

E-Markets and Changing Trends

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Abstract: This paper discusses the role of e-markets as intermediaries in the Australasian B2B e-space. The discussion and findings of this paper are from a research project that investigated the business and operational issues of these intermediaries as highly volatile business entities in 2002 and an evaluation of these same e-markets in 2005 to determine the changing trends. This paper presents business opportunities, revenue models from intermediary services, factors contributing to success and the challenges e-markets faced in 2002 and in 2005.

Keywords: B2B E-Business, net market makers, intermediaries, e-procurement, e-auctions, e-marketplace, e-markets.

I. Introduction

Since 1999 Australian businesses have increasingly adopted the Internet as a medium of doing business. According to the Australian Bureau of Statistics Report (2005) in the year 2004 75% of Australian business organisations were using the Internet and 25% had a web presence. B2B e-business in Australia is largely dependent on intermediation from net market makers either private, consortia based, national or international, to facilitate e-procurement, B2B exchanges, e-supply chain management and information sharing between business partners. B2B exchanges include various categories of market spaces, including vertical market portals, horizontal exchanges, hubs and various types of online auctions. Intermediaries generally referred to as net market makers or e-markets bring together exchange partners, organise and manage auctions, generate e-catalogues and other auxiliary services pertinent and relevant to efficient exchanges in the B2B e-space. Since 1998 Australian businesses have increasingly adopted e-procurement largely depending on net market makers to provide intermediary services and facilitate the exchange. As a result net market makers proliferated at an astounding rate because of the business opportunities in facilitating B2B exchanges. For buyers these intermediaries lower purchasing costs while reaching new suppliers. For suppliers they lower sales costs and help the supplier reach new customers.

However, as reported by Frew (2002), many of the net market makers that were announced in Australia in the year 2000 either collapsed or did not get off the ground. In the

year 2001 consolidation of some e-markets (net market makers) took place in Australia leading to B2B online exchanges becoming mostly industry specific verticals dominated by Australian buyers and sellers (NOIE, 2001). By the end of 2002 only about 100 e-markets (net market makers) existed in Australia (Frew, 2002). In 2004 several mergers and acquisitions took place and in 2005 synergistic takeovers are the trend.

Although the Internet offers great opportunities to net market makers, operational and business issues for success and survival as business entities have led these intermediaries to review and change their business and revenue models, services and operations. In this paper I present the findings of a research project that evaluated business practices, success factors and challenges faced by Australian e-markets in 2002 and in 2005.

II. Literature Review

E-markets (net market makers) offer services that facilitate transactional service needs to buyers and suppliers. Weill and Vitale (2001) and Zwass (2000) advocate that e-Markets enable easy search of products and services, information on product specifications which reduce communication costs for both buyers and sellers, dynamic pricing based on demand relationships, sales transactions that include payment and settlement, product delivery, market surveillance for stock market, auction results and enforcement of proper conduct by buyers and sellers.

Electronic intermediaries provide an information infrastructure by which traders can realise commerce over electronic networks (Lee and Clark, 1999). Deganaï and Gautschi (2002) describe net market makers as organizations that own and operate the e-marketplace. Characteristics of net market makers according to Deganaï and Gautschi are that these owners and operators may be companies that are fully independent (that is, are not also buyers or sellers) or could be major and dominant participants in the exchange as buyers and sellers. It is important for net market makers to adopt a business model that will allow them to operate the exchange and make a profit. These net market makers also depend on ancillary services to complete the exchange with support from electronic payment agencies, security system providers, and in some cases the engine (technology) to host auctions (Singh, 2004).

A business-to-business electronic marketplace has several buyers and several sellers. It is an arena on the Internet where a trusted intermediary (e-market) offers

trading functionality to registering companies (Swedish Trade Council, 2001). Whinston (1997) describes intermediary roles as facilitators of transactions between buyers and sellers with value-added services such as aggregation and distribution of product information, quality checks, and warranties. An electronic marketplace according to Archer and Gabauer (2002) is a virtual marketplace where buyers and suppliers meet to exchange information about prices and product and service offerings, to collaborate, and to negotiate and carry out business transactions. Gallagher and Ramanathan (2002) suggest that electronic marketplaces provide the basic infrastructure to allow suppliers and buyers to interact in an online environment.

Based on the above definitions, in this paper the terms net market makers and e-markets are terminologies used interchangeably meaning the same thing.

