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E-Commerce

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ABSTRACT

This paper examines the impacts of the Internet on business activity. Established

corporations and startup firms are utilizing the Internet to create new markets and

reorganize existing markets. Ubiquity and low cost make the Internet a powerful force

for transforming business activity and facilitating new venture creation. Firms are using

online retailing to circumvent traditional establishments, open portions of their

information systems to customers, and link firm processes directly to the consumer by

moving functions such as purchasing online.

Introduction

One of my grandfathers favorite movies, Cimarron, had a memorable scene with a panorama of an enormous number of covered wagons lined up to participate in the Oklahoma Land Rush. This scene captures the essence of the Internet rush. In 1990 the U. S. National Science Foundation approved the use of the Internet for nonacademic uses, but it was only in 1993 that the technologies were developed making possible the World Wide Web (WWW). The key breakthrough was the release of software able to generate the appropriate data that could be transmitted over the Internet to a user s machine where it would appear as visual images. The result has been nothing less than a global cyber rush, similar to the Oklahoma Land Rush, as individuals and businesses have rushed into cyberspace, a place where anyone can have a site almost by simply claiming it. In this paper we examine some of the initial commercial uses of this new space, while recognizing the very preliminary nature of our findings.

Among all the remarkable aspects of the Internet, the speed of its adoption is, perhaps, the most noteworthy. The growth of Internet users from 5 million in 1993 to 62 million in 1997 and nearly 100 million in 1998, is one of the

fastest adoption rates any technology has ever experienced. Traffic on the Internet continues to double every 100 days. Even faster than user adoption rates, the number of domain system names (registered sites) registered has been increasing at an annual rate of 40 to 50 percent, reaching about 29. 7 million at the end of 1997. And the number of commercial names (. com) increased from 27, 000 in January 1995 to over 765, 000 in July 1997. Since the U. S. was the leader, most analysts expected this pace to continue until after the year 2000. Since the movement to Web-based commerce is spreading globally, there eventually may be as many as 550 million users and a far greater number of commercial sites than currently exists.

The development of a particular technology certainly does not entirely determine, in the strong sense, the nature of the changes underway. However, as a tool, the Internet will be used in ways that will transform existing relationships such as those between buyers and sellers, workers and owners, and suppliers and assemblers. In the process there will be important changes in institutions such as manufacturing firms, service providers, and retailers. Here we are careful not to claim that technology mandates a particular institutional outcome. Our position is rather that drastic changes are already underway and the pace of change will intensify.

The power of the Internet is its simplicity; it is merely a medium for connections and is able to transmit anything digitized. Unlike prior communication systems, such as the telephone, which established a dedicated connection between two nodes, the Internet allows the simultaneous exchange of information in digital form among an unlimited number of nodes. The protocols used to transmit data across the Internet are

standardized and readable by a majority of computing platforms. To this is added the innovation of hypertext, that is the ability to almost effortlessly move from node to node at a whim. The information content of the Internet is almost completely dematerialized. It is reduced in its physical essence to the most abstract possible formulation: 1s and 0s carried by laser light, electrons, or electromagnetic waves. Multi-platform accessible standards, hypertext, and dematerialization are forcing and combining with a remarkable increase in the capacity of global telecommunications systems to rapidly reduce the costs of communicating digital data. The extreme flexibility of the Internet allows it to be used for a large number of activities with differing real world manifestations. Activities as diverse as booking airline flights, purchasing items, playing games, viewing pictures, listening to music, or accessing public information, many of which formerly were intermediated by human operators are being transferred to the Internet. The dimensions and plethora of activities related to the Internet are increasingly impossible to fully comprehend and this immensity is emblematic of its power.

Theorizing New Economic Space

By connecting computers the Internet allows direct access to processes and procedures, which were formerly cordoned off in the back offices and data processing centers of government and corporations, while also creating entirely new sources of information. The Internet makes a vast mass of information, images, and opinions accessible to any owner of a connected computer. It is an interactive communications medium through which the user accesses information that would have previously taken much time and

physical effort to find. The Web is remarkable because the user has the sensation of travelling, though in reality the user is only electronically reaching out and retrieving data to be visualized on a computer monitor. In this process the costs of information search drop dramatically.

