

## **Exchanges in the Digital Economy: The Case of StorebrandXchange.com**

### **RESEARCH NOTE**

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#### **THE EVOLUTION OF B2B E-MARKETPLACES**

From a metalevel perspective, B2B is about connecting the existing buyers and sellers. It is not a disintermediation play. It is about intelligently implementing Internet technology to improve business processes. The evolution and adoption of B2B e-marketplaces had occurred in three distinct waves (Berryman and Heck, 2001; Swahney, 2001). In the first wave of B2B, there were approximately 1,000 independent on-line marketplaces for commodities such as paper and steel (e.g., PaperExchange and e-Steel) to specialized components such as airplane parts (e.g., MyAircraft.com). Unfortunately, most of these independent, fee-based marketplaces such as Aluminium.com inc. and Ventro Corp.'s Chemdex and Promedix were not able to maintain their liquidity since a few large organizations that generated most of the transaction volume could negotiate with the suppliers and vendors on their own and save the transaction fees. Others, such as Vertical Net Inc. and SciQuest Inc. had transformed their business models from charging fees for online B2B transactions to positioning themselves as B2B software vendors (Hicks, 2001).

For instance, bandwidth exchanges were creating a liquid market for bandwidth and had obvious appeal since sellers were stuck with excess capacity due to rapid technology improvements which lead to price reduction of approximately 50% a year. With a profusion of approximately 25 bandwidth exchanges, it is harder for any one site to generate liquidity. This profusion of exchanges was widely speculated to drive the need for consolidation in the telecom B2B market-space.

In the second wave of B2B, large corporations had formed a consortia designed to reduce bid-ask spreads and to bring down transaction costs by matching buyers with suppliers and enabling suppliers to trade with one another. Examples of these consortia are the GM-Ford-Daimler Chrysler joint venture called Covisint, Forest Express in the forest products industry and Aero Exchange International in the airline industry. Unfortunately, similar to the first-wave B2B model, the effort to transform the procurement and sales practices was directed at whole industries, instead of individual companies and purchasing managers. Although one of Covisint's initial goals was to share the costs rather than force each car builder and supplier to house its own trading software, it had revised its strategy by agreeing to host private exchanges for companies and offer portal services connecting Covisint to purchasing sites fully operated by big manufacturers. However this strategy shift made one wonder whether Covisint's two priorities--creating a self-sustaining business and setting technology standards for the auto industry--were in direct conflict? Moreover, a majority of the "tier 3 and 4" suppliers, i.e., those that make rubber, plastic, aluminum and other basic car materials, were not using Covisint; and BMW, Honda, Toyota, Volkswagen and other manufacturers had began constructing their own private exchanges (Joachim and Moozakis, 2001). The key factors to

sustainability of a vertical market consortium is its ability to exploit not only the size and sophistication of the businesses that founded them, but also the exceptional value of their deep industry knowledge, to their advantage.

In the third wave of B2B, exchanges had customized their model/s based on the cost structures of various purchases. One of its distinguishing characteristics seemed to be the idea of choosing a different model for each kind of transaction. Some models focused on collecting and distributing information, while others on reducing purchase costs and improving transactional efficiencies. Companies purchasing a commodity, for example, might value the liquidity, the transparency, and the price orientation of an on-line exchange, just as commodity contracts were already traded at the Chicago Mercantile Exchange and elsewhere. By contrast, companies making highly specialized purchases might value the possibilities for customization offered by the traditional bilateral relationship between buyer and seller. In the long-term, the models were expected to lose some of their distinctiveness but their success depended on collecting and disseminating information that was not available elsewhere (Hansen et al., 2001).

The current one-time "all-you-can-eat" subscription model, which encouraged individual purchasing managers to use their facilities after their company had paid the membership dues, could not be sustainable on just an efficient trading value proposition. The key to success of digital exchanges in the current and the third wave of B2B, was better access to and the sharing of information, in addition to facilitating every kind of collaboration between buyers and sellers, such as enabling the partial integration of their operations, allowing them to improve their supply chains, and to work jointly on product designs. This assumes that buyers have strong internal strategic purchasing capabilities.

