

Work-in-Progress

**Electronic Marketplaces:
The View from Canada***

Philip Rosson
School of Business Administration
Dalhousie University
6152 Coburg Road
Halifax, Nova Scotia
Canada B3H 1Z5
(902) 466-5427
philip.rosson@dal.ca

&

Charles Davis
Faculty of Business
University of New Brunswick-Saint John
PO Box 5050
1 Tucker Park Road
Saint John, New Brunswick
Canada E3L 4L5
(506) 648-5783
cdavis@unbsj.ca

*The financial support of the Electronic Commerce Task Force of Industry Canada in undertaking the research study is gratefully acknowledged.

Revised: July 16, 2001

Abstract

This paper provides a first view of electronic marketplaces in Canada. It begins by reviewing the relevant literature and then goes on to present preliminary evidence from a continuing study. Forty electronic marketplaces are identified and characterized in terms of scope, type, establishment and location. Twenty-nine are Canadian-owned or operated and 11 have either US or international ownership, but significant Canadian company participation. The findings are discussed and a number of conclusions drawn that seem to hold for Canada and may apply in other countries with small and open economies.

1. Introduction

In the late 1990s and early 2000, many companies formed or joined electronic marketplaces (e-Ms). Although many e-Ms have failed to become economically viable or have ceased operations, others are still being formed, suggesting that innovation regarding electronic market mechanisms is still in its early stages. For several reasons, this paper looks at e-Ms from a Canadian perspective. First, since almost all of the discussion on e-Ms has focused on the situation in the US, additional viewpoints are needed to gauge the implications of e-Ms for small, open economies, such as Canada. Second, the US is by far and away Canada's main trading partner and changes in economic conditions or business behaviour in that country usually have repercussions in Canada. The projected shift to e-Ms in the US is such a major development. Third, it is important for Canadian companies to appreciate opportunities that may exist via e-Ms in the broader international arena. This paper is a first effort to understand the scope and extent of electronic market usage in a small, open economy, that of Canada. It begins with a brief description of developments in e-Ms and then reviews relevant theoretical literature. Attention then turns to the Canadian experience. Patterns of e-M establishment in Canada are summarized and the paper concludes with some comments on the implications of e-Ms for Canada.

2. Electronic Marketplace Developments

A large number of forecasts have been made in recent years about the extent to which B2B trade will move online and the share that will be accounted for by e-Ms. In the US, a report by Jupiter Communications estimates that online B2B trade will amount to \$6 trillion by 2005, or 42% of total B2B non-service spending. At present, direct channels dominate online B2B trade. Currently, 92% of online trade occurs between one supplier and its network of many buyers. Trade through direct channels is expected to decline sharply as e-Ms prove their greater effectiveness in many industry settings (Pastore, 2000). An approach and emphasis that takes into account attributes other than price will also hasten the diffusion of e-Ms (Bichler, 2001). However, considerable work remains to be done. e-Ms are new and many are experiencing difficulties. About 1,200 e-Ms were established in the past few years, but it is estimated that only 800 are still in business, and 200 are projected to survive (Boslet, 2001). Another prediction is that the number of US e-Ms will fall to 181 within three years (Forrester Research, 2000). Many public electronic markets relying on commission for revenue have been unable to generate sufficient volume to be profitable. The emergence of a new breed of private e-Ms backed by industrial giants (e.g., Covisint, E2open, Elemica and Transora) is expected to lead to greater success (Elias, 2001).

The current slowdown in the global economy has affected the move of B2B trade online. However, business is on track to achieve the 2005 levels noted above. Gartner views the slowdown as a reprieve for companies that were not keeping pace with technology developments. Companies now have time to prepare themselves for the fundamental changes that are anticipated by 2005. Time is no small matter, since

B2B technology firm Edifecs has found that a key barrier to the move online is "the process of preparing a company, its internal systems, and its trading partners to begin conducting transactions over all of its trading networks." Sellers and buyers have been relatively slow to move their activities online. Jupiter Media Metrix reports that most B2B buyers will move online but that by 2002, only 20% of purchasing will be done via the Internet. The main impediment at present is that their preferred vendors do not transact online. Several factors explain the slow uptake, including lack of industry agreement about common data standards and cost, know-how and relevance reasons at the company level (Pastore, 20001a, 2001b, 2001c).

