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Types 0f B2B E-Business Model Commonly Used: An Empirical Study On Australian Agribusiness Firms

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Abstract

This paper explores the various B2B e-business models commonly used using in-depth interviews and case studies conducted with Australian agribusiness firms. There is an apparent need to rethink the types of e-business models to be adopted as businesses make their transition toward the electronic environment. This is particularly evident in the B2B market where e-business has seen a significant growth. From the analysis, 10 B2B e-business models were identified with seven of them regarded as commonly used by agribusiness firms. Furthermore, rationales on the adoption of these models were also discussed and comparisons were made based on organisational size, industry sector and the current state of e-business model adoption.

Introduction

The growing importance of e-business has resulted in an increasing number of organisations conducting their business activities in the electronic environment (Kalakota & Robinson 1999). The uptake of e-

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business has been particularly significant in business-to-business (B2B) markets (Barnes-Vieyra & Claycomb 2001) to the extent that approximately US$105 trillion worth of sales transactions will be generated worldwide by the year 2005 (Gartner Group 2004). Although the emergence of e-business requires changes to existing business models to reflect the changing new environment (Barnes & Hunt 2001), organisations are faced with a wide range of e-business models, many of which are not well understood by potential users (Rappa 2001). The emergence of e-business and the resulting lack of empirical research into the types of models available for conducting B2B e-commerce are the key issues addressed in this paper. This phenomenon is particularly evident in the Australian agribusiness industry (NOIE 2001).

Agribusinesses worldwide have increasingly been involved in B2B e-commerce and have capitalised the many benefits of e-business to improve the marketing of their products (Shapiro & Varian 1999; Allen Consulting Group 2000). The Australian agribusiness industry consists of a large number of small enterprises, many of which are supportive of the adoption of e-commerce techniques (The Australian Electronic Business Network 1998). The industry has a high level of reliance on accurate and timely information (such as weather data and stock information) and large distances between producers and customers, making this industry conducive to the benefit of e-business (Allen Consulting Group 2000). Hence, this paper will address the question 'What e-business models are commonly used for conducting B2B e-commerce in the Australian agribusiness industry? Why?'

Literature Review

An e-business model refers to a structure that increases the value propositions to customers as compared to traditional business models and to provide guidance for organisations to conduct their business activities in the e-business environment on a sustainable basis (Hardaker & Graham 2001). Research into B2B e-business models has only just begun to emerge (Osterwalder, Lagha & Pigneur 2002), whereas the current literature has mainly focused on the details and development (Wise & Morrison 2000; Rappa 2001) and does not adequately address the many complexities facing contemporary businesses including agribusiness firms.

Whilst, research in B2B e-business models has examined different classifications with the aim of addressing the difficulty of consistently categorising e-business models (Pigneur n.d.; Timmers 1999), no single unique classification system for the types of B2B e-business models has been developed (Rappa 2001; Timmers 1999). However, with due consideration to the different foci for classification of models in the literature, various B2B e-business models can be classified into the following four generic categories; merchant models, manufacturer models, buy-side model and brokerage models (Rappa 2001; Timmers 1999). The key factor differentiating these four categories of models is their functional characteristics where some of these models may be either supplier or buyer centric while others take on the function of a middleman. Since the roles and functions of these models differ, businesses may develop and implement these models for a specific situation or environment appropriate to their respective needs and goals. Based on these four categories, the literature has identified 10 specific e-business models as being used for conducting B2B e-commerce.

Merchant models. Merchant models allow traditional wholesalers to sell their goods and services via the internet based on list prices or through auctions (Hardaker & Graham 2001; Afuah & Tucci 2000). These models are initiated by wholesalers and usually evolve from a traditional "bricks-and-mortar" storefront that seeks to establish a new distribution or marketing channel via the internet. The merchant model most

relevant to B2B e-commerce is the online storefront model which is usually operated by wholesalers and retailers over the internet and allows the provision of updated information on products and services while having the ability to instigate immediate business transactions (Rappa 2001; Timmers 1998). In addition, this model also provides customer support and includes the marketing of products and services that are being offered with minimal costs incurred in sales and promotion (Lawrence et al. 2000; Timmer1998).