In this third wave, organizations saw a need to build a value-added community/ metamarket. This would be an emerging alliance of suppliers held together by common interest, rather than by common ownership. Examples from the logistics field of such alliance were [www.freightmatrix.com](http://www.freightmatrix.com) (uses I2's SCM software), or [www.nte.com](http://www.nte.com) (one of the most well known and well-funded industry exchanges for trucking companies, with \$72 million from Dell, FedEx and Hummer Winblad). It operated on a percent of the cost, albeit it did not offer compatible software services to automate operations and ignored the ocean and airline companies, or [www.freightdesk.com](http://www.freightdesk.com) that linked forwarders, manufacturers, ship and airline companies to the same database and let them all talk, manage and track a shipment.

Such exchanges had to capitalize not only on the price efficiencies that resulted from standardizing complex processes and varied products and services, but also on the unique knowledge of the industry maintained by its members. This was anticipated to spread risk, and to uncover new opportunities (Devine et al., 2001).

Baumgartner et al. (2001) noted in their study that certain buyers are extremely price sensitive when they make certain purchases, which will naturally migrate to low-cost producers. But many other purchases will continue to involve information-rich bilateral relationships. A third model—that of the "e-distributor"—lies between the two extremes of the stand-alone marketplace and the consortium. Like distributors in the off-line world, e-distributors take title to the goods they sell, aggregate those goods for the convenience of buyers, and (because they carry only certain products) in effect advise buyers which to choose. In addition, e-distributors perform a critical service for sellers by reaching hard-to-find buyers, such as small ones. For example, SciQuest, a distributor of laboratory supplies, links its on-line search-and-order

engine to the in-house systems of its customers so that once an authorized manager has approved a purchase, the order is dispatched automatically; and Mercateo.com, a start-up e-distributor of MRO products, carries the stock of only the top two or three suppliers in each product category with explicit guidance and troubleshooting guides in addition to the opinions of customers or independent researchers. The result, in many cases, is significant extra value for buyers whose orders are too small for bilateral relationships, and decent profits for sellers since unlike B2B marketplaces, which depend on collecting a vast number of small transaction fees, e-distributors make their money from markups (Baumgartner et al., 2001).

### **ASSESSING E-MARKETPLACES: A CLOSER LOOK**

The three critical criteria to assess e-marketplaces are value proposition, user experience, and technology execution (Cuny and Richardson, 2001). The best practices for e-marketplaces include making changes based on research and tests of participant's experience; assessing policies on dispute resolution, data control, and transaction transparency; and evaluating if the marketplace is ready for new technologies, such as wireless, or fine tuning the enterprise application integration (EAI) tool to extend the back-office systems to customers, suppliers and other business partners over the Internet.

According to a McKinsey study by Hansen et al., (2001) only B2B marketplaces that collect and exploit information not available elsewhere, can provide anything more than short-term purchasing benefits. The sooner buyers act on this insight, the more chance they will have to shape and reshape their marketplaces without losing ground to competitors. Winning B2Bs must focus on their transaction capabilities in industries dominated by commodity products and large numbers of highly fragmented buyers and sellers, avoid concentrated industries, and hold on to their equity. Hicks (2001) reports that successful independent e-marketplaces have conformed to the prevailing business practices in their industry rather than attempt to push radical changes. For example, as is customary in their fields, Altra Energy in the energy field and Arbinet in the telecommunications capacity trading field allow buyers and sellers to remain anonymous through much of a transaction.

The Global Trading Web Association, a group of 44 providers and users of electronic services to 250,000 companies in more than 100 countries, has some powerful backers from Fortune 500 companies including General Motors, Citigroup and Deutsche Telekom. Although it was created by Commerce One, powered by their own suite of exchange software, it is moving towards interoperability across e-markets by not only ensuring compatibility with other leading platforms such as Ariba, Oracle, and SAP but also creating trust (comprising security and privacy) in business relationships that will cause inter-marketplace trade. This open system could serve as an international standard for buyers and sellers to use, and in doing so will create an ambitious global B2B network of strategic marketplaces and key players. The investment bank CSFB recently became the first company to complete multiple transactions across several exchanges in the Global Trading Web system.

