

# Strategies for B2B Electronic Markets: Delivering Business Value to Buyers and Sellers

Chia Yao Lee

School of Information Systems, Deakin University, Melbourne, Australia  
chia.lee@deakin.edu.au

**Abstract:** This paper discusses the key elements of effective and successful strategies for organisations engaging in Business-to-Business (B2B) Electronic Markets. Existing literature have concentrated on developing schemas for categorising B2B Electronic Markets, and evaluating the innovative business models they employ, with less focus on understanding the business value of B2B Electronic Markets from a multi-stakeholder, business strategy perspective. In the present business climate, business managers and executives are keen to discover strategies to maximise performance improvements associated with ICT adoption. Based on case studies of B2B Electronic Markets, this paper discusses the importance of (i) creating and distributing business value among the various stakeholders, (ii) determining a pragmatic approach for engaging in B2B Electronic Markets, and (iii) managing the transformation of business processes associated with B2B Electronic Markets. The study contributes to practice and research by presenting rich empirical insights into the operations of B2B Electronic Markets, and providing suggestions for future research in the topic area.

**Keywords:** Case Study in E-business; Electronic Markets; Business Value of IT; Business Strategies.

## I. Introduction

Over the past two decades, B2B Electronic Markets have attracted substantial attention from practitioners and academic researchers, for they represent an economic model that promises to transform traditional ways of doing business, influencing organisational practice and the make-up of industries [2, 12, 13, 20]. Predictions have been rife that B2B Electronic Markets will quickly become a strategic necessity for organisations, and in turn become an important part of an industry's infrastructure [2]. In reality however, B2B Electronic Markets have had less profound effects. Several prominent B2B Electronic Markets that became the posterchild of the Dotcom era have fallen victim to acquisitions, mergers, or failed altogether [4], thus bringing into focus the problem first raised by Wise and Morrison [20] that *"The use of the Internet to facilitate commerce among companies promises vast benefits: dramatically reduced costs, greater access to buyers and sellers, improved marketplace liquidity, and a whole new array of efficient and flexible transaction methods. But if the benefits are clear, the path to achieving them is anything but."*

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This paper addresses the important issue of how and why organisations derive business value from engaging in B2B Electronic Markets. The research question that underlies the study asks,

*"What are the important elements that underpin effective and successful strategies for B2B Electronic Markets?"*

The paper discusses the roles B2B Electronic Markets play in inter-organisational relationships, and highlights the need for developing a pragmatic approach for participating in B2B Electronic Markets. The inability of B2B Electronic Markets to focus on issues beyond transaction cost reduction has narrowed the prospects of many B2B Electronic Markets during the Dotcom period, and limited their ability to achieve long-term sustainability. The present study addresses a call in existing literature to regard the Internet and other relevant Information Technologies as a complement to, instead of a cannibal of, traditional ways of competing [16]. Highlight is also placed on effective management of the business process transformations that accompany B2B Electronic Market adoption [3, 11].

## II. Literature Review

Research in B2B Electronic Markets draws on accumulated knowledge in economics, management, marketing, and information systems, due to the cross-disciplinary nature of B2B Electronic Markets, and the loci of the impact and implication of B2B Electronic Markets. Several theoretical frameworks from different research streams have been adapted and modified for studying B2B Electronic Markets. These theoretical frameworks include the Transaction Cost Theory [19], the Network Externality Theory [9], the Diffusion of Innovation Theory, and, Game Theory [18]. Individually, these frameworks are inadequate, and insufficient for explaining the richness of the B2B Electronic Markets phenomenon, nor the depth of its implication [1]. Amit and Zott [1] summarised that *"research on e-business and, more generally, on competition in highly networked markets, will benefit from an integrative approach that combines both strategy and entrepreneurship perspectives."* This paper addresses the above problem, by drawing from different theoretical approaches, and not being constrained by any particular theoretical framework. Using the resource-based view of the firm to develop a descriptive model of the value generating process, Melville et al. [14] defined IT Business Value research as *"any conceptual, theoretical,*

*analytic, or empirical study that examines the organisational performance impacts of IT*". Lee and Corbitt [10] proposed an analytical framework that uses Aggregation, Matching and Integration as the key sources of business value of B2B Electronic Markets.

