lectronic business is probably the hottest thing to hit the business world since the personal computer was first introduced two decades ago. Nevertheless, the numerous Internet startups that wound up on the scrap heap of business failures are testament to the fact that the Internet is merely a tool, not a panacea, and no matter the public fervor over an innovation, sound business strategy is always a prerequisite for success.

By way of definition, e-business is a general term used to describe conducting business digitally. As such, e-business includes not only buying and selling on the Internet, but extranets that link a business to suppliers and intranets that enable an organization to better manage its knowledge. In practice, however, it has been suggested that too many companies focus on the "e" prefix and do not give sufficient attention to the "business" component.

Caught up in the general fervor over e-business applications and the Internet in general, many executives may have turned a blind eye to the fundamental strategic and operating issues that need to be addressed both before and during the launch of e-business initiatives. As business author Michael Porter notes, many assumed that the Internet changed everything, negating all the old rules about companies and competition. Although that may be a natural reaction, Porter views it as a dangerous one. In fact, instead of the Internet making strategy less important, as some have argued, it has actually made strategy more indispensable than ever.

Although the Internet and e-business initiatives can make information more widely available and can reduce the difficulty of purchasing, any efficiency gains that the Internet allows are extremely difficult to capture as profits for the business. Instead, they all too often go to the customer. In fact, if managed poorly, e-business initiatives may actually transform once promising opportunities into dangerous threats.

In this article, the authors outline the environmental threats posed by the Internet and e-business practices and present a series of propositions on the relationship between managerial perceptions of e-business's impact on industry structure and the prevalence of a formal e-business strategy. We also discuss managerial implications and suggestions for future research.

There are many ways to view business strategy. For example, Porter describes strategy as the creation of fit among a company's vital activities. A more formal definition is provided by Turban *et al.* (2002), who view strategy as a "formula for how a business is going to compete,

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what its goals should be, and what plans and policies will be needed to carry out those goals''. As such, effective strategic planning is dependent on the accurate interpretation of the organization's environment, including the structure of one's industry.

According to Porter, most ways in which the Internet influences industry structure actually have negative consequences for established businesses, making strategic planning vital to success. In addition, the structure and the resulting attractiveness of any industry are determined by five underlying forces of competition: the intensity of rivalry among existing competitors, the barriers to entry for new competitors, the threat of substitute products or services, the bargaining power of suppliers, and the bargaining power of buyers.

Perhaps the most important way in which the Internet increases rivalry among existing competitors is by expanding the size of the geographic market. Consequently, many more companies are brought into direct competition with one another. Moreover, according to Porter, ''Internet technologies tend to reduce variable costs and tilt cost structures toward fixed cost, creating significantly greater pressure for companies to engage in destructive price competition'', leading to the first proposition.

Proposition 1: *As the rivalry among existing competitors increases, firms undertaking e-business efforts need to develop and implement a formal e-business strategy.*

For example, by the 1990s, Microsoft captured near monopoly power in software areas such as operating systems, spreadsheets, and word processing. In 1994, recognizing a new opportunity with the growth of the Internet, Microsoft decided to move into this domain as well. However, Microsoft was not the first to venture into the new Internet industry and so was forced to play catch-up to a variety of innovative rivals. The only way for Microsoft to succeed in such a competitive climate was through the establishment of a sound e-business strategy. Through careful strategic planning, Microsoft was able to change direction and retool its software for the Internet. In fact, through reverse engineering, purchasing, licensing, and obtaining Internet software through strategic alliances, Microsoft quickly became a dominant Internet player.

In general, the threat of new entrants is high if low entry barriers exist in an industry. Because the Internet reduces the need for such elements as an established sales force, access to existing channels of distribution, and the need for physical facilities, barriers to entry are greatly reduced, further intensifying competitive rivalry. As such, the second proposition emerges.

