costs because their product or service can be shipped electronically (Anderson 1995). It also allows aggregation of widely dispersed niche markets that would need different outlets in the physical marketplace. This has been done successfully by companies such as Virtual Vineyards which has been offering not only a selection of excellent wines but also a variety of authentic specialty foods from around the world. Businesses offering their products in electronic marketplaces such as the Internet, however, should be aware that they are targeting a global audience and have to be prepared to handle shipping, customs, and payment problems, many of which the company may have no prior experience with (Cohen in Orme et. al. 1995).

As physical location in electronic marketplaces becomes irrelevant, decisive factors of place (or distribution) shift to the creation and utilization of new, boundary-free infrastructures to reach a critical mass of consumers (Zimmermann 1995). Until homes are wired for easy-to-use interactive devices that provide consumers with high-quality video interactions in the electronic marketplace, electronic sales channels will be somewhat limited in their ability to make inroads with the consumer.

For small companies that set up a website, this means that they may not necessarily generate enough traffic to their site unless they make some use of cybermediaries. Renting space in an electronic mall, registering the site with the important Internet directories, creating a “cool site” that gets listed as such, and trying to

get as many hits as possible among the popular search engines are just some of the options smaller companies have to increase volume of transactions on the Internet. But just as with physical location, prime "real-estate" in cyberspace is expensive and hard to come by. At the end of the day, even popular search engines and cybermediaries have only limited shelf space that they sell for a premium to companies with large advertising budgets.

Promotion

Electronic marketplaces also offer endless opportunities to promote a company and its products or services. With its ever-growing pool of middle to upper class users, the Internet provides access to prime target groups. In addition, at a fraction of the costs of traditional means such as print, television, or radio, online promotion can be delivered almost instantaneously around the globe. A study by IBM indicated that firms putting forth online catalogs on the Internet could save up to 25% in processing costs and reduce cycle time by up to 62% (Hoffman and Novak 1996). It is, therefore, no surprise that the biggest market for the Internet is considered to be advertisement and marketing (Anderson 1995).

The Internet means the end of business as usual and companies that want to be successful in using the Internet as a promotional tool have to be conversant with the rules of this new medium (Levine, 2000). The old mass-market approach and hype of television, billboard, and magazine advertisement will not work on the Internet, where the audience is far better educated and more upscale than the average consumer (Daniel Janal in *Network World* 1995). In fact, almost everything in this new medium is different from the traditional mass communication model where no interaction between the consumer and the firm takes place.

On the Internet the message is hardly ever sent to the consumer; rather the consumer comes to the message. Consumers control the type and duration of advertising exposure. Web users can link to the site of a company where they are free to explore as little or as much of the information as they want, instead of having it all shoved down their throats. This shifts power considerably to consumers (Gerald O'Connell in Anderson 1995) and reverses the typical one-to-many communication process to a many-to-one process. The push-type promotional strategies of traditional markets give way to pull-type promotional strategies in electronic markets. Smart companies are even able to go one step beyond and enter into a one-to-one communication process with the members of their target audience by customizing their offers to individual customers. Cookies – pieces of data transmitted by web servers to client computers – allow marketers to track the users' navigation paths within a website (Leibrook 1997). Through such tracking, site visitors' interests and preferences can be learned, and marketers can tailor their offerings and promotional approaches to specific website visitors. Such tracking, of course, has raised concerns about privacy (McGrath 1999).

To reach online buyers marketers have to create an information-rich, interactive form of marketing communication for a personalized sales approach (Levine, 2000). The

World Wide Web with its multimedia and interactive capabilities has the potential to offer exactly this. It is a medium that allows publishing, real-time communication broadcast, and narrowcast all in one. Information can be updated instantaneously and retrieved 24 hours a day. Most importantly, the interactive nature of the medium makes it possible to engage consumers in asynchronous dialogues that occur at both parties' convenience (Deighton 1997, Hoffman and Novak 1995a).