Even though there is no certainty about the ultimate configuration of Internet-related commerce at maturity, businesses such as stock trading, bookstores, airlines, and PC firms are already migrating on-line. Virtual stores are being created with virtual inventories far larger than any physically existing store. Because their inventory of products available is entirely computerized, the customer rapidly pinpoints the exact product desired by using specially tailored database query software. These products can be drop-shipped from a production or distribution node to anywhere in the world using the various courier services that are now on-line. The Internet eases many market entry barriers because of minimal startup costs, thereby dramatically accelerating the realization of an idea and allowing successful ventures to grow exponentially.

The Internet represents an extremely powerful dematerialization. It is no longer necessary to disseminate information in the physical medium of paper, floppy disks, or CDs. It can now be communicated through electronic impulses and/or beams of light (fiber optics). Such flexibility and ease of use accelerates information flow and communication, facilitating new knowledge creation and novel forms of social production. These changes have been most pronounced in the software development area. Though the distribution of commercial-class software over the Internet is still only limited, already in existence are vast downloadable stores of freeware and shareware

programs, and numerous product demos, service updates, and bug fixes. Many software developers use the Internet to publicize and distribute test versions of innovative software programs such as the Opera browser and The Brain user interface. The Internet also facilitates the development, distribution, and maintenance of the alternative freeware Linux operating system and Apache web server. These programs are the result of the collaborative efforts of thousands of users/developers for whom the Internet serves as a virtual software development campus. According to the chairman and founder of Netscape, Jim Clark, new business models are possible because

The Internet is low cost. We proved that by using the Internet to distribute our first product and we were able to build a customer base of 10 million users in just about nine months. Our only expense was the engineering cost of making the program . . . So we see this potential for low cost distribution of any kind of intellectual property whether software, or pictures, or movies, or compact disks, or anything that can be represented as bits.

An example of the curious economics of the Internet is McAfee Associates, a producer of antiviral software, which adopted the capture “ mind share” strategy and pioneered free Internet software distribution. McAfee has said “ if you give software away and assist people as well, you re almost bound to make money. After providing free software to five million users, McAfee shifted into a marketing mode and started charging for upgrades, add-ons, and new updates. This kind of practice is becoming quite common; even Microsoft, probably the most aggressive seller of software posts trial versions of some programs, such as Money and Outlook 98. Since computers and

networks constantly evolve, the customers actually evolve with the software in the form of upgrades. From the perspective of traditional economics, practices such as giving products away for free seem foolhardy and even perverse. Recently, however, some economists and business theorists have began to rethink traditional economic concepts to encompass the value-added from knowledge creation and the “ winner-take-all” aspects of capturing or becoming standards in information-and communication-intensive.

Economic puzzles like these are only the tip-of-the-iceberg, there are other phenomena pressing beyond the boundaries of traditional social sciences. User communities, at a number of web sites online actually become an integral component of the value of the site, as opposed to the consumers in the non-Internet market. For example, reader s reviews are posted at Internet bookseller, Amazon. com. The user community creates value in a profoundly social sense. The social community interaction process and its accompanying communication of information and opinion create the value of a web site. The ability to search online for a book and purchase it is reproducible, the online community is not.

The creation of online or virtual communities occurs through the medium of virtual places. Certainly, worldwide web servers provide Internet surfers with the electronic analogue of visiting an address. Although it is really only a software construction on a computer server connected to a telecommunications pipeline through which the user retrieves information. This idea of a virtual place in space is a vexing issue in capitalist economies where space is measured, marked, and owned. Marking and ownership

systems, however, are being developed. For example, World Wide Web addresses are becoming valuable property as Compaq can attest when it paid $3 million for the Altavista web address.

The Internet and Commerce

By the early 1990s the Internet hosted a vast collection of useful information and downloadable software. However, most of the tools for accessing this information were primitive and required a certain amount of expertise and system knowledge on the part of the user. Over time a number of key innovations were developed, reflecting a long tradition of collective development of network technologies, standards, and protocols funded by the Federal government. These were all designed to make the Internet more useful to the academics and computer scientists who were the Internet s main users. The breakthrough came with the World Wide Web (WWW) and Hypertext Mark-up Language (HTML) protocols, which were developed by researchers at the European Laboratory for Particle Physics (CERN) in Switzerland in order to facilitate the exchange of information among physicists. Thereafter the obvious next step was to develop special software, the browser, which made the utilization of these and other protocols invisible to the user. A number of different browsers were developed, some more functional than others, and were distributed freely over the net. One of the early browsers, Mosaic, developed at the National Center for Supercomputing Applications (NCSA) at the University of Illinois Urbana-Champaign became wildly popular with millions of copies downloaded in a few short months after its release. The group that created Mosaic was recruited and moved to California to build the first commercial grade

browser, forming the company named Netscape. Netscape added the final key innovation, building secure transaction capability (Secure Sockets Layer, or SSL) into its browser. This enabled Internet users to safely and conveniently exchange money for products to be delivered over the net itself or by the already extant and highly sophisticated delivery systems such as Federal Express, UPS, or the USPS. Once all these pieces of the puzzle were in place, the success of the Internet as a commercial medium was all but guaranteed.

