

Electronic Markets: Collaborate If You Want To Compete

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Abstract

Electronic markets can change the structure of industries, ultimately causing a shift from decentralized markets without significant intermediaries to more centralized markets with few organizational intermediaries. It is not too early for small businesses to seize the initiative by assessing their own industry prospects for electronic markets. It may be desirable for industry members to collaborate on an indexing scheme to help customers find the small businesses, even if it means finding their competitors as well. If the small businesses do not work together, a large corporation or database will so dominate the market that there will be no room for the small business.

Introduction

Electronic markets are inevitable in virtually all industries (Malone et al., 1987, 1989; Bakos, 1991). They can change the structure of competition, pose threats, and offer attractive opportunities for perceptive firms. Small businesses would be wise to seize an element of control early on in the development of the electronic market structures that will eventually dominate their market. A collaborative initiative with fellow competitors will not only help protect them from exploitation by dominant firms, but will also assure them of economical access to the by product industry statistics on their industry, own firm's market share, and individual clients' inquiries and buying patterns. This paper constitutes an update and extension of the concepts put forth in an earlier document (Bradley and Peters 1996) on the state of interfirm electronic markets, where they are headed, and strategies for participating in their development.

What is an electronic market?

An electronic market can be viewed as a public listing of products and their attributes from all suppliers in an industry segment, and available to all potential buyers. The database is accessible online and is capable of being kept continually up to date. Further, the system is organized to facilitate comparisons of product offerings in some useful way. It is a powerful concept because it makes it potentially affordable for small suppliers to have total exposure to the market at large, and it makes it potentially affordable for the shopper to know the best buy available. Electronic markets can lower coordination and transaction costs for producers and retailers, lower physical distribution costs, or eliminate retailers and wholesalers entirely, as purchasers directly access manufacturers (Benjamin and Wigand, 1995).

The state of electronic markets today.

One of the earliest examples of an electronic market is the online stock exchange, which includes not only matching, but also ordering, and payment in real time. It is a special case in that any one product offered at any one time is unique. However, because the business dealing resembles an auction in some respects, it points to the way in which other types of industries may conduct future business once customers have access to virtually all offerings on the market at one time. Usually the first phase in the evolution of an electronic market is a catalog, followed by progression to an online ordering facility. Proprietary networks make possible secure provisions for adding an online payment system as well. As secure transmission features become more prominent on the open Web, the way will be opened for widespread acceptance of direct payment options through that medium instead.

However, today's Web searching system is not adequate for achieving an interfirm electronic market as defined in this paper. Electronic matching on the Web using generalized search engines is a disorderly task for businesses who typically do not have the time or do not want to the thrill of the hunt for information. The users' search boundaries are dramatically extended by the Web but they get too much irrelevant data. This problem stems directly from the lack of an indexing structure useful to most business search needs. This is not to discourage the creation a web presence, however. On the contrary, it is inexpensive to establish a Web home page, and success stories show that your site just may be spotted by chance by someone, somewhere who can bring can bring business your way.

In order to be useful for sustained industrial purchasing, however, the system must go beyond the role of a generalized search engine to provide a standard of some type for searching within a given product domain. The standard can be based on the corporate product codes which a dominant player carries over into a public database subscribed to by competitors. Some pharmaceutical firms have done this. Or the project may emanate from a pre-existing product classification system which some industries, such as building and airlines and stock exchanges, are fortunate to possess. Alternatively, the code can be set up from scratch by an initiative from cooperating parties, such as manufacturers' consortiums, which some grocery wholesalers and music distributors have done.

At the consumer retail level, by contrast, comprehensive electronic catalogues are not much evident. Shopping malls for consumer products are just that: a limited set of dissimilar shops still requiring browsing in each, although some do offer product indexes at a very general level. This method of shopping is pleasant to a number of consumer clients to whom searching is an end in itself and to whom a comprehensive listing is not important. However, it does not serve as a particularly good model for efficient industrial shopping, which is characterized by specialized purchasing staff seeking broader boundaries for the best match.