Businesses can make use of interactive ads, for instance, to give customers exactly the information they are looking for. Consumers simply click on icons or hypertext to obtain more detailed information on the products they are interested in and get it in the form of text, picture, audio, or video. This can be a very effective way to reach consumers who generally do not like the mass-market hard-sell approach and who would not respond to any other form of advertisement. This new way of non-intrusive advertisement is expected to work best on the World Wide Web where users, unlike commercial online services, do not face time charges for accessing marketing information and are, therefore, likely to spend more time reviewing it (Daniel Janal in *Network World*).

The World Wide Web also offers unprecedented opportunities to tailor the promotion-mix precisely to the individuals' needs and enter into ongoing relationships with the customers. The crucial difference to any other medium before is that the Internet fosters conversation and companies must be ready to listen rather than to talk (Levine, 2000). Early efforts to use the Internet for promotional purposes saw companies such as Hello Direct or DEC (now Compaq) strategically locate E-mail buttons on their websites to elicit comments about their products and services from their customers. They also presented sophisticated fill-out forms and other incentives to obtain relevant information from customers in order to serve them more effectively in the future (Hoffman and Novak 1995a). This allowed businesses such as Virtual Vineyards, the wine and specialty foods merchant on the Internet, to recommend and customize special offers to its customers (Dholakia, 1995). Digital Equipment Corporation also employed such a strategy. Each of the Alpha computer users had to fill out a variety of demographic information which generated substantial leads and became part of DEC's corporate lead-tracking database (Andelman, 1995). In combination with the use of small icons as electronic ads in E-zines this fits right in the culture of the Internet -- non-intrusive, but available to those who want it (Jones, 1994). But the Internet offers more promotional channels than just the World Wide Web and some companies understood that they can also benefit from newsgroups or mailing lists. As found by Sivadas, Kellaris, and Grewal (1995), readers of a particular newsgroup are avid consumers of products/services related to the type of the newsgroup. Newsgroups and mailing lists resemble more the traditional media as they deliver the message right into the hands of the users. There is, however, a strong bias in the Internet community against raw sales pitches and only a few newsgroups do not oppose advertisements.

In recent years, companies have redoubled their efforts to engage in conversations with their customers, even with non-customers. One can now find discussion groups hosted on the companies' Web-site where product users converse directly and in real-time

with company employees and fellow customers. There, product failures, flaws, and fixes are being discussed openly and company engineers participate to offer technical advice, explain the status of ongoing research, and calm upset customers. In another discussion group, investors may be discussing the past, present and future outlook for the company and company managers are participating to offer their opinion. Such openness is risky but inevitable for future success in electronic markets (Levine, 2000). In fact, companies need to understand that such open conversation with the market is not risky at all but the most valuable form of customer relationship management conceivable [Means, 2000 #2200].

In order to succeed in these media, companies must strictly adhere to so-called “netiquette” and offer information about their products and services only where appropriate. It is strongly suggested to identify the target audience first before starting any promotional program. The Internet provides effective means, such as search engines, to find likely groups and by following the discussions in these groups companies can find out whether the community would appreciate their information or not. It is essential that the information provided be of high quality and that customers can respond conveniently to the company.

An even better way for companies to promote their products and services is to start their own newsgroup or mailing list. Then they can let people know about their offerings, get feedback on what customers like and do not like, solve customer problems, and get a better understanding of the interests and trends in their market (Levine, 2000). Companies that have set the standards in these areas are mainly from the computer industry. Adobe or Dell, for example, dedicate several people to monitor their (and competitors’) newsgroups in order to respond to customers’ problems and suggest new uses of their products. As Internet users are generally early adopters of new product technologies, this gives them a competitive edge in realizing new product opportunities and shifting trends in the market. Additionally, this two-way form of communication offers the opportunity to build strong relationships with a segment that is extremely unwilling to respond to any traditional one-way form of marketing communication such as mass advertising (Mehta and Sivadas, 1995).