Existing literature have concentrated on developing schemas for categorizing and classifying B2B Electronic Markets [8, 15, 16]. These schemas enable organisations to better understand the characteristics of various B2B Electronic Market models, and develop strategies to maximise the related business value [8]. Operators of B2B Electronic Markets reasoned that the adoption of ICT would improve communication and coordination among organisations, favouring a shift towards market-type structures for governing inter-organisational commerce. However, too much emphasis has been placed on the issue of reduced cost of transaction. This undermined opportunities to study the impact of B2B Electronic Markets on inter-organisational relationships and on complex inter-organisational business processes [3, 7, 11], independent of the implication of the Transaction Cost Theory.

The Game Theory [18] has been used to model participant behaviour and organisational strategies in B2B Electronic Markets [5, 21], by describing how participants will pursue strategies that will deliver optimal returns in a given environment. While it has been obvious that the ability to produce and sustain a Win-Win situation is an important factor that heralds the success of B2B Electronic Markets the issue at hand that is equally important is how do B2B Electronic Markets achieve this ability? Thus, practitioners and academic researchers are keen to understand strategies that lead to just and fair creation and distribution of business value among participants, in a B2B Electronic Market environment.

As Jap [6] and Kambil and Van Heck [7] have found, unless all major stakeholders are better-off, a B2B Electronic Market system is less likely to succeed. The Network Externality Theory [9] has also been used regularly for describing the rollout and adoption of B2B Electronic Markets. The central argument is that the more participants there are on the networked system, the greater the benefits an individual participant will gain, especially from interacting with the existing participants. Hence, logic would predict that for B2B Electronic Markets to succeed, they need to attain a critical mass, especially in the number of participants. In terms of economics of scope, this translates to a substantial range of business functionalities being facilitated.

Porter [16] considered B2B Electronic Markets from a competitive strategy perspective. He surmised that, bar some fragmented industries, if B2B Electronic Markets do not provide additional value to buyers and sellers, as an intermediary, B2B Electronic Markets may find themselves disintermediated if buyers and sellers transact directly.

In [3, 7, 11, 20], it was found that substantial benefits from engaging in B2B Electronic Markets lie in an organization's ability to automate internal and external

business processes, and subsequently integrate the automated processes across organisational boundaries. The transformation of business processes produces organisation-wide impact, thus, presenting opportunities for organisations to streamline complex procedures, especially those that require frequent human intervention. The transformation of business processes requires delicate management, due to the diversity of the stakeholders involved, and the complexity of the transformations. In addition, the potential for uneven creation, distribution and capture of the business value may adversely influence the participation by stakeholders.

There is little doubt that the value propositions presented by B2B Electronic Markets continue to evolve and shape organisational strategies. Issues which have arisen from recent studies suggest that managing the transformation of business processes, and the ability to adapt business strategies to extract value from the transformations, may hold the important elements to effective and successful B2B Electronic Markets strategies.

Building on prior work in B2B Electronic Markets [2, 3, 6, 8, 13, 16], this study explores the following issues in detail:

- (1) the creation, distribution and capture of business value amongst stakeholders;
- (2) the determination of a pragmatic approach for engaging in B2B Electronic Markets; and
- (3) the management of B2B Electronic Markets-enabled process transformation.

### III. Methodology

This paper describes part of a comprehensive exploratory study into the strategic sources of business value of B2B Electronic Markets. Six case studies of B2B Electronic Markets were conducted. The study adopts a qualitative approach to gain a deep insight into these case study organisations [15]. The typology of B2B Electronic Markets involved ranges from Private Electronic Markets used for procurement and distribution purposes, to Independent Electronic Markets that provide one-stop buying and selling solutions for organisations. Semi-structured interviews were conducted with 16 executives who were actively involved in the operations and implementation of the B2B Electronic Markets. The hermeneutic process [15] was employed for analysing and synthesising data collected. A summary of the six cases is illustrated in Table 1.