Some major threats of electronic markets

The history of electronic markets have been characterized by both negative and positive experience, depending upon who has taken the initiative in forming them. There are a number of instances in which a failure of anticipation has been to the disadvantage of businesses large and small. However, a threat can often be turned into an opportunity if perceived in time.

First movers can ultimately present competitors with no option but to join their database, at a cost, and exposing their market statistics to the firm which controls the database. The most highly publicized example of this threat is the early experience of the American Airlines SABRE reservations system (HBS, 1967; McFarlan, 1985; Clemons, 1986; Copeland and McKenney, 1988; Malone et al., 1989; Hopper, 1990). In the pioneering days of online systems, American Airlines invested heavily in a system that would process its reservations more efficiently. It then occurred to them to extend access to this database of airline seats to terminals on the desks of its direct customers, the travel agents. They soon found that significant increased market share was being obtained from the travel agents. American Airlines decided to extend the service to its competitors, for a fee. But American's flights always appeared on the first screen, thereby biasing the database in American's Airlines favor. They found that first screen placement strongly influenced purchasing behavior. American Airlines also charged for making reservations and issuing tickets for competing airlines who listed.

By this time it was too late for all but one airline to respond to this highly enterprising sequence of initiatives. United Airlines made its system available, resulting in a "clash of the Titans" for the business. The market proved big enough to sustain two databases, but both of them eventually had to adopt a common access procedure, as travel agents did not want to learn how to use differing systems. Because SABRE was proprietary, American Airlines had access to rich data not only on its own operations but on its competitors as well. When legally challenged again, American Airlines made competitors' own data available to them at still another usage charge.

The SPECTEL owner also accommodated its competitors on its database. SPECTEL is a building industry electronic market which started off as an in-house online catalog for the products of the Fletchers, the largest building products supplier in New Zealand. When the catalog's clients grew accustomed to using the wide-ranging Fletcher system, competitors felt obliged to request listings too. Fletchers had access to query transaction statistics of all its competitors, but fortunately for the other industry players, Fletchers did not abuse the information source. The database activity was eventually sold off to a completely independent third party and no one firm was disadvantaged.

The first mover can inflict major damage on competitors.

American Airlines bowed to legal pressure and sold competitors the right to preferential places on the listings. However, priority display still remained American's. When monopoly action again succeeded, a priority listing service was made available to competitors, at still an additional charge. Today the database is unbiased, but during the intervening years of litigation much competitive damage was done.

Another example of competitive damage inflicted is *The ASAP* ordering system of American Hospital Supply Corporation (now Baxter International), who placed terminals in its hospital customers' premises, directly linked to AHS' existing in-house order system. Once customers began to rely on this system many of them stopped dealing much with other firms. By this time competitors found it difficult to respond because hospital purchasing agents were unenthusiastic about accepting a second system with its separate operating and searching procedures. Partly as a result of this, at least one of AHS' major competitors was forced into corporate reorganization. Over time competitors did make considerable inroads with electronic catalogues of their own but they had lost market share and the smaller players remained at the mercy of larger ones who were willing to list them.

Electronic markets can change the way the industry competes.

SABRE changed the intra-industry competitive balance, encouraging niche marketing among some smaller players, but forcing most to go beyond service and compete on price. But price competition favored American Airlines, who used their experience with information technology to develop an advanced seat yield management system based on data from SABRE. This allowed them to charge different prices to different customers and thereby maximize their profits. Their competitors at the time had no such database to analyze.

The French company, Lamy, dramatically changed the way the freight-forwarding business competes. Lamy is a publishing firm which traditionally derived an important part of its business from publication of the voluminous government-regulated tariffs for freight handlers to charge, depending upon freight origin, destination, and item volume and dimensions. When the government deregulated the industry, the 50,000 haulage firms could then set their own individual tariffs. This spelled the end of the tariff publishing business. However, Lamy was quick to set itself up as the intermediary for a database which brings customer and common carrier together. At any moment of the day a carrier can list one or more origins, destinations, capacities, and dates, but not prices. Customers put in bids and carriers scan and usually accept the highest one. This auction-like system has actually stood the competitive mode of the trucking industry on its head, and its success raises the question of whether auctions may replace ways of doing business in other industries as well.