3. Theoretical Background

The theoretical underpinnings of electronic markets have been sufficiently developed to form expectations about how and why these mechanisms will develop and diffuse in business environments.¹ However, the first generation of Internet-enabled e-Ms has clearly diverged from expectations in one key respect: many business decision-makers do not see the value propositions detected by theory.² As is the case in any new field, the empirical scientific literature on e-Ms is sparse, and conceptual models are abundant but untested. Given the impact of e-Ms are expected to have, it is perhaps surprising that academic researchers have largely ignored the phenomenon to date (Rosson, 2000 provides one review).³ Many of the substantive writings originate from researchers at large US brokerage firms.

3.1 Basic Ideas

The three central functions of markets are (1) matching buyers and sellers, (2) facilitating the exchange of information, goods, services and payments associated with transactions, and (3) providing an institutional infrastructure, such as a legal and regulatory framework, to enable efficient market functioning. Intermediaries typically enable the first two functions to be carried out, whereas government is prominent with regard to the third. Bakos describes ways that markets might be changed as a result of employment of Internet technology, stating that "electronic marketplaces leverage information technology to perform these functions with increased effectiveness and reduced transaction costs, resulting in more efficient 'friction-free' markets" (1998, p. 35). e-Ms are likely to improve the matching function of markets through enhanced information about product offerings, easier search and more effective price discovery. Transaction efficiency is expected to improve and lead to lower costs as a result of greater information sharing between the parties involved in e-Ms, as well as the development of electronic payment systems. Finally, although e-Ms are viewed as promising many benefits, competitive (or anti-trust) issues may well surface as scale economies

¹ See for example, Bichler (2001), Strader & Shaw (1997), or Timmers (1998).

² Much e-M theorizing is framed in terms of transaction cost economics, while much of the business reticence to adopt conventional e-Ms is framed in terms of positioning in a value chain, resistance to commoditization, and considerations of "customer value".

³ The discussion in this section is based on the earlier work.

in areas such as distribution and payment mechanisms lead to high levels of concentration.

3.2 Typologies and Models

Several writers have contributed helpful descriptive and analytical schema, which we now briefly examine. A basic distinction is between *vertical* e-Ms, which serve the distinct needs of particular industries, and *horizontal* e-Ms, which run across several or many industries. Common buyer needs characterize these horizontal markets and are addressed through the supply of standardized goods and services (Merrill Lynch, 2000).

Phillips and Meeker (2000) have identified four general types of B2B exchange, based on who it is that runs the e-M. *Buyer-managed* exchanges have been established by large buyer organizations and sourcing networks (consortia). These are usually privately owned and therefore located behind the firewall of the buyer. Some are public, however, having been established as separate entities or spun-off from an existing company. Large producers and distributors that serve fragmented markets populated by small buyers have set up *supplier-managed exchanges*. A third type of exchange is independent of buyers and suppliers: *distributors/market makers* provide a match making and transaction capability. Sometimes these exchanges specialize by transaction type (auction houses versus real-time bid/ask). Finally, *content aggregators* build and maintain multi-vendor, electronic catalogues. Many variations exist within these four broad categories.

Kaplan and Sawhney (2000) use a simple two-way purchasing classification to distinguish between four types of e-M. These researchers use manufacturing inputs versus operating inputs (the "what"), and systematic sourcing versus spot sourcing (the "how"), to identify the following e-Ms:

- MRO Hubs (operating supplies, systematic sourcing, horizontal focus)
- Yield Managers (operating supplies, spot sourcing, horizontal focus)
- Catalogue Hubs (manufacturing inputs, systematic sourcing, vertical focus)
- Exchanges (manufacturing inputs, spot sourcing, vertical focus)

MRO hubs focus on making the buying process more efficient for operating supplies in diverse industries. *Yield managers* concentrate on the spot purchasing of operating inputs across industries. *Exchanges* create spot markets for commodities (or near commodities) in specific vertical sectors. Finally, *catalogue hubs* streamline the systematic sourcing of manufacturing inputs in vertical industries.