Table 1. Summary of Case Studies

	Description	Market Ownership model	Business functionality facilitated
Case 1	Reverse Auction site	Privately operated by the buyer	Sourcing, Procurement, Price Determination
Case 2	Life science Electronic Market	Independent, 3 <sup>rd</sup> party market-maker	Information exchange, Marketing, Sourcing, Ordering
Case 3	Steel Electronic Market	Independent 3 <sup>rd</sup> party market-maker	Information exchange, Auctions, Sourcing, Procurement, Ordering, Insurance & Transportation.
Case 4	Electronic Distribution Channel	Privately operated by the supplier	Inventory management, Information exchange
Case 5	Indirect supplies Electronic Market	Privately operated by a buyer, but backed by a consortia	Catalogue, Auctions, Sourcing, Ordering
Case 6	Healthcare Supplies Online Catalogue	Privately operated by a supplier-cum-intermediary	Access to pricing and inventory information, Catalogue, Ordering

#### IV. Research Findings

The six B2B Electronic Markets studied can be broadly categorised into (a) Private, and (b) Independent B2B Electronic Markets. Private B2B Electronic Markets are typically established, operated, and financially-backed by a focal organisation, which plays the primary role of a market-maker. The market-maker has substantial influence in the market segment, and is a prominent member of the supply chain community, such as an Original Equipment Manufacturer (OEM), a retail chain, or an assembler of products. As the name suggests, participation in Private B2B Electronic Markets is restricted to the trading partners of the market-maker. Usually, Private B2B Electronic Markets are implemented to address a specific need of the market-maker, e.g. procurement or sales.

In contrast, the market-makers in the case of Independent B2B Electronic Markets are typically neutral third parties. The market-makers do not have a direct stake in the transaction, they are neither a buyer nor a seller. Participation in Independent B2B Electronic Markets is open to a variety of organisations, depending on the structure of the Electronic Market – vertical or horizontal. Cross-case analysis of the case study data suggests that the business

strategies adopted by the market-makers, the buyers and the sellers, vary considerably, depending on the market ownership model used.

##### *Strategies for Private B2B Electronic Markets*

In analysing the business strategies deployed by market-makers, buyers and sellers, it was observed that the creation, distribution and capture of business value among stakeholders in Private B2B Electronic Markets are more likely to be uneven, with the market-makers emerging as the main beneficiaries. By channelling a substantial portion of their existing business via Private B2B Electronic Markets, the market-makers have consolidated their existing channels for sales and procurement, eliminating inefficient and ineffective processes and practices. For example, the market-maker in Case 1 had developed the Private B2B Electronic Market for sourcing and procurement purposes. Adoption of the Private B2B Electronic Market enabled the market-maker to benefit from economies of scale, by aggregating its internal purchases, and negotiating bulk discounts with suppliers. The market-maker organisation also experienced economies of scope benefits through reusing the same Private B2B Electronic Market for sourcing a variety of supplies. As noted by an executive in Case 5, the adoption of Private B2B Electronic Market for procurement reduces maverick purchases. Employees are less likely to place deals with non-preferred suppliers, or miss out on existing deals negotiated with the preferred suppliers.

From the perspective of buyers and sellers, the adoption of Private B2B Electronic Markets is political, and viewed with a degree of scepticism. Some small buyers and sellers viewed participation in Private B2B Electronic Markets as a pre-requisite for trading with large organisations. The participation issue becomes a strategic necessity for the small organisation, rather than a competitive advantage. However, large organisations which have participated in Private B2B Electronic Markets established by their major suppliers or customers have also attempted to avoid, or bypass the Private B2B Electronic Market. For example, a major supplier in Case 1 had commented that they were willing to match and better an offer listed in the Private B2B Electronic Market, but unwilling to place a counter-offer to the bid listed. The supplier perceived making pricing and inventory information available to competitors and customers as a loss of competitive advantage. Also in Case 1, a supplier which had secured a contract tendered on the Private B2B Electronic Market negotiated with the market-maker to extend the duration of the relationship. The supplier argued that they wished to increase business certainty in the medium term while saving themselves the trouble of having to renegotiate new supply contracts online regularly.

The issue of uneven creation, distribution and capture of business value among stakeholders is more of a concern among participants of Private B2B Electronic Markets, due to the biased orientation of the trading environment. While the smaller-sized buyer and seller may benefit from gaining

access to trade with a major supplier or customer the additional resources required in planning, managing, and transforming their internal business processes to accommodate Private B2B Electronic Markets are often overlooked, or underestimated. In addition, market-makers need to consider the suitability of Private B2B Electronic Markets on a case-by-case basis, taking into account the attributes of the product, the existing relationships with trading partners, the economic climate, and a host of other ancillary factors, to ensure the outcome is optimal.