Despite the seemingly obvious commercial applicability of the Internet, no one dominant model of doing business has yet emerged. The Internet has presented itself to business as uncharted territory, forcing firms to blindly grope for strategies that work. Those firms who wish to succeed in Internet commerce have had to confront three unique characteristics. The first is ubiquity. By this we mean that all “ places” on the Internet are accessible to the user on what is essentially an unlimited and equal basis. The user can go anywhere on the net with a minimum of effort; there is no inherent technological reason for the user to start at a particular point.

One entry point to the WWW is the proprietary network services predating the rise of the WWW in the mid-1990s, such as America On Line (AOL), Prodigy, and CompuServe. But these services had to adjust their business models and, in fact, Compuserve was acquired by AOL. Moreover, most, if not all of the services provided by more delimited systems are available at either free or subscription stand-alone web sites. Thus, commercial content providers must find ways to attract people to their site, either by providing attractive content for them to consume or some service or product they want

to use or buy, or by creating a system for purchasing non-Internet specific products that offers something conventional retail channels do not.

The second important characteristic of the Internet is interactivity. The Internet itself was developed through a remarkable process of interaction by researchers located around the world. Commercial publishers who wish to succeed on the Internet must offer more to customers than that which is ordinarily available in print or from some other media. One of the more successful web publishers has been the Wall Street Journal, which has seen steady growth in its paid subscription base since it connected to fees about 2 years ago. The Journal s site offers not only standard print content, but also a wide range of content and services not found in the print addition. These include articles from other Dow Jones publications, past article search and retrieval, customized stock quotes, job finding information, a database of company background information, interactive discussion of various current news topics, a news audio feed, the ability to customize the web page to the user s interest, and numerous other features. The Journal site serves both as a substitute for those with limited access to the print version, such as overseas readers, and as a complement to print subscribers who wish to access additional services such as company and stock tracking from a source they know and trust.

The interactive nature of the Internet also gives rise to new forms of related activity. Some software firms place nearly completed software (beta releases) at a web site and encourage computer buffs to install the software and test it for bugs, functionality, and features. The aforementioned Linux and Apache software programs have relied on the Internet for both their

circulation and their continuing technological evolution. Here, consumers actually participate in the knowledge creation process by using a new product and communicating the results back to the company. Netscape, for example, pre-releases unfinished versions of their software over the Internet for this purpose. This diminishes some of the burdens of in-house testing and decreases the distance between software creators and customers by creating an information feedback loop. Moreover, integrating a subset of customers directly into the product development process also accelerates the creation of demand for the finished product.

The third important characteristic of the commercial Internet is speed. Because the Internet is a universal, interactive system, changes such as system software upgrades, new standards and protocols, and new publications can be developed and dispersed very rapidly. The availability of out-of-the-box network and network server hardware and easily adaptable software applications such as credit card billing systems and searchable databases enables the rapid development of commercial systems at very low cost. Moreover, many Internet-based businesses have been developed as overlays on existing infrastructure, which further reduces startup costs and time of deployment. The rapidity at which businesses can be established on the Internet places a great deal of emphasis on being the first in a particular market category. An interesting case in point is Amazon. Com, an Internet bookseller based in Seattle. By relying on existing systems of distribution as a sort of retailing adjunct to them, Amazon was able to start operations quickly and efficiently. By purchasing advertising link space for itself on the Internet from frequently visited sites such Netscape’s, Amazon developed a

high volume business in a very short time. Founded in 1995, Amazon had over $116 million in net sales during the second quarter of 1998, an increase of 316 percent over net sales of $27. 9 million for the second quarter of 1997. Barnes & Noble, an important innovator of large, high variety, bookstores, has only recently recognized and introduced book selling on the Internet as a logical extension of its own large-scale distribution and inventory-tracking system. But, by entering the Internet book sales arena late, Barnes & Noble is having great difficulty overtaking Amazon.