The way that value is created has also been used as an organizing device. *Catalogue* models create value by aggregating suppliers and buyers and creating search and transaction efficiencies. *Auction* models create value through the spatial matching of buyers and sellers. This model works best for unique and perishable products and where different perceptions exist about the value of the items in question. *Exchange* models create value by temporal matching of supply and demand. They perform well for near-commodity items and can create substantial value in volatile markets, allowing companies to manage

excess supply and peak-load demand. *Barter* models create value by matching two parties that have reciprocal assets. To this point, e-Ms have usually focused on one of these models. However, a trend is apparent as more options are offered to buyers and sellers (Forrester Research 2000).⁴

3.3 Success Factors

Although e-Ms have a very short history, there have been sufficient failures to enable some organizations to identify key success factors (KSF). Three recent reports are instructive. One predicts that changing business conditions would push e-Ms to evolve from isolated niche offerings – providing a narrow range of targeted products for a buyer base – to highly interconnected one-stop shops. In this latter state, e-Ms would provide a single point of access for industry commerce and information, combining services like logistics, payments, and credit with product offerings in real time. If this forecast is accurate, then e-Ms that (1) focus on transactions at the expense of developing analytics; (2) neglect incorporating complementary commerce services; and (3) are too slow at building strategic alliances with other marketplaces, are most likely to fail (Forrester Research, 1999).

A second study proposes that there exist five factors that are key to e-M success:

1. Attracting and retaining a critical mass of transactions, through offering value and a level playing field for all participants,
2. Balancing the interests of shareholders, members and outside interests (e.g. in the US, the Federal Trade Commission),
3. Satisfying the scale considerations of buyers, suppliers and other intermediaries,
4. Maximizing member benefits and leverage without attracting the scrutiny of regulators, and
5. Implementing robust interconnected systems that span various processes and create advantage and "stickiness."

e-Ms are likened to fragile ecosystems, where the success of the entity is dependent on the success of each of its participants. The research concludes that value-creation and industry transformation is the new and central focus of company efforts and that a consequence will be fewer but larger e-Ms (Deloitte Research, 2000).

A third study examines the benefits, strategies and capabilities of e-Ms through survey research. A key finding is that many of those that are involved in e-Ms see these as offering "quick fix" solutions (e.g. reducing suppliers' margins) rather than offering longer-term economic value (e.g. lasting improvements in supply chain cost drivers, resulting from increased information and functionality). The study claims that only two of five e-M models are currently structured to deliver long-term value creation. These are the so-called project/specification manager, and supply consolidator. Three others – liquidity creator, aggregator, and transaction facilitator – are judged to be unsustainable over time since others can easily replicate what they offer. The latter types must therefore evolve to deliver

⁴ See Merrill Lynch (2000, p. 26) for a comprehensive treatment of e-M models

lasting impact and to provide unique content knowledge (McKinsey & Company/CAPS Research, 2000).

Overall these studies reflect two important trends in electronic markets: in public or independent e-Ms, business models are becoming more complex and are converging into multi-service markets as e-M managers add non-transactional complementary services and test various combinations of for-fee and free services to determine which combinations are economically viable within specific business contexts. Consortium-based exchanges of the Covisint variety are expected to take longer to establish than simple public e-Ms because they are being built on pre-existing business relationships. They do not aim simply to introduce price mechanisms into all business relationships but have broader goals, often couched in terms of collaborative commerce and supply chain management. Essentially, they are an attempt by dominant firms in an industry to impose order across a system so as to ensure efficiency gains are enjoyed. Consequently, these e-Ms are the most ambitious and, perhaps, most likely to attract industry and regulatory attention.

4. Canadian Electronic Marketplaces

4.1 The Canadian Situation

A good starting point is provided by two reports of the Canadian E-Business Opportunities Roundtable (2000, 2001). The Roundtable is a private sector-led, public sector-supported initiative to improve Canada's involvement in the Internet economy. The first report concluded that Canada was well positioned to accelerate its leadership position, but not aggressively rising to the challenge. Although progress was made in 2000, the second report concluded that this was insufficient: a greater and faster response was required for the fruits of the e-business opportunity to be fully enjoyed.