The manufacturer model. The manufacturer model permits manufacturers to reach buyers directly through the internet, hence eliminating middlemen and shortening the distribution channel. This results in improved efficiency, better customer service, a better understanding of customers' (business buyers) preferences and the ability to reach a larger customer base (Afuah & Tucci 2000; Rappa 2001). Furthermore, this model is supplier centric in nature and involves a major supplier providing its products or services to potential buyers (usually large in size) via the internet (Chan 2000).

However, this model has the potential for creating conflicts within a manufacturer's supply chain because buyers can bypass the middlemen to conduct business activities directly with the manufacturer (Afuah & Tucci 2000; Rappa 2001). This action causes disintermediation, where the service and support from middlemen is no longer required.

The buy-side model. A buy-side model is buyer centric in nature and it refers to a major buyer seeking products or services from potential suppliers (usually large in size) via the internet (Chan 2000; Kippola 2000). This model encourages potential suppliers to initiate business relationships or transactions by approaching the buyer in the hope of providing them with the required products or services (Chan 2000). In addition, this model has not only enabled buyers to reduce their costs with the ability to view the list of products or services being offered to them, but has also enhanced customer relationship management through the acquisition of prompt replies or responses from suppliers (Chan 2000).

Brokerage models. Brokerage models refer to central hubs that bring together buyers and sellers for transactions, where each is charged a fee for each transaction completed (Rappa 2001; Hardaker & Graham 2001). Brokerage models involved in B2B e-commerce are the e-speculator model, the procurement portal model (buyer aggregator), the specialist originator model, the distributor model (distribution portal), the sell-side asset exchange model, the mega-exchange model (independent marketplace) and the solution provider model.

There are three models (e-speculator, procurement portal and specialist originator) identified as being buyer centric in nature, which are inclined towards buyers in the brokerage models classification. First, the e-speculator model enables organisations to gain real-time information that can be transferred into a competitive advantage among a large group of buyers (Wise & Morrison 2000). This model seeks to capitalise on a large quantity of market information (such as pricing) where organisations will be required to gain more valuable and timely information than competitors (Wise & Morrison 2000). This competitive advantage can only be achieved by organisations that have substantial financial and risk management skills and who are also having the ability to maintain a close relationship with mega-exchanges (Wise & Morrison 2000).

Second, the procurement portal model aims at bringing a few major buyers together to purchase products

or services as a group from a set of potential suppliers via the internet (Timmers 1998; Perrott 2000). This model enables individual organisations (buyer) to gain economic benefits (such as bulk discounts) that are traditionally received by organisations that make purchases in volume (Chan 2000; Rappa 2001).

Last, the specialist originator model seeks to aggregate large order requests of complex products to be executed in exchanges (Wise & Morrison 2000). This model requires organisations to have a good understanding of issues related to customer decision making and to be committed to providing real-time support for online customers (Wise & Morrison 2000). Furthermore, decision support software is also commonly used to assist in enhancing the success of this model (Wise & Morrison 2000).

In contrast, the distributor and sell-side asset exchange models are supplier centric in nature and are focused on achieving supplier's benefits in brokerage models. The distributor model seeks to collate a few major suppliers who then sell their products or services as a group to a set of potential buyers via the internet (Chan 2000). This model allows organisations (suppliers) to greatly decrease the cost of sales through more efficient order processing and tracking of order changes (Rappa 2001; Chan 2000). In addition, this model is also attractive to buyers as it allows them to make several purchases from a group of suppliers that offer a range of related products or services that these buyers intend to acquire (Chan 2000).

The sell-side asset exchange model requires strong relationships within the supplier community as this model allows the trading, swapping and reselling of orders among a closed group of suppliers (Wise & Morrison 2000). This model requires organisations to develop and maintain strong relationships with the supplier community as the success of this model relies on the ability to swap and resell orders efficiently within the group of suppliers (Wise & Morrison 2000).

Finally, the two remaining models (mega-exchange and solution provider) are regarded as having a neutral bias between buyers and suppliers in the brokerage model. The mega-exchange model acts as a central trading hub that facilitates transactions between buyers and suppliers (Wise & Morrison 2000; Chan 2000; Hardaker & Graham 2001). This model is usually run by third-party market makers where it gathers buyers and suppliers to enable efficient trading between them (Wise & Morrison 2000; Hardaker & Graham 2001).