Among the key barriers to entry in a B2B marketplace are industry/domain expertise, backend integration, follow-up service, and a strong two-sided value proposition (i.e., a benefit to both buyers and sellers such as aggregation techniques that aggregates both buyers and sellers to enable the hub reach critical mass). Buyers, investors, and marketplace executives each define value differently. Hansen et al., (2001), Sawhney (2001) and Keringan et al., (2001) describe the following four ways that B2B marketplaces create value:

First, they expand everyone's market reach. This has significant value in fragmented industries, such as electronic components, health care, and life sciences, where buyers and sellers may face considerable difficulty in finding each other. For instance, Chemdex maintains a register of 2,200 suppliers and more than 26,000 users of life sciences materials. Second, B2B marketplaces generate lower prices for buyers by enabling them to reach more suppliers or the most efficient supplier as well as precipitating increased price competition and, in some cases, access to excess-inventory stocks. For example, FreeMarkets estimates that its customers have experienced savings of 7 to 10 percent for commodities and 7 to 25 percent for custom purchases. Third, B2B marketplaces cut the cost of the buyers' operations such as the cost of B2B procurement processes, order-tracking, inventory-management, and reordering processes. For example, an exchange called e-Steel, automates the transaction process for approximately 2,200 buyers and sellers that leads to cost and time efficiencies. Finally, these marketplaces provide unique, high-value-added content such as identifying industry best practices. For example, Ecountries.com, a B2B publishing and e-commerce service focused on the global economy, uses Dun & Bradstreet's Eccelerate to enable users to verify a counterparty's identity and corporate status and to make credit decisions in real-time; SiteStuff, a property maintenance exchange monitors materials, repair, and operations spending per building and compares these costs with those of average and best-run buildings of the same type and size; and Neoforma.com singles out and profiles hospital medical departments with the best floor plans, equipment, and stock of materials. Thus based on secondary research, it seems logical to implement a solution that maximizes value in the four ways discussed above.

### **TRACKING THE TRANSFORMING FUTURE OF EXCHANGES IN THE DIGITAL ECONOMY**

At the dawn of the new millennium, business-to-business (B2B) e-commerce was regarded as the e-business model with the greatest potential for growth and profits. Yet many once-promising B2B exchanges have now gone out of business, downsized, or changed their business model. The B2B models have evolved from extranet to exchange to e-marketplace to meta-markets (market to market). The key question to consider is: What does the future hold for B2B exchanges such as SXc? B2B is about connecting the existing buyers and sellers. It is not a disintermediation play. It is about intelligently implementing Internet technology to improve business processes. Wise and Morrison (2000) provide an overview of the new B2B models such as mega-exchange for maximum liquidity and common transaction standards, specialist originator for complex/relatively expensive products, e-speculator for products with high degree of product standardization and moderate to high price volatility, solution provider for products whose cost is a small portion of overall costs and product-related issues impact other costs, and sell-side asset exchange for assets with high fixed cost and a relatively fragmented supplier and customer base.

As the new economy rapidly spawns new business models, multiple online- exchange integration, e-to-e, could create dynamic marketplaces that will require organizations to overhaul strategy and planning efforts to create more collaborative, externalized, and process-versus event-oriented practices. In the long term, Independent Trading Exchanges (ITEs) will evolve, and the technology will enable suppliers to differentiate their models on multiple criteria such as quality, warranty services, and time of delivery. Exchange-based hubs will evolve to include futures and options. The evolution of digital exchanges will next be focused on adding systems and services that actually tackle the main elements related to procurement that occur before and after the actual selling moment occurs – order management, electronic documentation, electronic bill presentment and payment, electronic customer relationship management (eCRM) and logistics. Some form of a hybrid between private and public

exchanges will evolve in the post-capitalist, digital/knowledge economy. The new frontier in e-marketplaces is in providing whole solutions to a problem. This includes the online catalog, the e-financing of the purchase and the e-logistics via a technology standard that integrates the various hardware and software platforms.

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