### ***Strategies for Independent B2B Electronic Markets***

Past studies indicated that the sustainability and success of Independent B2B Electronic Markets rely on a number of factors, such as the volume of transaction processed, the type and range of business processes supported, and the number and diversity of the participating organisations [8, 20]. Like Private B2B Electronic Markets, Independent B2B Electronic Markets rely on the market-maker to generate the required volume of transaction and attract the right mix of participants albeit without the backing of a major supplier, manufacturer or customer.

The Independent B2B Electronic Markets studied have had to fend off competition from other B2B Electronic Markets. The market-makers are constantly motivated to present a unique set of value propositions to their clients that cannot be easily replicated by competitors. At the same time, the market-makers have to employ strategies to attract the right crowd, the right mix of buyers and sellers to the independent trading environment, while maintaining a reliable and sustainable business model. Independent B2B Electronic Markets thrive in highly fragmented market segments whereby buyers and sellers could quickly and inexpensively extend their reach, and expand their capabilities to trade with a greater pool of trading partners. Data from Case 2 suggested that the market-maker diversified its revenue stream by branching into print publication and advertisements to supplement revenue collected from membership and transaction fees from the electronic market.

The market-maker in Case 3 sought to expand the scope of business functionality supported by becoming a one-stop shop for buyers and sellers. It provided a range of value-added services, such as payment processing, product inspection, and logistics through its allied partners. The underlying rationale is that by expanding the scope of business functionality supported, it provides additional revenue streams and presents a set desirable value propositions to its clients. Many B2B Electronic Markets, both Private and Independent, have pursued this path, by morphing their intermediary and brokerage model into a one-stop solutions provider model.

From the perspective of buyers and sellers, Independent B2B Electronic Markets were employed as a low-cost channel for spot transactions, e.g. unplanned purchase of out-of-service equipments, or for getting rid of surplus inventory. Buyers and sellers also used the Independent B2B

Electronic Markets to smoothen out spikes and shocks in demand and supply cycles. Although market-makers have concentrated on providing an extensive scope of functionality, it was observed that the participating organisations seldom utilise all of the value-added services. Participants of the Independent B2B Electronic Markets engage in these trading systems for a specific purpose, such as accessing new trading partners in a highly fragmented market to quickly accessing vendors of urgently required items or to inexpensively dispose of excess inventory. The increasing number of organisations that utilise eBayBusiness.com, a B2B-centered eBay, for similar purposes confirms this empirical finding.

The issue of uneven creation, distribution, and capture of business value is less of a concern to buyers and sellers in Independent B2B Electronic Markets. Challenges remain however, for the Independent B2B Electronic Market to fend off competition by rival B2B Electronic Markets, and the threat of disintermediation by direct interaction between buyers and sellers. The other challenge for Independent B2B Electronic Markets lies in their ability to attract and maintain the right mix of buyers and sellers. While healthy competition among the participants is encouraged, intense price competition quickly erode the competitive capability of participants, and overly-friendly inter-organisational relationships may lead to collusion.

Table 2 summarises the important elements of the business strategies employed by buyers, sellers, and market-makers for participating in B2B Electronic Markets.

### ***B2B Electronic Markets and the Transformation of Business Processes***

Data from the six case studies indicated that the transformation of business processes due to the implementation of B2B Electronic Markets is an issue that all parties have to address. The difficulty in quantifying the business value of B2B Electronic Markets, is likely related to the challenges that lie in understanding the transformation of business processes due to B2B Electronic Markets.

Kambil and Van Heck [7] posited that using a stakeholder-process framework enables one to better understand how and why an Electronic Market system transforms business processes, and thus delivers value to the different stakeholders.

In this study, a similar approach was adopted, and the adoption and implementation of B2B Electronic Markets were evaluated by identifying the business processes they transformed, from the perspective of the stakeholders they impacted. It was found that additional incentives were required, such as collaborative sharing of inventory information, and sometimes in the form of additional monetary assistance, to encourage trading partners and customers in particular to participate in B2B Electronic Markets. The reduction of transaction cost alone is insufficient as an incentive.

The results indicated that a pragmatic approach is crucial

for the success of B2B Electronic Markets, especially from the perspective of the market-maker. The B2B Electronic Market model adopted must be clearly defined and the business functionalities and processes supported have to be fully understood. This is to ensure that the limitations of the

B2B Electronic Markets are known in advance, and the market-makers do not have a mentality that “if we build it, they will come.”