In *Canada's B2B Future*, Forrester Research (2001) estimates that \$272 billion of business-to-business (B2B) will be transacted online in Canada by 2005 (or 18% of all B2B sales). These sales will be concentrated in the industrial heartland of Ontario and Quebec (\$193 billion or 71%). Sectors where online trade is expected to achieve significant penetration include: computing and electronics (40%); automobiles (29%); utilities, shipping and warehousing (25% each); paper and office products (24%); and petrochemicals (20%). The MRO sector is also expected to move online in a significant way.

Forrester Research regards e-Ms as a key element in an economy's transition to B2B e-commerce. Accordingly, it predicts that 51% of Canada's B2B online sales will be transacted through e-Ms by 2005. For three main reasons, much of this business is forecasted to flow through US e-Ms. First, US e-Ms have a significant first-mover advantage in terms of recognition and critical mass. Second, market size considerations will lead Canadian companies to join US e-Ms, rather than those in Canada. Third, a low Canadian dollar, NAFTA, and the historical importance of the US as an export destination, almost guarantee Canadian company interest in US e-Ms. However, some potential for Canadian-owned and operated e-Ms is seen. These will be most successful when they focus on Canadian buyers or Canada's strength in natural resources. Examples include horizontal procurement malls, locally transacted business such as construction, and online

commodity marts. Aitken and Sandiford's (2000) study of the potential for Canadian e-Ms led to somewhat similar conclusions.

4.2 Current Research

In order to more fully understand the current situation with regard to e-Ms in Canada, research was initiated on e-Ms owned and operated in Canada. Also included are e-Ms with substantial involvement by Canadian companies, even though these are owned and operated outside Canada. Particular questions of interest from a public policy and programming standpoint were: (1) should Canadian SMEs be encouraged to join e-Ms? (2) do Canadian SMEs have access to e-Ms in other countries? (3) what forms of e-M are likely to be successful in the Canadian economy?

The starting point for the study was a comprehensive search of business and industry documents to identify Canadian e-Ms. This was mainly achieved through interviews with industry observers, analysis of the Canadian electronic commerce literature, and searches in online full-text business literature databases. Some 40 e-Ms were identified and are listed in Appendix A.1. Information was obtained from their websites and from interviews with selected e-Ms. Finally, as described below, Canadian participants in a US-based e-M were queried by e-mail. The results of this research are summarized below.⁵

In the discussion that follows, reference is made to four categories of e-M (1) buy-side, (3) sell-side, (3) market maker, and (4) coordinator e-Ms. These are similar to types reported elsewhere (Philips and Meeker, 2000). Buy-side e-Ms are those where the initiative has been taken by purchasing organizations, and where the motivation is usually one of aggregating purchasing power to create efficiencies (i.e. drive down prices). Sell-side e-Ms result from the aggregation of suppliers' offerings so as to present a broader and deeper selection for prospective buyers. These e-Ms are sometimes developed in concert with, or to present a broader and deeper replacement for trade publications and other paper-based systems. The result is often likened to an industrial "mall." Market maker e-Ms are neutral in their orientation. In other words, their purpose is to create efficient markets that benefit buyers and sellers. In order to succeed they must bring sufficient numbers of buyers and sellers together so as to create liquidity. Market makers usually offer ancillary services so as to provide additional value to participants. Finally, coordinator e-Ms occur when a consortium of large buyers look for more than procurement savings.

4.3 Overview of Canadian e-Ms

The number of Canadian-owned or -operated e-Ms identified in the study was 29. Table 1 shows their distribution with regard to various characteristics. The first distinction concerns the scope of the e-Ms in question. The majority (19 or 66%) serve vertical markets, with the balance (10 or 34%) focusing on horizontal markets. The second characteristic considered is the e-M type. Two types dominate: market makers number 19 (66%), while there were 9 sell-side e-Ms (or 31%). One buy-side e-M was evident. No cases were found of Canadian coordinator e-Ms.

⁵ Full results are presented in Rosson & Davis (2001).

Date of establishment is a third consideration. Aside from 2001, a similar number of e-Ms were established before 1999 and in 1999 and 2000. The smaller number for 2001 probably reflects the fact that first, e-Ms have experienced difficulties of late, and second, the timing of the research study meant that only part of 2001 was considered. A final characteristic is the location of e-Ms. Some 26 (90%) of the e-Ms are located in Ontario and the West. However, three cities account for the vast majority of e-Ms: Calgary, Ottawa and Toronto. Surprisingly, only two Quebec-based e-Ms were found. However, one of these (Mediagrif) is arguably Canada's most successful marketplace business. No e-Ms were apparent in the Atlantic Provinces.