Proposition 2: *As the barriers to entry decrease, firms undertaking e-business efforts need to develop and implement a formal e-business strategy.*

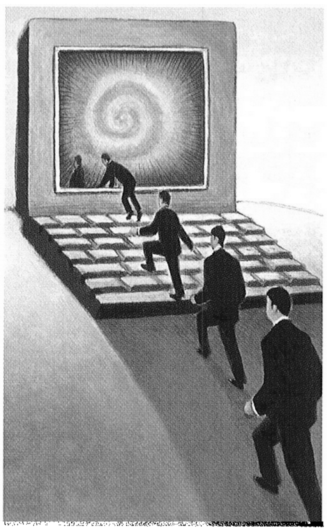
In September 1995, for example, there were no Web-based stock brokerages. However, with extremely low barriers to entry, a host of companies quickly set up operations. In fact, by the fall of 1998, there were already 82 Web-based stock brokerages. The largest of these online brokerage houses, Charles Schwab, had traditionally been a ''brick and mortar'' operation, but it developed a new strategy where the role of their 250 physical branches changed dramatically. The result was that physical facilities were no longer required for trading.

With the implementation of their e-business strategy, Schwab conducts fewer than 5 percent of trades at the branch offices. The branches are primarily used for customer acquisition and the dissemination of investment advice.

According to Porter, ‘‘the proliferation of Internet approaches creates new substitution threats’’. The Internet allows new forms of competition to perform traditional functions and gives customers new approaches to meeting their needs. Even small firms have a greater opportunity to introduce a substitute product given the low cost access to a large Internet market.

Proposition 3: *As the threat of substitute products or services increases, firms undertaking e-business efforts need to develop and implement a formal e-business strategy.*

In the music industry, for example, several firms have responded to the threat of new Web-based substitutes through a series of strategic adjustments. Initially, major recording companies such as Universal Music, EMI, and Warner Music Group used online stores merely as distributors for their physical CDs and tapes. However, by 2000, Internet users increasingly began to buy, sell, and trade songs online, often evading paying royalties. In response to this threat of new digital substitutes, the music industry initiated both a vigorous legal response and a shift in strategy. Even as the Recording Industry Association of America pursued copyright infringement suits against such online competitors as Napster, Inc. and MP3.com Inc., several record companies began to shift their strategies even further toward the digital distribution of music. Universal, for instance, started building their business around the electronic distribution of music, eventually making the bulk of its albums and singles available in digital form. Similarly, in a major strategic shift that would allow both EMI and Warner Music Group to save on the cost of investing in the new media, the music units of Time Warner and EMI merged to create Warner EMI music.



For almost 30 years, supplier firms and their business customers have been sending and receiving messages between computers connected by a communication link. Known as electronic data interchange (EDI), it has allowed for the electronic movement of specially formatted business documents, such as purchase orders, invoices, payments, shipments, and delivery schedules. Because of the high initial investment required, the long start-up time, and the need to restructure business processes to fit EDI requirements, firms employing EDI links have become increasingly dependent on a small number of suppliers, increasing the power of these suppliers.

Proposition 4: *As the bargaining power of suppliers increases, firms undertaking e-business efforts need to develop and implement a formal e-business strategy.*

As supplier power has increased, many firms have sought wider e-commerce applications to negate this trend. In 1996, the lighting division of General Electric (GE Lighting) piloted the company's first online procurement system, the trading process network (TPN). Through TPN, the company's sourcing department can get requisitions for supplies electronically from its internal customers and post bid packages to suppliers around the globe via the Internet. Since the TPN system is Internet-based, suppliers need only a Web browser, opening the bid process to many new suppliers. Additionally, because the Internet allows a customer to gather extensive information about products directly from suppliers, customers are often able to make more informed choices. In the case of GE Lighting, the division was able in 1997 to find seven new suppliers in just one month through the Internet, including one that saved 20 percent over the second lowest bid. Thus, the Internet as a channel for procurement provides greater competition among suppliers, and consequently the leverage of existing suppliers is greatly reduced.