Strong customer relationships are paramount for companies that want to compete effectively with businesses offering products of higher quality or lower prices. According to Treacy and Wiersema (1995) “customer intimacy” is a very useful route to market leadership. Customer-intimate companies do not pursue one-time transactions but they try to cultivate relationships in order to gain lifetime customers. For that they need detailed customer knowledge to respond quickly to almost any need, which often only they, by virtue of their close relationship with the customer, recognize.

No other medium besides the Internet seems to be so uniquely suited to collect and analyze these huge amounts of customer data at such a low cost. Interactive websites allow companies to obtain relevant customer information for the purpose of building customer relationships. Web servers can provide information on which pages are accessed, when and for how long they are accessed, which website the user previously

visited, and which domain address the user belongs to (Hoffman and Novak 1996). Hello Direct, for example, uses this information to learn about the interests of its customers and find out which products are getting the most attention. Subsequently the information is used to update Hello Direct's offerings -- almost instantly compared to mail-order catalogs (Verity in Verity and Hof, 1994).

More sophisticated websites follow consumer's electronic trail which gives a much more detailed account of the online consumer. Tracking software is now able to monitor every minute detail of consumer activity [Locke, 2000 #2286]. Besides the obligatory and already somewhat antiquated clickstream analysis and cookies, computers can now capture where consumers go with their mouse and how long they linger at a site. What is more, software can capture whether a consumer who was exposed to company X's banner advertising when visiting website Y, actually visits company X's website even if he does so three days later [Allard, 1999 #2283]. With such information at hand, stored in massive databases yet accessed and analyzed with lightning speed if needed, software packages produce a consumer description in real-time that can be matched against one of hundreds of pre-configured profiles or, as in collaborative filtering, against other consumers with similar preferences.

Businesses using these means can develop extensive customer databases and use them to enter into a new era of low-cost micro marketing. As consumers increasingly demand products targeted to their individual tastes or preferences, companies must customize their offerings for ever smaller segments, eventually all the way down to the individual consumer. The Internet is an efficient instrument for developing true one-to-one relationships and extract value from them [Peppers, 1997 #2258]. Companies lacking the capability of reaching micro segments efficiently might end up with offerings that are designed for everyone but appeal to no one (Cronin 1994).

The Internet offers more than just a low-cost database-driven marketing approach to achieve new levels of customer relationships. It is an ideal medium for creating and sustaining true customer dialogue (Cross 1994, Deighton 1997). Newsgroups and mailing lists are excellent media to discuss product features, solve customer problems, suggest new product uses, and get customer feedback. E-mail, as a one-to-one communication medium, is uniquely suited to provide customer support in an asynchronous dialogue that occurs at both parties' convenience. This allows firms to be closer to the customer than ever before and respond faster to changes in its competitive environment. It also offers new opportunities to create stronger brand identities which may translate into brand loyalty (Upshaw in Hoffman and Novak 1995a). Companies engaging in this form of marketing will reap the benefits by building and maintaining customer relationships that promise to be highly profitable in the long run.

CONCLUSION

Companies that want to stay ahead of competition can no longer ignore electronic commerce and associated electronic marketplaces. To gain a real competitive advantage, however, they have to understand the logic of these emerging electronic markets. Simply

transposing traditional marketing-mix strategies into the world of electronic marketplaces will not yield satisfactory results.

In ubiquitous electronic marketplaces physical location becomes irrelevant and so do large amounts of retail space, or shelf space. Many products and services exist in digital format only and may even be distributed as such. Product offerings, prices, and promotional campaigns are no longer geared towards the mass-market but can be customized to the individuals' needs in cost-efficient ways. Electronic marketplaces are also ideal marketing communication media for creating and sustaining true customer dialogue (Deighton 1997). This allows firms to be closer to the customer than ever before and achieve and maintain new levels of profitable long-term customer relationships.

Although most of the excitement about electronic commerce and electronic marketplaces is based on the tremendous growth of the Internet, sales on the Internet have been relatively slow to develop, especially in markets other than USA and Canada. In the global context, the Internet has often served more as a channel for public relations and image building than as a sales channel (Mundorf, Zwick and Dholakia 1999). This is changing rapidly, though, as users become more comfortable with the act of buying on the Net.