The solution provider model operates differently from open exchanges with the aim of embedding unique and valuable services to the product sales (Wise & Morrison 2000). This model enables organisations to leverage their distinctive expertise in specific areas and provides the opportunity to capture niche markets that have regarded value added services as being more important than price in the buying decision (Wise & Morrison 2000).

In brief, there are many models organisations can use to conduct B2B e-commerce in the agribusiness industry. These models can be grouped into four categories with 10 specific B2B e-business models being discussed in relation to their respective characteristics. Due to the diversity of models available, close examination of each model's characteristics as well as analysis of specific organisations' characteristics is necessary to make an optimal choice.

Methodology

This research was exploratory and conducted in two stages. Stage one involved six in-depth interviews with e-business experts and agribusiness professionals from both the private and the public sector. These interviewees were regarded as having the required knowledge, expertise and experiences in the fields of e-business and agribusiness, to share their experiences, opinions and attitudes to address the key issues. The selection of six interviewees was based on convenience judgement sampling, where interviewees were chosen through personal contacts or references from peers or colleagues (Patton 1990; Malhotra 1996). During this stage of the research, e-business models identified in the literature were investigated for their appropriateness and the potential use to conduct B2B e-commerce in the Australian agribusiness industry. The interviews conducted lasted approximately 45 minutes each and were semi-structured in nature so that the discussion was flexible and informal, thus allowing the interviewer to explore and gain an in-depth understanding of the key issues.

Case study research was then used to assist in confirming or disconfirming the e-business models identified in the literature and the in-depth interviews (Yin 1994). Six cases across the grain and cotton sectors (both large and small medium enterprises) within the agribusiness industry with organisations that were either intending to conduct, or who were currently conducting, B2B e-commerce were selected judgementally. In each case, two interviews were conducted with the managing director or equivalent and a middle level manager or operational manager. These interviews were semi-structured to provide a greater sensitivity to misunderstanding by respondents and also to reveal information about feelings and emotions regarding different subjects such as why a particular e-business model was used (Neuman 1994). The duration of each of the in-depth personal (face-to-face) interviews lasted approximately 1 hour.

In view of the potential for confusion about the various B2B e-business models used in this research, all interviewees were provided with clear written definitions for the 10 models, regardless of their individual categories. Interviewees were also asked for their opinion about each model rather than about the categories into which the models were grouped. Furthermore, a standardised interview protocol was developed and used throughout each of the two stages in order to ensure that all relevant issues were addressed and understood by interviewees.

Results

Based on the results of the in-depth interviews, two key areas were identified. First, five e-business models (the buy-side model, the e-speculator model, the solution provider model, the sell-side asset exchange model and the specialist originator model) could possibly be removed from the list of models to be investigated in the second stage of this research, as they were mentioned by two of the depth interview respondents. However, the full list of all 10 e-business models from the literature will be used as the basis for the next stage of the research where comparison could be made with findings from the in-depth interviews. Second, the identification of two specific industry sectors (grain and cotton) within the agribusiness industry and the size of the organisation (large enterprise and SME) were also explored where further investigation in stage two of the research could be carried out to determine the level of e-business model knowledge and the types of models appropriate for the individual sector and organisational size.

The findings in the second stage of this research supported the 10 e-business models identified in the literature as being used for conducting B2B e-commerce. However, only seven of the 10 models were regarded as commonly used in the agribusiness industry (see Table 1). The results suggested that respondents from the cotton sector had a greater knowledge of the types of e-business models for

conducting B2B e-commerce in the agribusiness industry than those in the grain sector. This could be attributed to the traditionally high levels of innovation and adaptability of information technology by organisations in the cotton sector (Cotton Australia n.d.). A respondent supported this by commenting that "The cotton industry has always been very active in taking up technologies. That's why we are very concerned with issues related to e-business". However, there were no noticeable differences in knowledge of e-business models by organisational size. This could perhaps be explained by the fact that both large enterprises and SMEs were actively involved in the conduct of e-business activities thus resulting in a relatively similar opinion on the use of e-business models.

On review of the types of e-business models (as shown in table 1) used for conducting B2B e-commerce, it was revealed that the procurement portal was the most frequently mentioned e-business model. The findings suggested that six other e-business models were also frequently mentioned; namely the mega-exchange model, the buy-side model, the manufacturer model, the distribution portal model, the e-speculator model and the online storefront model.