Although dedicated e-commerce linkages can enhance the bargaining power of suppliers, the expanded degree of interconnectivity allowed by the Internet has greatly increased the bargaining power of buyers. This is especially true in the case of small businesses. In the past, their suppliers were largely from a local population, but the Internet gives small businesses more opportunities to search globally for the best value products or services. Further, the greater information access afforded to buyers tends to shift bargaining power to buyers as they become more familiar with the technology. This convenience of online buying tends to reduce buyers' switching costs, even further enhancing the bargaining power of buyers.

Proposition 5: *As the bargaining power of buyers increases, firms undertaking e-business efforts need to develop and implement a formal e-business strategy.*

During the height of the European technology stock boom in 2000, according to the *Wall Street Journal*, "it seemed all you had to do to launch a successful online brokerage firm was to set up a Web site and wait for the customers to arrive and start trading". When the bull market "went bust", there were far fewer buyers, resulting in increased bargaining power for the remaining customers. Online brokerage firms across Europe were forced to develop well-conceived strategies incorporating new services to meet the increasing demands of customers.

According to Turban *et al.* (2002), executives of successful e-business companies are strategic thinkers focusing on customers, markets, and competitive positioning as well as internal operations. Unfortunately, many companies approach e-business with no clear idea of where they are going. Consequently, managers must devise and follow a strategic approach to the planning of e-business initiatives.

According to Ware *et al.* (1998), a useful assessment and planning methodology for e-business initiatives and an approach for clarifying goals and expectations would include the following seven steps:

1. Formulate a creative map of scenarios that align business strategy and e-business initiatives for the future.
2. Communicate an integrated business vision from top management to include and drive e-business initiatives.
3. Identify key "value constellations" (match among web relationships and value propositions). Search for opportunities to incorporate the Internet to enhance these value constellations.
4. Transform strategy to include the opportunities identified and develop a tailored portfolio of e-business initiatives for the company to pursue.
5. Outline year-by-year objectives and develop plans for the chosen e-business initiatives. Measure the effectiveness of the e-business initiatives and their effect on the overall business.
6. Implement the plan for the change process.
7. Monitor and evaluate the plan on a continual basis. Adjust and improve the process as necessary.

Following this structured process encourages managers to take a systematic approach to strategy development, especially as it relates to incorporating an e-business initiative into a traditional business. Regardless of the method, however, it is certain that to achieve success managers need to have a clear vision and an integrated strategy that includes a well-planned e-business initiative.

During the initial transition to Internet-based business, the focus was on the technology issues. Few managers fully understood or anticipated the far-reaching impact of e-business as it began to emerge and invade traditional businesses. Gradually, the picture is now becoming clearer as companies realize the potential of the Internet to improve the effectiveness and efficiency of their businesses. They also recognize the potential threats posed by the new economy. Although the impact of the Internet has changed dramatically the strategic direction of some businesses, very few firms can afford to ignore the impact of the Internet on the basic components of the competitive model. E-business integration imposes the need for an e-business strategy driven by all of the underlying forces of competition.

Future research seeking to investigate and to evaluate the impact of e-business on the five competitive forces can use the propositions presented in this paper as a theoretical basis. First, though, the propositions must be tested to determine if they hold true for all industries, or if the relationship between the forces underlying competition and e-business strategy vary by industry sector. In addition, the propositions must be assessed for measurability. Besides measuring the five underlying forces of competition, researchers must develop a means to measure the degree of a firm's efforts to develop and implement a formal e-business strategy.

Keywords:

Electronic commerce,
Internet,
Environmental management

Initiation of e-business invariably leads to the need for an e-strategy addressing the five competitive forces, each of which may have a dramatic affect on profitability. Ultimately, the development of e-strategy needs to be incorporated within the traditional business strategy process so that a given business has a single integrated strategy for competing in the marketplace. The direction for business strategy is clear, and the time for action is now.

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