While electronic commerce has exhibited explosive growth in recent years, this method of doing business is still in its infancy. As greater numbers and a wider variety of actors in kaleidoscopic patterns of relationships appear in the electronic marketplace, these types of markets will become more complex, often much more so than their physical counterparts. Success will be increasingly difficult to predict as new types of technologies emerge and transform parts of the electronic marketplace. To survive and prosper in the electronic marketplace, market players will have to be ready with contingency plans based on scenarios that take into account potential technological innovations as well as changes in consumers' preferences and behaviors.

REFERENCES

- Andelman, David A. (1995). Betting on the 'Net'. *Sales & Marketing Management* (June), 47-59.
- Anderson, Christopher (1995, July 1). The Accidental Superhighway. *The Economist*. [<http://www.temple.edu/lawschool/dpost/accidentalsuperhighway.htm>]. Accessed February 25, 2001.
- Anon. (1995a). EDI: Cornerstone of Electronic Commerce. *Canadian Business*, 68 (May), 47.
- "Managing Electronic Commerce" (1995), *Canadian Business*, 68 (May), 46-47.
- "The Right Connections" (1995), *Canadian Business*, 68 (May), 43-44.
- Anon. (1997, November 10). Cable TV attracts high-speed speculation. *Telephony*, 233 (19), 7.
- Axelson, Barbara (2000), "When Price is no Object," *eCommerce Business*, November 6, 32-35.
- Auger, Pat & John M. Gallaughier (1997). Factors Affecting the Adoption of an Internet-based Sales Presence for Small Businesses. *The Information Society*, 13, 55-74.
- Bakos, Yannis J. (1991). A Strategic Analysis of Electronic Marketplaces", *MIS Quarterly* (September), 295-310.
- Benjamin, Robert & Rolf Wigand (1995). Electronic Markets and Virtual Value Chains on the Information Highway. *Sloan Management Review* (Winter), 62-72.
- Berst, Jesse (2000, June 27). Death of Amazon (and Other E-Commerce Lies). ZDNet: [<http://www.zdnet.com/e-commerce/stories/main/0,10475,2594627,00.html>]. Accessed February 27, 2001.
- Bosley, Aneurin (1994). Internet Shopping and the Death of Retail. *The Internet Business Journal*, 2(October-November), 14.
- Brooker, Katrina (1998). Online Investing: It's Not Just for Geeks Anymore. *Fortune*, 138 (December 21), 89-98.
- Cash, J. I. Jr. (1994, December 26). A New Farmers' Market. *InformationWeek*, 60.
- Cortese, Amy, John Verity, Russell Mitchell & Richard Brandt (1995, February 27). Cyberspace: Crafting Software That Will Let You Build a Business Out There. *Business Week*, 78-86.