Table 1: Types of e-business models identified as currently being used for conducting B2B e-commerce in Australian agribusiness industry

	Large enterprises						SMEs						
Types of e-business models	Case A#		Case C#		Case D^		Case B^		Case E#		Case F^		Total
Brokerage model	A1	A2	C1	C2	D1	D2	B1	B2	E1	E2	F1	F2	
Procurement portal / Buyer aggregator*	ü	ü	ü	ü		ü	ü	ü	ü	ü	ü	ü	11
Mega-exchange / Independent marketplace*		ü	ü	ü	ü	ü	ü	ü	ü	ü	ü		10
Distribution portal / Distributor*	ü		ü	ü	ü		ü			ü		ü	7
E-speculator*	ü	ü		ü	ü		ü	ü	ü				7
Specialist originator					ü		ü	ü					3
Solution provider				ü			ü	ü					3
Sell-side asset exchange	ü					ü							2
Buy-side model*	ü	ü	ü		ü	ü		ü	ü	ü	ü		9
Manufacturer model*		ü	ü		ü	ü		ü	ü		ü	ü	8
Merchant model													
Online storefront*		ü		ü		ü	ü		ü		ü		6
Total	5	6	5	6	6	6	7	7	6	4	5	3	

Note: a tick (ü) in each column represents the e-business model mentioned.

Note: cases A, B, C and D had adopted e-business model while cases E and F are intending to adopt e-business model.

Cases from the grain sector.

^ Cases from the cotton sector.

* Models commonly used in the agribusiness industry.

Source: Analysis of case study data

In contrast, the specialist originator, solution provider and sell-side asset exchange models were regarded by the respondents as being least likely to be used for conducting B2B e-commerce in the agribusiness industry in Australia. Respondents suggested that these three e-business models were complicated in nature and their complexities made them inappropriate for most of the agribusiness industry, which was relatively new to the e-business concept.

Eleven of the 12 respondents agreed that the procurement portal model was the most commonly used e-business model in the agribusiness industry. Respondents suggested that the adoption of the procurement portal model was beneficial to agribusiness organisations as it increased bargaining power and aided cost reduction and could also provide convenience to the buyers to make bulk purchases as a group. Some respondents believed that this model was common among buyers in the agribusiness industry, which was mainly dominated by a few large buyers. "This model (procurement portal) is commonly seen in the agribusiness industry. It can help to improve buyers' purchasing power" (B2). Furthermore, buyers that were smaller in size could also use this model to increase their bargaining power with consolidated purchases.

The second most frequently mentioned e-business model was the mega-exchange model. Ten of the 12 respondents regarded the mega-exchange model commonly used for conducting B2B e-commerce in the agribusiness industry because of its ability to serve as a central hub for organisations to conduct business activities among themselves in a convenient and hassle free manner. In addition, this model was usually maintained by a third-party thus reducing any maintenance cost. "This model (mega-exchange) is very convenient and is commonly seen not only in this industry but also in other industries too" (D2).

Nine of the 12 respondents indicated that the buy-side model was commonly used to conduct B2B e-commerce in the agribusiness industry. This model was common in large enterprises that conduct mainly purchasing activities where they could benefit with purchases from a group of selected potential suppliers, thus giving them more choices to choose from and the ability to bargain at a lower price. "From what I know, this model (buy-side) will not only attract a group of suppliers, but could also benefit from having greater buyer power" (E1).

The manufacturer model was supported by eight of the 12 respondents as commonly used in the agribusiness industry. This model appeared to be favoured by large suppliers in the agribusiness industry where they focused on supplying products or services to their major buyers, in view of integrating their business processes to improve the business relationships with these buyers. "We've adopted the manufacturer model and I think it's suitable for our business. We're able to meet their (major buyers) demands and improve our relationship" (D2).

The distribution portal model was another e-business model regarded as being used to conduct B2B e-

commerce in the agribusiness industry. Seven of the 12 respondents mentioned that this model could enable the establishment of suppliers' networks and helped in servicing a wider group of potential buyers where it could potentially enhanced their bargaining power and controlling the products supplied to the buyers. "In our industry (agribusiness), some companies have adopted this model (distribution portal) because it will allow them to have access to more buyers" (C1).