The large amount of bid, order and transaction management for the B2B procurement of parts and supplies usually require assistance from auxiliary services such as e-markets (Thomson and Singh, 2001, Laudon and Traver, 2002). An 'e-market' functions as a trusted intermediary whose well-integrated business procedures and technology save costs and streamline the purchasing and sales processes (Swedish Trade Council, 2001). They provide customers with buy and sell services to enhance business, efficiencies and competitiveness.

Three main functions that electronic markets serve according to Bakos (1998) are matching buyers and sellers, facilitation of transactions and provide trust and assurance. To match buyers and suppliers they help determine product offerings, price of goods, suppliers for the buyers and buyers for the selling companies. Facilitation of transactions includes logistics, settlement and trust. They provide trust and assurance with certification services and an infrastructure that is bound by legal and regulatory standards. There are generally different value propositions for buyers and suppliers to participate in a trading exchange or an industry consortium. Palmer (2002) suggested that buyer benefits gained from e-markets are easier and faster buying process, reduced transaction cost and time, reach to global community of sellers, easy access to a large amount of information, reduced search costs, streamlined business processes, a wider choice, quick order fulfilment and less chance of errors. For supplier benefits Palmer included cost saving and tighter inventory control, reduced transaction time and cost, broader customer base, information privacy and security, savings in time and capital, streamlined business processes, easy to update prices, availability and other product information, enable smaller regionalised suppliers a level playing field with larger suppliers and consolidation of orders onto a single invoice. Fairchild et al (2003) advocate that e-markets manage market process design, IT innovation and trust in B2B exchanges.

II. 1 Evolution of E-Marketplaces

According to Raisinghani and Haneback (2002) e-markets evolved in three waves of B2B e-business. In the first wave

there were approximately 1,000 independent online marketplaces for commodities such as paper and steel to specialised components such as airplane parts. Many of these were entirely dependent on transaction fees from a few large organizations, which could not remain in business as more organization-to-organisation dealings became possible. In the second wave large corporations formed a consortia designed to reduce bid-ask spreads and matching buyers with suppliers and enabling suppliers to trade with one another. In the third wave, exchanges customised their models based on the cost structures of various purchases. Some models focussed on collecting and distributing information, while others on reducing purchase costs and improving transactional efficiencies.

II. 2 How E-Markets Support E-Procurement

Business and government organisations in Australia and around the world are increasingly moving from paper-based traditional procurement to e-procurement, to capitalise on the efficiencies of price transparency, online catalogues, easy search for products and suppliers, and to capitalise on the benefits of technology and automated processes. While EDI has been the most common method for automating procurement, its extent was limited by its substantial cost that made it only accessible to large firms with recurring volume purchases (Pavlou and Sawey 2002). The more ubiquitous Internet, which is also economically accessible to small-scale B2B exchanges, has further advantaged e-procurement. Developments in B2B e-business in Australia has seen businesses and the government, both at the State and Federal levels adopting Web-based e-procurement to achieve volume purchase, dealing with a wider choice of buyers and suppliers, lower costs, better quality, improved delivery, and reduced paperwork and administrative costs (Singh and Thomson, 2002).

Businesses buy a diverse set of products and services, ranging from paper clips to computer systems, from steel to machinery. At the broadest level these purchases have been classified by Kaplan et. al. (1999) as manufacturing inputs and operating inputs. Business purchases are dominated by systematic sourcing and spot sourcing of goods and services. Systematic sourcing, buying through pre-negotiated contracts with qualified suppliers is relationship oriented and contracts are long term. Spot sourcing is fulfilment of an immediate need, typically of a commoditised item for which it is less important to know the credibility of the supplier (Thomson and Singh, (2001) and Chaffey, (2002) and Christiaanse, et al (2001)).

E-marketplaces or e-hubs that enable B2B purchases have been categorised by Kaplan et al (2000) as MRO (maintenance, repair, operating) hubs, horizontal markets that enable spot sourcing of operating inputs for manufacturing, labour, and advertising. Vertical exchange markets enable spot sourcing of manufacturing inputs and commodities, as well as vertical catalogue hubs for systematic sourcing of non-commodity manufacturing inputs.

E-markets support e-procurement by providing technology and governance solutions, auctions, electronic catalogue content, aggregating supplier input, industry news and standardised data access to buyers (Archer and Gabauer, 2000). Archer and Gabauer further explain that e-markets face the challenges of a balancing task as they set up solutions that satisfy suppliers and buyers ensuring that their costs do not outweigh the overall benefits they will receive from the arrangement, the need of a particular business model to determine which buyers and suppliers to recruit as participants and compete with other techniques that suppliers and buyers use to meet their needs.