Table 1: Canadian Electronic Marketplaces (n=29)

| Scope | No. | Type | No. | Establishment* | No. | Location* | No. |
|------------|-----|--------------|-----|----------------|-----|-----------|-----|
| Vertical | 19 | Buy-side | 1 | Pre-1999 | 7 | West | 11 |
| Horizontal | 10 | Sell-side | 9 | 1999 | 5 | Ontario | 15 |
| | | Market maker | 19 | 2000 | 9 | Quebec | 2 |
| | | Coordinator | 0 | 2001 | 2 | Atlantic | 0 |

* Date of establishment and location not available in 6 and 1 cases respectively.

Similar data are presented for 11 non-Canadian e-Ms in Table 2. These US or international-owned or -operated e-Ms have significant involvement by Canadian companies. Once again, a distinction is made about scope, i.e. between vertical and horizontal e-Ms. A vertical focus is dominant, with 10 (91%) falling into this category. The distribution of e-Ms by type shows that a majority (7 or 64%) of these e-Ms were coordinators, followed by sell-side and market maker e-Ms (2 or 18% each). No buy-side e-Ms were found. The large presence of coordinators is not surprising insofar as these e-Ms are North American or global in their operations, making them attractive to Canadian companies with geographically diverse interests (or aspirations). The distribution of e-Ms in terms of establishment date is bi-modal: one group of 4 (36%) having started before 1999, whereas another six (55%) date from the year 2000. Finally, the location of these e-Ms was almost evenly split between the US (5 or 45%) and international (6 or 55%).

Table 2: US & International Electronic Marketplaces with Canadian Involvement (n=11)

| Scope | No. | Type | No. | Establishment | No. | Ownership | No. |
|------------|-----|--------------|-----|---------------|-----|---------------|-----|
| Vertical | 10 | Buy-side | 0 | Pre-1999 | 4 | US | 5 |
| Horizontal | 1 | Sell-side | 2 | 1999 | 0 | International | 6 |
| | | Market maker | 2 | 2000 | 6 | | |
| | | Coordinator | 7 | 2001 | 1 | | |

4.4 Canadian SME involvement with VerticalNet

In light of its early involvement in the field, it was decided that VerticalNet should be included in the study. Twenty-five Canadian companies in five VerticalNet e-Ms were identified and seven responded to an e-mail questionnaire.⁶ Of the seven, five maintained electronic storefronts on the e-M's site and two had closed their storefronts because no benefits were realized. In four cases, companies were at an early stage with their storefronts and had yet to see concrete benefits from participation. The fifth company reported having received sales leads from around the world and having saved on promotional literature as a result of participation.

Regarding the direct costs of doing business via the e-marketplace, four companies indicated that their storefronts were being hosted at no charge for a one-year period. Two were very aggressively recruited. Another company noted that it had needed to retool its accounting system to be able to interface with the storefront database. Companies were uncertain about costs beyond obvious ones such as ISP charges and web site updates. Does being a Canadian supplier on a US-dominated marketplace create any difficulties? Company responses to this question did not reveal any e-M-specific disadvantage. Where problems were reported, these related to business (e.g. buy local) or regulatory practices (e.g. slow approvals) of a general kind. Most companies had generated no sales via the e-M in question and were therefore uncertain what to say in response to this question.

The experiences of Canadian SMEs do not paint a particularly positive picture of the trade communities in question. If these are typical companies, participation is more a result of promotional pressure than careful consideration and no real sense of participation costs is apparent. Positive results will be necessary to turn the

⁶ Four e-mails were undeliverable. The response rate was therefore effectively 33%.

present free memberships into profitable involvement. There is clearly much work to be done by e-Ms.