Given the assistance of customers, product evolution in Internet software is extremely rapid. The leading personal computer software company, Microsoft, only saw the potential and danger of the Internet in late 1993, though after that it moved very quickly to exploit the new opportunity to overtake the leader, Netscape. Microsoft s strategy was to rapidly improve its Internet browser and include it in the Windows 95 software package. By the end of 1997, Microsoft was rapidly taking market share from Netscape.

The Internet economic space opened quickly and continues to provide many possibly transformative opportunities. Leadership roles in previously stable and even immobile activities such as book selling, travel agency, and telephone ticketing are in a state of flux. For the airlines, the Internet made it feasible to create online reservation systems that they could control and use to reduce the power of travel agents. There were also significant savings, because the cost of issuing an eticket is only one dollar, whereas a telephone ticket costs eight dollars spurring changes for the highly competitive airline industry because of these compelling economics.

The Internet could also impact the local newspaper as a materialized source of information delivery. The initial approach to simply place the newspaper on a web site has failed. What may evolve is that various web sites will replace different components of the newspaper. Already there are entertainment oriented “ lifestyle guides,” such as Microsoft s Sidewalk sites. There are many sports and business-oriented web sites that might replace or, alternatively, complement the sports and business sections. Like the Wall Street Journal, these sites offer a level of interactively accessible information that would be bulky in printed form. The most important impact on newspapers might come from Internet-based classifieds since they are a key source of revenue for newspapers. Inexpensive local classified ad sites are already available on the Internet. It is likely that the classifieds will eventually become interactive, allowing direct responses to ads through email, or even more interactively through a chat program. The variables that will determine the fate of newspapers hinge upon the issue of whether readers appreciate the variety, including national and local news, sports, business, weather, and advertising etc. in hardcopy.

It is still quite early in the development of the Internet and related data communications, so the possibilities of the new medium are only beginning to be explored. Old activities such as making phone calls, sending mail, and ordering goods and services are already migrating to this nearly instantaneous environment. And, as important, for this paper, many formerly relatively sedate industries are finding parts of their value chain absorbed and accelerated to computer and Internet time. As a result, some local businesses can go global and experience dramatic growth, while other local

businesses will be outflanked by competitors from anywhere on earth and experience decline.

Customer Service Functions

Customer service functions have always been a time-consuming person-to-person activity, however much of this is highly routinized. An important recent step in automating customer service was telephone call processing, but this was a slow system with very low bandwidth. In other words, an excessively long menu of choices leads to consumer disconnection and difficulties in creating user-friendly branching systems. More sophisticated non-human intermediated customer service would have to wait until the consumer had a device able to handle greater amounts of information, i. e., the PC and a computer modem. When the installed base grew and the technology was sufficiently mature it became possible to place information on a server open to customers. This redefined customer service by increasing the level of provision while decreasing the cost. This was possible because most interactions are entirely standard. For example, many customer questions are for routine information such as store hours and directions. Answers to such questions can be codified, indexed, and stored on a server to be accessed online and downloaded. For simple questions such as directions the Internet can download a map, whereas on the telephone error-prone verbal instructions are necessary. Essentially, customers can access the information they need to find and create value for themselves from the provider s web site at practically no-cost except the initial startup costs.

In addition to seeking routine information, customers are also attracted to sites that provide detailed information about products or services. A potential customer can browse several competitors' sites, as well as third party sites, which discuss the product in question, compare prices and features, gather general information about a particular product or type of product, taking as much time as desired before making a purchase. A recent study at the Fuqua School of Business at Duke University found that consumers were more likely to buy products from sites that provided comprehensive information than from sites that had slightly lower prices but little in the way of useful information. The point is that the user can select the desired amount of information, removing the need for the information provider to make decisions based on an " average" consumer.

The types of customer service provided online depend upon the firm s product or service. For example, software companies make available various software patches, add-ons to current products, and/or demos. Increasingly, software programs such as Microsoft Windows or Netscape Communicator have the ability, upon a prompt from the user, to automatically check for updates and then download and install them. Delivery through the Internet is essentially without cost and has the added benefit of developing a connection with the customer. In other cases, service bulletins or product-related information are placed on company web sites for informational purposes. These relatively straightforward applications replace or augment previous product upgrading or information dissemination techniques.