II. 3 E-Markets in the Australian B2B E-Space

In the year 2000, many market makers (e-markets) proliferated in Australia due to e-procurement being the most important B2B e-business application. However, in the year 2001 consolidation of some e-markets took place in Australia due to online exchanges being new and unproven roles of these intermediaries (NOIE, 2001). A preliminary study of the e-market in Australia undertaken by Standing and Stockdale (2002) highlighted that initiatives such as 'try before you buy', free transactions, site tours and lengthy FAQ sections, strongly addressing security information were important features on e-market web sites. They also indicated that the most important means of revenue generation was a charge on transaction costs. Standing and Stockdale also suggest that Australian ownership of e-marketplaces is generally based on first mover advantage operating as intermediaries. These are either horizontal or vertical hubs enabling catalogues, auctions, exchanges, storefronts and negotiations.

Bryant (2002) is of the opinion that in Australia and New Zealand there are too many market makers for the size of the industry in this region. According to Bryant, most of these net market makers have similar offerings and flawed revenue models. Therefore to survive and expand business e-market makers need to build specialist businesses to support B2B e-business and look beyond their current business model.

E-markets in Australia do have an important intermediary role in e-procurement matching buyers and sellers, ensuring trust among participants, supporting market operations and transactions, ensuring quality control and aggregating buyer and supplier information. However, with evolving e-business models and technological developments, consolidation and liquidation of a large number of these market makers have taken place. Since 2002, e-market trends in Australia show mergers and acquisitions, synergistic takeovers and market consolidation.

An earlier research on net market makers in Australia (Singh, 2004) identified e-market intermediary business opportunities, revenue models, governance structure and e-market services in the B2B e-space. However, due to the changing trends of mergers, consolidation, huge competition and takeovers, it was imperative to evaluate e-markets to determine the changing trends in their business and revenue

models, business operations, success factors and challenges. Therefore the five e-markets that participated in the earlier research were contacted to identify changes in their business practices, governance issues, challenges and success factors. The method of investigation, findings and discussions are presented in the next section.

III. Research Approach and Methodology

This research project was accomplished via interviews, both face to face and telephone and email. Profiles were gathered from 5 companies operating as net-market makers in the Australian B2B e-space. The interviews explored company demographics, business model, practices and governance, success factors and challenges of these intermediaries operating as business entities, and changes in all of these after two years of operation. The 5 organisations investigated are those that agreed to participate in the project. Contact was made by email with the person who headed the organization, emphasising the importance of this research and agreeing to share the findings with these organizations. Five organizations were considered adequate for this study to help me identify the trends for further research. Interviews were semi-structured with open-ended questions to guide discussion about each firm's business practices, successes and challenges.

Data collected are summarised in Table One. The method of analysis is qualitative, inferences and implications of which are discussed in the following section. For reasons of confidentiality, names of companies discussed are not identified. In this paper they are referred to as Companies A to E.

Insert Table One

IV. Findings and Discussion

Company demographics, business practices, challenges and success factors identified from the findings are discussed in the following section.

IV. 1 Company Demographics

Organisations investigated were both large and small intermediaries in the B2B e-space. Companies B, C and E were privately owned while companies A and D were subsidiaries of international organisations. Companies B, D and E facilitated vertical hubs providing services to the construction, steel and supermarket industries, A and C facilitated horizontal and vertical hubs providing services to specific industries as well as exchange of commodities.

The respondents' positions ranged from senior consultant with the company to partner and director. Core services provided by these organizations included document tracking, online catalogues, strategic sourcing of suppliers, technology for online auctions, prequalification of suppliers and

facilitation of product sales in 2002. Additional services in 2005 included sourcing platforms, collaborative suites, exchange of specific types of goods such as perishables.

IV. 2 Motivation to Operate as Intermediary

Business opportunities from the Internet and e-procurement being the largest component of B2B e-business were the main motivating factors for these organisations to act as intermediaries. Company A saw a window of opportunity in the Australasian B2B e-business, thus decided to expand its operations in this region. Core services provided by these intermediaries included provision of technology for online bidding and auctions, sourcing of solutions and suppliers, document and transaction management and online catalogues. Company B capitalised on technology to reach out to global buyers of Australian Steel. Company D being a part of a large network of the supermarket industry facilitated large exchanges in the industry. Company E provided services specifically to the Steel industry and folded its business in 2004 due to a lack of participation from buyers.