Cost reduction is of particular concern for many organisations. The question they face is whether they are

Table 2: Stakeholder Strategies in B2B Electronic Markets

	Private Electronic Markets	Independent Electronic Markets
Strategies for Market-maker/Operator	<ul style="list-style-type: none"> <li>(i) Channel a substantial proportion of existing transactions through the Private Market.</li> <li>(ii) Avoid confrontational style in encouraging trading partners to engage in Private markets.</li> <li>(iii) Strategies to redistribute business value are especially important, due to the uneven creation and capture of business value.</li> </ul>	<ul style="list-style-type: none"> <li>(i) Rely on increasing transactional volume, and increasing the diversity of participants.</li> <li>(ii) Present a different set of value propositions to buyers and sellers.</li> <li>(iii) Diversify and broaden the business functionalities supported, to counter competition from private markets, and other independents.</li> </ul>
Strategies for the Buyer	<ul style="list-style-type: none"> <li>(i) Improve inventory management through collaborative planning, etc.</li> <li>(ii) Consolidate sourcing channels, and standardise purchasing processes.</li> <li>(iii) Gain access to important market information, such as the availability of products</li> </ul>	<ul style="list-style-type: none"> <li>(i) Conduct spot purchases to overcome unforeseen demand spikes.</li> <li>(ii) Gain access to a greater pool of sellers, vendors.</li> </ul>
Strategies for the Seller	<ul style="list-style-type: none"> <li>(i) Gain access to greater business certainty and security by securing major contracts.</li> <li>(ii) Move away from price-based strategies, and concentrate on product differentiation to prevent commoditisation of products.</li> <li>(iii) Improve relationships with customers, such as through collaborative planning and design.</li> </ul>	<ul style="list-style-type: none"> <li>(i) Get rid of excess inventory,</li> <li>(ii) Use them as a low cost channel for accessing non-existing trading partners, especially if the buyers are fragmented, and difficult to access.</li> </ul>

willing to incur the additional cost of participating in B2B Electronic Markets, simply to enjoy a marginal cost reduction from savings in transaction cost. For major buyers and sellers, the volume of their transactions may justify this decision easily, but for those that have less volume, or already have well-established relationships with existing trading partners, the decision for joining B2B Electronic Markets requires an evaluation of whether it aligns with the organisation's core business, and how it will improve its core business.

From the perspective of an individual buyer or seller, the decision to join a B2B Electronic Market is frequently influenced by decisions by its major trading partner to join, or a group sign-on by its trading community. While the network externality effect may describe the typical network benefits for the individual buyer or seller, these organisations must be prepared to perform substantial modification or transformation of their existing internal processes. Integration of internal and external business processes represents a major hurdle for some organisations, but also an incentive for those that intend to pursue process automation.

## V. Conclusion

The paper contributes to practice and research by presenting rich empirical insights into the operations of B2B Electronic Markets, and providing suggestions for future research in the

topic area. It also highlights the importance of the traditional process for formulating business strategies, albeit one that is adapted for a faster-paced B2B Electronic Markets environment.

In conclusion, the study found that an important element to effective and successful strategies lies in the ability of the B2B Electronic Market system to foster collaboration, and encourage participating organisations to draw synergy from mutual strength and expertise. Pitting participating organisations against one another to achieve price-based reduction is but a short-term tactic. As interest among participating organisations to compete on price wanes, the viability of the B2B Electronic Market is threatened. For market-makers in particular, the ability to generate and distribute business value fairly provides additional motivation for stakeholders to participate.

Secondly, the adoption of B2B Electronic Markets requires business strategies that are not much different to adopting new business innovations. For participating organisations, an important element to effective and successful strategies for B2B Electronic Markets is to have adequate long-term planning, and be able to focus on measurable and achievable goals. Frequent recalibration and readjustment to business strategies are indicators of inadequate planning, or the lack of understanding of B2B Electronic Markets.

Last, but by no means least, the paper highlighted the need for managing business process transformation that

accompanies B2B Electronic Markets. In-depth understanding of existing business processes, and the capabilities of B2B Electronic Markets, prevent hasty strategies that require frequent recalibration. In addition, these three major findings represent areas that require further research in order to determine qualitative-type effects of B2B Electronic Markets.

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