Global logistics firms, such as DHL, UPS, and Federal Express, have taken the potential for customer service much further. Federal Express, one of the

aggressive first-movers, has opened the tracking portion of its computer system to Internet users. Federal Express initial effort on the Internet was a one-way information provision service customers could use to receive information about the location of the shipment and its arrival time. The success of this initial effort spurred Federal Express to consider other ways to use the Internet. Based on its experience with the tracking service, a web site was developed to permit customers to use the Internet for all their shipping functions. The features now available include scheduling pick-ups, detailed maps of all drop-off locations, rate charts, and other information regarding international customs regulations. Moreover, the site offers free downloadable software that speeds the processing of shipments, allows the user to store addresses in an address book, maintains a shipping history in a log, and creates and prints labels. Many shipping office functions have been transferred onto software and into data communications networks. Human intermediaries and physical documents were replaced by software. Not only is it less expensive than previous methods, but it also provides the mechanism for creating whole new ways for firms and their customers to interact. Most critical, the information provided through the server gives the customer the resources to create value from the site.

Ecommerce

The reasons consumers purchase retail items are complicated and, at times, non-rational. Of course, one reason is plainly utilitarian, but, of course, there are other more emotive motivations. Today, the Internet is establishing an entirely new retailing channel that is already affecting traditional retail industry. As we shall see, building successful Internet retail web sites is

significantly more complex than simply moving a catalog online. A web site must create a feeling that it is the place to go to buy something.

The use of Internet retailing will transfer an increment from traditional channels to online. Fred Smith, the founder and CEO of Federal Express has an threatening vision. “ The Internet is going to make it very difficult for anybody in a middleman position to stay in business the same type of effect that Wal-Mart had in the retailing sector that s what the Internet is going to do to every business.” No previous communications technology has allowed the customer to personally search databases of, for example, books, autos, software, airline schedules, and then complete the purchase without face-to-face interaction. In traditional commercial locations deployed a service worker (or intermediary) that communicated with a customer while interfacing with a computer and performing search and booking procedures. With Internet browser technology it is possible to remove the service worker as a translator between the analog customer and the digital database. This makes it possible to reconceptualize activities that formerly required human service workers and directly connect customers to firms computers. With credit card payment the entire process is electronic with the exception of delivery for some goods, such as insurance, stock certificates, and financial instruments, there is nothing but an accounting notation in a computer.

There are remarkable benefits for a retailer that can transfer sales activities to the Internet, though they vary by product or service. For many services in which there is no physical component at all it may be quite easy to move the entire process online. A general benefit is that an Internet retailer can hold far less inventory than a conventional retailer who must have the items in

inventory thereby tying up capital. The difference can be striking. For example, Amazon. com, the online bookseller, turned its inventory over 42 times in 1997, whereas its largest competitor, retail store-based Barnes & Noble turned inventory only 2. 1 times. Moreover, a significant portion of Amazon’s inventory is held by distributors who ship the items directly to the customer although this is changing as Amazon attempts to develop a system of buying directly from. Book retailing could experience even further radical changes as new electronic book devices arrive in the marketplace. For example, devices enabling books in digital form to be downloaded by phone or potentially over the Internet. An early example of this is the four hundred page book Emerging Digital Commerce published by the U. S. Department of Commerce (1998) using Adobe Acrobat and can be printed in a book-like format. In another inventory-sensitive market, one of the several automobile retailing web sites, Auto-By-Tel, had an annual rate $6 billion in sales at the end of 1997, up from $1. 8 billion the previous year.

Complicated sets of purchasing decisions such as booking travel and hotels can be undertaken on-line without human intervention. For example, air travel, car rental, and accommodations can be booked at an online travel site. The on-line travel agent can go far beyond a telephonic travel agent by providing much broader and more detailed information including textual descriptions, images, and even reviews of the various destinations. In effect, huge databases of information can be made available to the customer in such a way as to allow users to “ customize” their travel agenda. In essence, the customer produces a uniquely customized product from an entirely standardized set of choices.

The convenience and availability of information are important advantages. However, online travel agencies have yet another advantage, namely, they can post comments from previous travelers, thereby creating interaction and information exchange. This multiplies, simplifies, and makes interactive the “ letters to the editor” columns found in newspaper travel sections. The interactive possibilities permit online discussions regarding specific types of travel. This virtual community adds value to the site and is a mechanism for retaining customers who can change sites at the click of a button. Moreover, the knowledge generated through these discussions could permit the discovery of new market needs, thus giving rise to new products. The community and its interactions add value that the travel agency does not need to compensate.