In the 2002, it was apparent that opportunities arising from technology were a strong driver of net market makers to provide intermediary services and to operate as business entities. Another compelling reason to operate as a net market maker was first mover advantage in the emergent Australian B2B e-space. Although total revenue, profit and number of transactions still remain the motivating factors for e-markets, in 2005 developing B2B e-business from e-catalogues to a full suite, and supporting buyers with infrastructure was more compelling. Other reason was consolidation with industry or a take over by a more financially viable large organisation.

IV. 3 Business Models and Governance Issues

Companies A and C operated as neutral third parties supporting both vertical and horizontal exchanges, Companies B and D operated as vertical intermediaries supporting two specific industries the construction and supermarket. Vertical exchanges took advantage of the knowledge of the industry to target suppliers and buyers. Horizontal operators used advertising both formal and informal and allowed 40 % of the potential suppliers, based on prequalification and buyer selection to participate in any event. In most exchanges, the suppliers were known to the buyers due to the limited number of suppliers of some goods and services in this part of the world.

Value proposition to the buyers and sellers included transparency of information and prices, business efficiencies resulting from reduced costs of purchases, administration accuracy of data transmitted, reduced time for acquisition of products, scalable and reliable applications and improved and standardised business processes.

Findings of this research reveal that business models of intermediary operations in the Australian B2B sector of e-business are similar to those identified by Kaplan (2000), discussed earlier. However, new models of mega-

marketplace with supply chains suites are a consideration.

IV. 4 Intermediary Services

Intermediary services included provision of directories listing suppliers, their profiles and ratings; inventory listing; bulletin boards and online information browsing capability; information about the site and customer service, buyer guides and news. Creating e-catalogues and conducting reverse auctions, with online negotiations, RFQ's and document management and after event reports and payments were some of the other important services provided to buyers and sellers. Training users to use technology to bid online, access information and to negotiate online are also provided by these e-markets. Helping buyers participate effectively with technology and training support were incorporated by 2005. Other services for the horizontal smaller intermediaries included knowledge, project and tender management.

IV. 5 Revenue Model

The most common revenue model for services included a flat fee and a percentage of transaction fees charged to the buyer. Other sources of revenue included charges for technology for bidding and auctions, preparing e-catalogues and other small technology solutions. Company E charged a subscription fee for participating for servicing the construction industry. All charges were levied on the buyer. Prevalent payment methods used were traditional, although all had the infrastructure to support e-payments. Most received payments for their services 15 to 20 days after the event. Two respondents indicated that the fee charged covered costs but was inadequate. Low fees were maintained to attract business. New revenue streams identified in 2005 include fee for training, recruiting and licensing of technologies.

IV. 6 Strategic and Tactical Issues

Main business strengths identified were open source technology, skilled staff, a focused business model, technology for niche applications, holistic solutions encompassing services and technology, leveraging global knowledge base, applications of technology and first mover advantage in the industry. Competitive threats common to these organizations were other net market makers operating in the region and in the specific industry, as well as consulting organizations. Consulting organizations such as Peat Marwick and A T Carney provided B2B solutions as well as the engine for auctions. Business strategies for these e-markets focussed on business expansion, capitalising on technology, new and profitable business models, packaging of disparate issues for simplified solutions, new partnerships for business growth. To form new alliances with organizations that can support software development, content, e-catalogues, payment services and technology.

The findings in 2002 indicated that e-markets faced stiff competition, and their strategy is focused on growth and expansion. Technology can be capitalised on for

differentiated services and integrated solutions to lock in customers.

In 2005 moving onto the next round of B2B e-business with winning business models to create value for customers as well as creating profits and sustained growth in shareholder value was emphasised to be the strategic consideration. Communication hubs with supply chains and reverse logistics management to foster better participation from buyers and suppliers are considered.

IV. 7 Infrastructure Issues

Infrastructure for managing an electronic marketplace varied for all the respondents. Company A, which is a subsidiary of an international net market maker owned its e-marketplace platform called 'Bidware' which supports global markets and hosted on a server in Pittsburg. Companies B and E supported vertical exchanges with privately owned technology either developed or modified in house to support the online exchange. Company B's platform required participants to make their bids from their personal computers. Company D used technologies supported by international partners. Company E was based on open source JAVA and LINUX.