- Cronin, Mary J. (1994). *Doing Business on the Internet: How the Electronic Highway is Transforming American Companies*. New York: Van Nostrand Reinhold.
- Cross, Richard (1994). Internet: The Missing Marketing Medium Found. *Direct Marketing* (October), 20-23.
- Deck, Stewart (1998, February 9). Car buying on the Web. *ComputerWorld*, 32, 40.
- Deighton, John (1997). Marketing in the Age of Addressability: Managing Conversations to Build Customer Equity. In N. Dholakia, E. Kruse, & D. Fortin (eds.), *COTIM-97 Proceedings* (pp. 169-170). Kingston, RI: RITIM.
- Dholakia, Ruby Roy & Birgit Pedersen (1994). To Shop or Not to Shop the Interactive Way: Executive Summary. *Research Report at the Research Institute for Telecommunications and Information Marketing (RITIM)*, University of Rhode Island.
- Dholakia, Ruby Roy (1995). Connecting to the Net: Marketing Actions and Market Responses. Paper presented at the *International Seminar of Impact of Information Technology*, CIET-SENAI, December 6, Rio de Janeiro, Brazil.
- Fernandez, Manny (1999, March 17). Keynote Address of Manny Fernandez, Chairman of GartnerGroup. *Providence Business Expo*, Providence, R.I..
- Friel, Daniel (1998). Window on the Web. *Business Economics* (July), 66-67.
- Ghosh, Shikhar (1998). Making Business Sense of the Internet. *Harvard Business Review*, (March-April), 126-135.
- Goffman, K. G. & Odlyzko, A. M. (2000). Internet Growth: Is There a “Moore’s Law” for Data Traffic? AT&T Research Paper: [http://www.research.att.com/~amo/doc/internet.moore.pdf] Accessed February 27, 2001.
- Greenberg, Paul A. (2001), “Mirror, Mirror, On the Wall – Is My E-Tailer Special at All?” , E-Commerce Times, February 7, <http://www.ecommercetimes.com/perl/story/7298.html>
- Hoffman, D. L., Novak, T. P., & Chatterjee, P. (1995). Commercial Scenarios for the Web: Opportunities and Challenges. *Journal of Computer-Mediated Communication*, 1(3).
- Hoffman, Donna L. and Thomas P. Novak (1996). Marketing in Hypermedia Computer-Mediated Environments: Conceptual Foundations. *Journal of Marketing*, 60 (July), 50-69.

- Hoffman, Donna L. & Thomas P. Novak (1995c). The Challenge of Electronic Commerce. <http://www2000.ogsm.vanderbilt.edu/intelligent.agent/index.html>.
- Jarvenpaa, Sirkka L. & Peter A. Todd (1997). Is There a Future for Retailing on the Internet? In Robert A. Peterson (ed.), *Electronic Marketing and the Consumer* (pp. 139-154). Thousand Oaks, CA: Sage.
- Jasco, Peter (1998). Shopbots: Shopping Robots for Electronic Commerce. *Online* (July/August), 14-20.
- Jones, Russ (1994). Digital's World-Wide Web Server: A Case Study. *Computer Networks and ISDN Systems*, 27 (November), 297-306.
- Katz, J., & Aspden, P. (1997). Motives, Hurdles, and Dropouts. *Communications of the ACM*, 40(4), 97—102.
- Kover, Amy (1998, October 12). Why the Net Could be Bad News for Bloomberg. *Fortune*, 138, 220-222.
- Leibrock, Larry (1997). Privacy, Surveillance and Cookies. In Robert A. Peterson (ed.), *Electronic Marketing and the Consumer* (pp. 155-161). Thousand Oaks, CA: Sage.
- Malone, Thomas W., JoAnne Yates, & Robert I. Benjamin (1989). The Logic of Electronic Markets. *Harvard Business Review* (May-June), 166-172.
- McGrath, Peter (1999, March 29). Knowing You All Too Well. *Newsweek*, 48-50.
- Means, Grady & Schneider, David (2000): *MetaCapitalism: The E-Business Revolution and the Design of 21st Century Companies and Markets*. New York: John Wiley.
- Mehta, Ray & Eugene Sivadas (1995). Direct Marketing on the Internet: An Empirical Assessment of Consumer Attitudes. *Journal of Direct Marketing*, 9 (4), 21-32.
- Mundorf, N., Zwick, D., Hamm, V., Schwarz, P., & Dholakia, N. (1998). Internet-Auftritte der 100 groeBten deutschen Industrieunternehmen.[Internet presence of the top 100 German industrial corporations] Duesseldorf, Germany: VDI Verlag.
- Network World (1995, May 1). Book Review: Handbook Offers How-To Advice for Cyber Sales. [<http://www.nwfusion.com/archive/1995/95-05-01hand.html>]. Accessed February 28, 2001.
- Orme, Paul M., David Cordeiro, Kathy Cordeiro, Jonathan K. Cohen, & Nikhilesh Dholakia (1995). Evolving Electronic Commerce: A Report from the Base Camp and the Digital Frontier. In R.R. Dholakia and D. Fortin (eds.), *COTIM-95 Proceedings* (pp. 349-354), Kingston, RI: RITIM.