Electronic markets threaten the middleperson.

Industry-wide online product catalog offer direct access to the market, with lowered transaction costs and lowered barriers to entry. In short the way is paved for more open and more competitive markets and this has considerable implications for middlepersons. Begotal is a European consortium of distributors of music CD's and related retail products. They have formed a common database access service which offers the retailer a choice of consortium or wholesalers for ordering. There is no discount from central ordering but this has raised tensions with the wholesalers who are uncertain about their future role.

If your business stands between the manufacturer and the consumer in the distribution chain, you need to think very carefully about your future. Brokers and wholesalers of all types of products and services are especially vulnerable to either the original manufacturers' consortiums or outside enterprising firms who will start electronic markets on their own with value added features. You will either need to retain or create distinctly attractive alternative value added services or, better yet, take the initiative with your fellow competitors to secure your places by becoming the electronic market intermediary yourselves.

The customer can get the best price.

If there is pressure to list prices in an electronic catalog, and if you are competing virtually on price alone, your market position may be at risk. This is more of a problem for retailers, because by and large, mass consumer retail buying is not characterized by negotiated prices and bulk terms. A *USA Today* reporter found that it took a minute to search through eight online stores for prices on Billy Joel's Greatest Hits. He was presented with three price quotes, ranging from \$US23.77 to \$US28.01, along with various shipping charges and return policies of the different stores. Some stores did not like the competition and three retailers blocked it (*USA Today* 1996).

But distributors are not immune from the threat. For example, German exporters, who were battling a strong currency and high labor costs, put the Internet to blame for their declining share of international markets. Germany's wholesale and foreign trade association claimed that companies were losing lucrative niche markets because the Net makes it easier to compare prices, making competition tougher (Toronto, 1996).

Some major benefits and opportunities in electronic markets

Because of the inevitability of electronic markets, the threats can be turned into opportunities, the benefits of which are many for those who are prepared to pro-act. The smallest firm can get equal exposure with the largest firm. The relatively low cost of listing makes knowledge of your product available globally. This kind of exposure was previously affordable only by large firms. SPECTEL covers 80% of the suppliers in the building industry and reaches 60% of the buyers. Lamy and stock exchanges put all contributors

on an equal footing. If your product is competitive, you will profit by the ability of the customers to get the best matches to their needs.

Electronic markets can expand geographical scope. Extension of geographical scope of marketing is a tremendous unrealized potential, as industry online catalogs are just learning to serve regional boundaries. Electronic markets can diminish the large competitors' advantage of one-stop shopping. Large competitors with comprehensive product lines have traditionally enjoyed the advantage of single source shopping for buyers because of the expense in time and money that it takes to search for the best deal going. Database users can scan the smaller firms' offerings almost as easily as it can the traditional catalog listings of the big companies.

Electronic catalogs can support a strategy of personal marketing. The database can track activity not only of the industry, segment, and firm, but it can also support personal marketing targeted at individual clients. Customer loyalty programs, in which the systems can respond to clients based on their purchase or query patterns, is feasible. For instance, a client may have purchased data in the past week dealing with a certain company. The program will then advise the client that further information is available on another database held at the same site. The opportunities for up-selling and cross-selling are considerable. Your firm can then seek out the customer, rather than put the burden on the customer to come hunting for you. All of the electronic markets described in this paper possess the raw data for making this possible. One can respond to threats by starting up an independent intermediary. Lamy proved this. However, you may find, as some United Kingdom building databases did, if you want to do start up on your own, it may be too costly without possession of a pre-existing contact database of some kind.. Sparse listings in the early days of a product listing site are not of very much use to buyers and they may lose interest. Brokers or middlepeople should band together to pool their contacts in order to start off with a critical mass of information sources. Suppliers' consortiums can exploit excluded firms by closed membership, or charge high fees for outside suppliers to participate when the venture becomes a going concern.. EUROSELECT shows how businesses can collude to form a powerful alliance which collectively can wield resources in a similar way to large players and to the disadvantage of other competitors. It is a proprietary electronic market acting to the advantage of a consortium of small players who have invaded territorial markets where they do not compete with one another.