5. Discussion

In many industries in which Canada has large firms such as Alcan, Nortel, McCain's, and Canadian National Railways, or major supplier industries as in the automobile industry, these firms have joined large international e-Ms such as Quadrem, e2open, Transora, Railmarketplace, or Covisint. These e-Ms typically encompass purchasing, supply chain management, and coordination. Some e-Ms of this kind have failed and most are reported to be evolving more cautiously than originally anticipated. Industry observers report that in many cases, large investments in infrastructure have taken place in these e-Ms and so, although original expectations are not being met, principal partners are adopting a wait-and-see attitude. Purchasing appears to be the most widely utilized function of these e-Ms, reflecting perhaps the previously mentioned complexity of industry-wide supply chain coordination. e-Ms centred on the major players in an industry have also raised concerns about anti-competitive behaviour. The question of which country has jurisdiction over e-Ms in this regard will require attention.

Two conclusions can be drawn about Canadian firms and international coordinator e-Ms. First, involvement by a large domestic firm in an international electronic market is no guarantee of success, since the success of these e-Ms depends primarily on conditions within the industry. Second, the survey conducted for this report shows an absence of domestic coordinator e-Ms in Canada. This can be attributed to the relative scarcity within Canada of concentrations of large firms that predominate within an industry. The centres of gravity of large coordinator e-Ms will practically always be located in major markets where the member firms are active. Canada has insufficient scale to lead such e-Ms.

Only one buy-side e-M was identified in Canada, Procuron. The relative absence of buy-side e-Ms in Canada is explainable by two factors. First, only companies that are able to aggregate significant amounts of purchasing power have enough leverage to operate a buy-side e-M. Procuron's principals, for example, have agreed to channel a billion dollars of procurement through the e-M. Perhaps of more significance is the trend to move away from pure e-M types to mixed or hybrid models which offer ancillary or complementary services to purchasers or which expand the number of players to eventually become market maker e-Ms. Procuron, for example, seems to be an example of the former tendency, evolving into a sell-side e-M, while MERX seems to be an example of the latter. MERX, the major Canadian public procurement site, is an e-M with very distinctive Canadian characteristics since it is an instrument in large part of Canadian public procurement policies.

It appears to be very difficult to successfully create horizontal B2B sell-side e-Ms in Canada aiming at SMEs. Although the potential market is huge, these e-Ms must operate on a large scale in order to reach profitability. Only configurations of very large players (typically banks, telecommunication companies, and technology suppliers) have the wherewithal to operate at the scale of a BellZinc

or a Procuron. Industry observers consider that the Canadian economy can support only a very small number of e-Ms of this kind. Various players in this market, such as Onvia, have since exited, and the size of present incumbents deters entrance by smaller potential domestic rivals. It is anticipated that the attainment of viability of e-Ms of this kind in Canada will have two possible consequences. One will be to encourage even larger players, probably US-based, to enter the market. The other will be to shift the balance of power in favor of large suppliers, which are not likely to be domestic firms. However the domestic banks and telecommunication companies that are sponsoring the emergence of large horizontal B2B horizontal sell-side e-Ms in Canada will be well positioned to earn income from transactions and infrastructure services.

Canada seems to have experienced a particularly vigorous development of domestic electronic market makers in the agricultural and natural resource sectors. Examples are Aginfonet, Agralink, Alberta Watt Exchange, Natural Gas Exchange, NetThruPut, and Roughneck. Although some of these e-Ms have not been successful, several are. Most of these companies are based in Alberta or Ontario. They are almost always the result of entrepreneurial ventures by persons familiar with the industry and the market in question. Sometimes these e-Ms exploit proprietary technology and more often than not their initial rounds of funding were obtained locally. As examples of Canadian ability to put together packages of technology, talent, and financial support in pursuit of perceived market opportunities, these initiatives deserve special attention.

For that matter, several domestic Canadian e-Ms have developed novel business models that are producing value despite the current dearth of interest by the investment community. Examples are business models that have hybridized elements of physical and electronic businesses, such as The Ag Dealer; models that have built online multidimensional information and economic exchanges into a professional or commercial community, such as Bar-eX or ShipAhead; and very specialized vertical exchanges that are owned and operated by domestic technology suppliers such as Mediagrif or VerticalBuilder.