Compare the economics of an online travel agency with that of a conventional agency. At the conventional agency a person deals directly with the customer in a situation in which the time spent with a customer on a booking is a direct cost. In essence, each interaction with the customer is a cost. As mentioned earlier, it costs an airline one dollar to book a flight on the Internet and eight dollars through an airline customer agent. In addition, travel agents can make mistakes, however on the Internet the customer bears full responsibility for the reservation. In the case of the conventional travel agency, return business is dependent upon building an interpersonal relationship with the customer. The online travel agency uses the online customer community to develop relationships between the customers and with its site in the hopes of encouraging repeat business.

The travel agent s experience combined with a personal relationship with the traveler can be seen as knowledge base that enabled them to make recommendations to improve the traveling experience. The travel agent was a form of expert knowledge. Customers not utilizing the travel agent s knowledge base, in effect subsidized those using the knowledge. However information on travel habits, previous travel, and other characteristics allows the computer to search its database and match it with similar profiles to be used to offer “ personalized” services to a customer.

The success of online travel agencies is apparent. For example, Microsoft s Expedia site launched in 1996 had more than $12 million in monthly sales in January 1998 and was growing quickly. As important, the U. S. travel industry is being reorganized, not only with new entrants such as Microsoft, but also as the airlines are reducing the fees they pay to travel agents and encouraging customers to buy tickets directly through their web sites. In the process these web sites are being built into virtual places. For those desiring human contact, the offline travel agent will remain available, but increasingly they will be paid for directly by the user, witness the increasing use of service charges by the offline travel agencies (a tactic that will accelerate the movement of customers to the online agencies).

The technical capacity for online retailing can be understood by seeing the two tendencies that were integrated by the Internet. First, the decreasing cost of long distance telephone service meant many customer transactions had already been centralized into call processing centers especially for the purchase of products such as tickets, software, computers etc. Second, the development of sophisticated database management software and the use

of corporate Intranets serviced by large-scale computer servers meant that the purchasing process had been largely computerized. The service worker using a networked computer to take an order was merely an intermediary between the customer and the corporate database. On the demand side, the increased usage of email, the development of expensive, user-friendly browser, personal computers with faster modems, and more persons attached to high-speed local area networks created a large installed base of potential consumers. The final step was to habituate customers to purchase items through cyberspace. As more and more consumers are online, old retail methods will be eclipsed since consumers have vastly more information at their disposal, not only about the products available, but about their prices as well. Premium list pricing will be more difficult to maintain as consumers can nearly effortlessly find the lowest priced vendor, or go to a site that aggregates the price information of several vendors.

Conclusion

I have shown that in economic terms the Internet is more than just another technological tool. By enabling certain types of activities, the Internet will impact consumer behavior, firm behavior, and industrial organization. The final configuration caused by the Internet is difficult to predict. This is because the basic impacts of the Internet interact in problematic and contradictory ways. The most problematic question related to the economic impacts of the Internet regards market niche and firm formation. Will the Internet encourage the development of a vast collection of business types, marketing strategies, and market niches? Or will it lead to a small collection

of mega marketers, each dominating a particular product or service? There are arguments to be made in favor of both possibilities.

At the most abstract level, the Internet can be conceptualized as a giant machine for reducing transaction costs. As we have seen the Internet is being used in a myriad of ways to speed, simplify, and enhance relations between consumers and firms. The Internet reduces physical and bureaucratic drag by drastically reducing the importance of location and the number of procedural steps requiring the direct intervention of firm operatives. For example, on the retail side the external costs associated with opening, maintaining, and staffing actual physical stores is reduced, and on the production/distribution side the time-related costs of generating and circulating paper is reduced. Startup costs are also greatly reduced in that all anyone really needs to begin selling things over the Internet is a connected server, or space on someone else’s server. This has led to a proliferation of individuals and firms attempting to use the Web for commercial purposes.

The ease with which someone can have a presence on the Internet, or access the Internet, has led to a disturbing paradox. The Internet replaces physical space with a virtual space within which all places are essentially the same. There are no permanently situated, highly traveled intersections or malls with thousands of potential customers constantly passing by, costs associated with traveling across town to find a particular product or service, high real estate costs, and parking lots to build. To the customer the Web is a million places, all in the same place. To the merchant, it is a cacophony within which being noticed is increasingly difficult. While it is supremely easy to set up a web site, whether anyone actually visits it is another question

altogether. Thus it is likely that the number of small merchants using the web to market specialized goods and services will continue to reproduce, and that this reproduction will lead to many successes, but even more failures. Yet it is also equally plausible to assume that a small number of firms, either new first movers, or already established brand names, will dominate their respective product markets at a minimum nationally and likely globally.

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