EUROSELECT is the name of an online procurement network for grocery wholesalers in Europe. It is based on a product/price catalog which is maintained by Van Erd Holding on behalf of a collaborative band of small wholesalers. It came about because smaller firms were not able to gain access to systems run by large competitors, who used them as a source of competitive advantage. In order to defray the costs of such a system, Van Erd approached similar sized competitors in different European states to contribute to the project. The outcome is a joint wholesale venture centered on a common product listing and procurement system which operates throughout Europe. The home country of each member is preserved for itself, however. In the process the collaborators developed their own extensions to the Economic Community's EAN product numbering system as the standard access code.

The customer can take the lead. The customer in an electronic market will have a greater role in the selection of information and the customization of products (Klein 1995). In fact,

companies that are powerful in their markets can force suppliers to provide information to fit their own databases. A large pharmaceutical firm was in the process of promoting its own indexing system tied to a proprietary electronic market, which it hoped would give it a competitive advantage with hospital purchasing officers. The region's largest hospital instead developed a classification scheme which it forced all suppliers to subscribe to for free and feed its database, thereby accruing all of the advantages of the database to itself. The hospital plans to franchise its use to other hospitals in the country. Government agencies are in an ideal position to do the same thing.

There is vast scope for differentiation in electronic markets. From the buyer's standpoint, the most efficient electronic market is the most comprehensive and easily searchable one. However, the scope for value added features in an electronic market is significant and customers may put up with searching more than one somewhat incomplete database if some kind of service which particularly appeals to them is offered. It has been observed that buyers basically are looking for solutions, not searches or raw information (Laufman 1996). Ralenti, a competitor to SPECTEL, offers customized services going beyond the Net to solve the client's problem. SPECTEL offers a suite of building design programs to be used in connection with searches.

Conclusions

Electronic markets can change the structure of industries, ultimately causing a shift from decentralized markets without significant intermediaries to more centralized markets with a few organizational intermediaries.

It is not too early for small businesses to seize the initiative by assessing their own industry prospects for electronic markets. It may be desirable for industry members to collaborate on an indexing scheme to help customers find the small business, even if it means finding their competitors as well. It may also mean providing added value services within or beyond the Net to help customers find solutions, not bland product information. Collaboration can secure economies of scale, leverage industry experience and know-how, and share the development cost. A critical mass of listings is necessary before the benefits are realized and the job of creating this is far more easily done cooperatively than on one's own.

Not all industries are suitable for online catalogs. Where asset specificity is high, such as interior decorating services, methods of search may be just as effective by using traditional yellow pages. Nor do all industries have equally good prospects for cooperative efforts. If a dominant player does not wish to join in, then the day of realization may be much delayed, but in the meantime interested firms can proceed to think about and draft a classification code in order to preserve bargaining power when a scheme actually does eventuate.

For industries in which the way is clear for initiatives, a good incremental approach might be as follows: Ask an independent body such as a university business school or small business advisory body to chair efforts at cooperative planning and development. This tends to take the political heat out of competitors' leadership in the project. While the index is being developed, start an industry information page on the Web which will eventually metamorphose

into an electronic catalog. Once the system is introduced, undertake a continuing plan of adding value to the services provided. If competitive databases arrive on the scene, strive to capitalize on your established position to differentiate your offerings in new ways.

Finally, for those who wish to look ahead and plan an entrepreneurial venture that will provide services beyond the separate industry database, an opportunity presents itself of an intermediary of intermediaries which provides solution-oriented results. This observation is compatible with Klein's proposition. It was Klein's contention that an information broker may be necessary to fulfill the trust requirements of buyers who do not know much about the firms whose products are on offer and to act at developing relationships between buyer and seller. Beyond that there are opportunities for ventures to provide the equivalent of consumer report services which match product attributes to value for money, on the basis of prices compiled from sources outside the online database.

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