6. Concluding Comments

A number of preliminary conclusions can be drawn from the analysis conducted to date. In some respects the Canadian experience mirrors the US experience, whereas in others, contrasts are evident. Taking the similarities first, it appears that e-Ms everywhere are seeking to diversify their revenue sources. The US experience of the past year has demonstrated that e-Ms that rely on transaction commissions/fees for profits will be sadly disappointed. Not only has it proven difficult to generate the volume of transactions necessary but also the buyer/seller matching model is relatively easily replicated. This realization is driving Canadian e-Ms to seek and implement additional services to participants. A consequence of this development is that there is a move away from "pure" e-M types towards more complex and hybrid forms, as well as the emergence of new forms (McKinsey & Company/CAPS Research 2000).

Two findings seem distinctively Canadian. First, the period of low entry-cost market makers seems to be over, if it ever existed. Those

e-Ms that have survived are either very specialized or have exited Canada (such as Onvia). Canadian e-Ms seem to be much more closely associated with industry groups, consortia of powerful buyers or sellers, or major infrastructure providers, than their US counterparts. It appears probable that venture capitalists in Canada did not make major investments in e-Ms intended specifically to serve the domestic market. Second, the e-M procurement space for SMEs is shaping up to be a major battleground among Canadian banks. Procuron is clearly the Goliath although the e-Ms identified all have substantial support through major strategic alliances among banks and telephone companies.

It will be interesting to see whether experiences in other countries bear a resemblance to those noted above. Canada's situation appears similar to some European nations in that its economy is relatively small and open, and greatly affected by a large neighbour(s). It remains to be seen what form e-Ms (and the broader question of e-business) take in settings such as these. Additional research studies are needed that study B2B e-Ms in a timely yet scientific manner.⁷

References

Aitken, Grahame & Peter Sandiford (2000), *E-marketplaces: Strategies, Tools and Opportunities*, Report prepared for Industry Canada, Information and Communications Branch, Ottawa, Global Technology Management Inc., July 11.

Bakos, Yannis (1998), "The Emerging Role of Electronic Marketplaces on the Internet," *Communications of the ACM*, 41 (8), 35-42.

Bichler, Martn (2001), *The Future of e-Markets. Multidimensional Market Mechanisms*, Cambridge: Cambridge University Press.

Mark Boslet, "After the B-to-B Revolution, May 14, 2001, <[www.thestandard.com/article/ 0,1902,24176,00.html](http://www.thestandard.com/article/0,1902,24176,00.html)> (May 17, 2001).

Canadian E-Business Opportunities Roundtable (2000), *Fast Forward: Accelerating Canada's leadership in the Internet economy*, Toronto: Prepared by The Boston Consulting Group (Canada), January.

----- (2001), *Fast Forward 2.0*, Toronto: Prepared by The Boston Consulting Group (Canada), February.

Deloitte Research (2000), *B2B Darwinism: How e-Marketplaces Survive (and Succeed)* <www.dc.com/deloitte_research> (April 15, 2001).

Elias, Paul (2001), "Still Trading," *Red Herring*, March 20, 52-56.

Forrester Research Inc. (2001), *Canada's B2B Future*, January.

----- "The eMarketplace Shakeout," August 2000, <[www.forrester.com/ER/Baseline/Detail/ 1,1896,201,00.html](http://www.forrester.com/ER/Baseline/Detail/1,1896,201,00.html)> (May 17, 2001).

----- (1999), *Net Marketplaces Grow Up, 1999*, <[www.forrester.com/ER/Print/Research/Report/ 0,1338,8774,FF.html](http://www.forrester.com/ER/Print/Research/Report/0,1338,8774,FF.html)> (April 7, 2000).

⁷ See Rosson (2000) for an agenda that is sympathetic to the interests of IMP researchers.