From the above it is clear that e-market services are not technology specific and can be operated from different platforms. The need for a seamless integration of procurement data and the back end system is essential for online realtime processing of information. Information technology is the backbone to B2B e-business exchanges. In 2005 this finding was the same with convergence and consolidation of technologies for additional services.

IV. 8 Success Factors

Success factors identified in 2002 were skilled and motivated employees, a focused business model, first mover advantage, open source technology, e-market technology compatibility with internal business processes, knowledge of the industry, a good value proposition to participants, and Australia's limited supplier base.

Technology and business knowledge of the market makers, need for support in B2B exchanges with the increased application of the Internet, and a well planned business model clearly lead to first mover advantages in innovations such as e-procurement and e-business.

In 2005 intermediaries operating vertically supporting industry specific exchanges were more successful in getting business. Ability to incorporate new and diversified offerings also supported business.

A regulatory framework to guide e-procurement and e-market facilitated exchanges now exists in Australia that provides assurance and trust in the application.

IV. 9 Challenges

Challenges faced by net market makers identified in 2002 were clearly more than benefits. The most common ones were the small size of the industry in which they are operating, fragmented market, a lack of belief in the industry

that e-market will work, undoing the legacy of existing markets, old inflexible back end systems, credibility issues due to the small size of the company, limited access risk capital in Australia, fear of change to a new way of doing business, negative perception created by the collapsed and unsuccessful market makers, a lack of trust, education and awareness of the benefits of e-marketplaces.

The above findings indicate that overcoming conservatism, finding a champion in the organization to promote the role of e-market services in B2B exchanges, the need for a leader company in the industry to support net market maker services, breaking existing supplier and buyer relationships, convincing buyers and sellers of the benefits achieved from intermediary services, the need for standards to support trust and security, winning investor confidence and overcoming internal resistance were hindering the growth of e-market operations.

In 2005, challenges were much the same with an emphasis on slow uptake of electronic exchanges. Company E folded business due a lack of interest from steel buyers trading online. New business models with an emphasis on value rather than price is an important consideration.

V. Conclusion

From this research it is apparent that technology opportunities gave birth to a new type of business, the intermediary services. It shows that the internet offers opportunities to buyers and suppliers in the B2B e-space to automate transactions, expand offerings to business partners, launch catalogues, e-procurement sites, auctions and communication. Some intermediaries service only vertical industries and some provide services horizontally. All emphasise on the efficiency to reach out to and be gained by bringing together buyers and sellers in an electronic marketplace.

Business models of e-markets are predominantly neutral third parties operating in the horizontal, vertical or both horizontal and vertical markets. However, the need to move from buyer-oriented, buyer-seller oriented and seller oriented to mega-marketplaces offering combined products and services, a transport network, communications hub and markets where products can be changed across manufacturers are being considered for next generation business to business exchange services.

Despite technical challenges e-markets are faced with the challenges of buyer and seller participation and changes to their sourcing systems. It is a very competitive business which is indicative of the need for new, innovative and integrated services and business strategies for revenue expansion and future survival.

An evaluation of the e-markets shows that although they are now more experienced and capable of offering better services, becoming industry specific or diversifying services is the new trend for capturing value.

It also highlights the fourth wave, which is merges and consolidation with new and diversified services. New

revenue and business models are also evolving.

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Table One

	Company A	Co B	Co C	Co D	Co E
Demographics & Business Motivation	New, small, international parent co., Business opportunity	New, small, local, Melbourne Business	New, small, Melbourne based Business opportunity	New, large, Australasian based Business opportunity	New, small and privately owned Business opportunity
Bus Model & Governance	Vertical & horizontal	Vertical	Vertical & horizontal	Vertical	Vertical
Services	Auctions, catalogues, RFQ, participant selection	Forward auctions	Reverse auctions, search, catalogues	Communication, connection & collaboration, Auctions	e-catalogues, tendering, search assistance
Revenue Model	Flat fee & charges for exchange services	Transaction fees	Auction & service fees	Training, volume transactions, auctions	Software, training users, negotiations
Strategic Issues	Holistic solutions	Niche applications	A focused business model	Industry specific	New services
Infrastructure Issues	Bidware	Developed in-house	Developed in-house	Sourcing on buyer desktop, full category sourcing	JAVA/LINUX
Success Factors	Previous experience, proven technology & business practice	Industry knowledge	Industry & technology knowledge	Technology	Industry knowledge
Challenges	Sparse transaction volumes Slow uptake & dev	Seeking alternative services for revenue	Competitors Slow development s	New horizons & trends	Resistance & fear of unknown