- Pitcher, George (1999, July 22). Why Commerce is at Risk from Internet Information Overload. *Marketing Week*, 22 (25), 25.
- Quelch, John A. & Lisa R. Klein (1996). The Internet and International Marketing. *Sloan Management Review* (Spring), 60-75.
- Rayport, Jeffrey E. & John J. Sviokla (1994). Managing in the Marketspace. *Harvard Business Review*, 72 (November-December), 141-150.
- Rickert and Sacharow (August, 2000). It's a Women's World Wide Web. Research Report sponsort by Media Metrix and Jupiter Communications. [<http://us.mediametrix.com/data/MMXI-JUP-WWWW.pdf>]. Accessed February 26, 2001.
- Sarkar, Mitra Barun, Brian Butler & Charles Steinfield (1995). Intermediaries and Cybermediaries: A Continuing Role for Mediating Players in the Electronic Marketplace. In R.R. Dholakia and D. Fortin (eds.), *COTIM-95 Proceedings* (pp. 82-92). Kingston, RI: RITIM.
- Schutzer, Daniel (1995). Get Ready for Electronic Commerce. *ABA Banking Journal* (June), 47-48.
- Sivadas, Eugene, James J. Kellaris, & Rajdeep Grewal (1995). One-to-One Marketing: The Internet as a Segmentation Tool. In R.R. Dholakia and D. Fortin (eds.), *COTIM-95 Proceedings* (pp. 250-257), Kingston, RI: RITIM.
- Strader, Troy J. & Shaw, Michael J. (1997). Characteristics of Electronic Markets. *Decision Support Systems*, 21 (3), 185-198.
- Tschong, Michael (2000, February 24). Iconocast Macroview. [<http://www.iconocast.com/issue/20000224.html>]. Accessed February 26, 2001.
- Treacy, Michael & Fred Wiersema (1995). *The Discipline of Market Leaders: Choose Your Customers, Narrow Your Focus, Dominate Your Market*. Reading: Addison-Wesley.
- Verity, John W. & Robert D. Hof (1994, November 14). The Internet: How It Will Change the Way You Do Business. *Business Week*, 80-88.
- Weston, Rusty (1995). Five Ways to Do Business on the Internet. *Inc. Technology*, 3, 75-77.
- Zimmermann, Hans-Dieter (1995). The Electronic Mall Bodensee: A Virtual Marketplace for Private and Commercial Customers. In R.R. Dholakia and D. Fortin (eds.), *COTIM-95 Proceedings* (pp. 11-17), Kingston, RI: RITIM.

Table 1: Marketing Mix in Traditional and Electronic Markets

<i>Traditional Markets</i>	<i>Electronic Markets</i>
PRODUCT	
Physical or digital form	Physical as well as digital forms
Standardization in products	High degree of differentiation and customization
PRICE	
Consumer's search costs are high	Consumer's search costs are (often) low
Prices vary according to retail format	Prices and profit margins tend to converge to the minimum possible
Consumers have significant switching costs	Consumers have zero or minimal switching costs
PLACE	
Wholesalers and retailers exist	Disintermediation of many traditional wholesalers and retailers, reintermediation by new breed of cybermediaries or infomediaries
Physical presence of shoppers usually required for transactions and delivery	Physical presence of shoppers not required for transactions and delivery. For digital products, even physical distribution system not required
For retailing, location is very important	Location is unimportant (except for logistical reasons)
PROMOTION	
Promotional costs very high for broadcast and major print media	Substantial savings in promotional costs, especially for early entrants who become dominant
Promotional messages are pushed to the consumer	Consumers pull themselves into a website (although "push" methods such as email advertising and "interstitial" ads are growing)
Communication is one way	Communication can be interactive
Hard to track consumers' interests, preferences, and decision making activities	Possible to track many of consumers' interests, preferences, and decision making activities

Source: RITIM Research.