- Kaplan, Steven & Mohanbir Sawhney (2000), "E-Hubs: The New B2B Marketplaces," *Harvard Business Review*, May-June, 97-103.
- McKinsey & Company/CAPS Research (2000), Coming into Focus: Using the Lens of Economic Value to Clarify the Impact of B2B Marketplaces, <[www.mckinsey.com/features/caps_white_paper\ featured%20paper.html](http://www.mckinsey.com/features/caps_white_paper\featured%20paper.html)> (May 1, 2001).
- Merrill Lynch (2000), The B2B Market Maker Book, New York: Global Securities Research & Economics Group, February.
- Pastore, Michael (2000), "\$6 trillion in B2B trade by 2005," June 26, <http://cyberatlas.internet.com/markets/b2b/print/0,,10091_402421,00.html> (May 1, 2001).
- (2001a), " B2B Projections Remain High Despite Obstacles," January 9, <http://cyberatlas.internet.com/markets/b2b/print/0,,10091_555291,00.html> (May 1, 2001).
- (2001b), " B2B Buyers Waiting for Vendors to Go Online," March 6, <http://cyberatlas.internet.com/markets/b2b/print/0,,10091_706471,00.html> (May 1, 2001).
- (2001c), " Economic Downturn Slows B2B Commerce," March 21, <http://cyberatlas.internet.com/markets/b2b/print/0,,10091_719571,00.html> (May 1, 2001).
- Phillips, Charles & Mary Meeker (2000), "The B2B Internet Report-Collaborative Commerce," New York: Morgan Stanley Dean Witter, April.
- Rosso, Philip (2000), "Electronic Trading Hubs: Review and Research Questions," *Proceedings*, 16th. IMP Conference, Bath, UK, CD-ROM.
- & Charles Davis (2001), Electronic Markets and Canadian Companies, Report prepared for Industry Canada, July.
- Strader, Troy & Michael Shaw (2001), "Characteristics of Electronic Markets," *Decision Support Systems*, 21, 185-198.
- Timmers, Paul (1998), "Business Models for Electronic Markets," *International Journal of Electronic Markets*, 8 (2), 3-8.

Appendix A.1 List of Electronic Marketplaces Identified

| Name* | URL | Industry |
|---------------------------------------|-------------------------------|-------------------------|
| Aerexchange* | www.aerexchange.com | Airline |
| Aginfonet Canada Corporation | www.aginfonet.com | Agriculture |
| AgraLink Exchange Ltd. | www.agralink.ca | Agriculture |
| Agri Place Inc. | www.agriplace.com | Agriculture |
| Alberta Watt Exchange Ltd. | www.wattexchange.com | Electrical power |
| ATT Canada Marketplace | www.attcanadamarketplace.com | Horizontal |
| Bar-eX Communications Inc. | www.bar-ex.com | Legal |
| BellZinc | www.bellzinc.ca | Horizontal |
| bizSmart | www.bizsmart.com | Horizontal |
| buildingweb Inc. | www.buildingweb.com | Construction |
| Buysalvage.com | www.buysalvage.com | Salvage equipment |
| CATA Alliance Small Business Exchange | www.cata.com | Advanced technology |
| Covisint LLC* | www.covisint.com | Automobile |
| E2open* | www.e2open.com | Computers & electronics |
| eBiz4Biz.com | www.ebiz4biz.com | Export |
| eBuild.ca | www.ebuild.ca | Construction |
| Empori.com | www.empori.com | Horizontal |
| e-STEEL* | www.e-steel.com | Steel |
| GHX Canada* | www.ghx.com | Healthcare |
| Gofish.com* | www.gofish.com | Seafood |
| Interealty | www.interealty.com | Real estate |
| Mediagrif Interactive Technologies | www.mediagrif.com | E-commerce |
| MERX | www.merx.cebra.com | Government tendering |
| Natural Gas Exchange Inc. | www.ngx.com | Oil & gas |
| NetThruPut Inc. | www.netthruput.com | Oil & gas |
| Onvia* | www.onvia.com | Horizontal |
| Partslink | www.partslink.com | Automotive |
| Petroleum Place* | www.petroleumplace.com | Oil & gas |
| Procuron | www.procuron.com | Horizontal |
| Quadrem* | www.quadrem.com | Mining |
| RailMarketplace.com Inc.* | www.railmarketplace.com | Railroads |
| Roughneck | www.roughneck.ca | Oil & gas |
| ShipAhead.com | www.shipahead.com | Shipping |
| SourceCAN | www.sourcecan.ca | Horizontal |
| TD MarketSite | www.tdmarketsite.com | Horizontal |
| The Ag Dealer | www.agdealer.com | Agriculture |
| thequotaexchange.com | www.quotaexchange.com | Export |
| Transora* | www.transora.com | Consumer packaged goods |
| Truck and Trailer Online | www.truckandtraileronline.com | Automotive |
| Vertical Builder | www.verticalbuilder.com | E-commerce |

*Owned by US or international interests.