Seven respondents suggested that the e-speculator model was used for conducting B2B e-commerce in the agribusiness industry and buyers particularly supported this model because of its potential benefits to them. This model could enhance buyers' relationships with the timely exchange of market information that was regarded as crucial to many buyers in the agribusiness industry. "We're engaged in this model (e-speculator) and it's particularly beneficial to buyers like us. It allows us (buyers) to share timely information" (A1).

The online storefront model was nominated by six respondents based on its capability to instigate immediate business transactions, the convenience for potential buyers to obtain updated information and creating greater opportunities for organisations to conduct their business activities in an electronic environment were regarded as major attractions to agribusinesses. "This model (online storefront) is adopted by some companies that I know. It provides them the convenience of acquiring updated information and business transactions can be closed almost immediately" (D2). Furthermore, this model was also capable of linking promotional materials while creating greater opportunities for organisations to conduct their business activities.

The findings from the second stage of the research also suggested that there were differing attitudes for three of the 10 e-business models based on organisational size, industry sector and current state of e-business model adoption. Respondents in the cotton sector and large enterprise agreed that the manufacturer model was used for conducting B2B e-commerce in their sector because this model was particularly appropriate for large organisations (suppliers), which dominate this sector. "This model (manufacturer) is common in large companies. They need not go out and search for buyers, but rather buyers will go to them" (B2). "Only big companies (suppliers) are capable of using this model (manufacturer) because they're the ones that have the resources to satisfy demands from those large buyers" (D1). In contrast, respondents in the grain sector revealed that their sector mainly consisted of smaller suppliers and they did not find the nature of this model suitable. "I reckon that this model (manufacturer) is only applicable for major suppliers and I don't think it's commonly used" (E2).

Respondents in organisations that had already adopted an e-business model agreed that the distribution portal model and the e-speculator model were used for conducting B2B e-commerce in their industry because they acknowledged the benefits and competitive advantages gained by these models and also the ability of these models to assist in building relationships regardless of the size of the organisations and the sector (cotton and grain) they were servicing. "I think some of our partners are using this model (distribution portal). They've gained greater bargaining power (supplier) by working as a group" (A1). "We're engaged in this model (e-speculator) and it's particularly beneficial to buyers like us. It allows us (buyers) to share timely information" (B2).

Conversely, respondents in organisations that were still deciding which model to adopt argued that these two e-business models were not used in their businesses and this could be a result of a lack of awareness in

these models. "This model (distribution portal) may be available out there, but I'm not aware of it. Moreover, this model doesn't suit our company" (E1). "I haven't seen any companies using this model in the agribusiness industry. In this industry, we don't usually exchange information" (D2).

In comparing the results of the case studies with the findings from the in-depth interviews (see Table 2), three e-business models were confirmed as not commonly used for conducting B2B e-commerce in the Australian agribusiness industry, namely the sell-side asset exchange model, the solution provider model and the specialist originator model.

Table 2: Comparison of the results between the research findings and the literature

Types of e-business models	Literature	Research findings	Remarks
Buy-side model	Only limited empirical investigation shows that it is used to conduct B2B e-commerce.	This model is commonly used to conduct B2B e-commerce in the agribusiness industry.	This model is common among large enterprises in the agribusiness industry and is able to attract a list of potential suppliers and also allow them to bargain for a lower price.
Sell-side asset exchange model (Brokerage model)	These three models are used for conducting B2B e-commerce.	Only one respondent each in cases A and D suggested that this model is used to conduct B2B e-commerce in the agribusiness industry.	This model is not commonly used for conducting B2B e-commerce in the agribusiness industry because of its complexity that requires much coordination between parties.
Solution provider model (Brokerage model)		Cases A, C, D and E suggested that these two models are not used for conducting B2B e-commerce in the agribusiness industry.	These two models are too complicated and there is also a lack of awareness by the respondents since the e-business concept is relatively new to the agribusiness industry.
Specialist originator model (Brokerage model)			
Online storefront model (Merchant model)	These six models are used to conduct B2B e-commerce.	These models are commonly used to conduct B2B e-commerce in the agribusiness industry.	These models were noted as commonly used to conduct B2B e-commerce in the agribusiness industry regardless of organisational size.
Manufacturer model			

Distribution portal model (Brokerage model)			
E-speculator model (Brokerage model)			
Mega-exchange model (Brokerage model)			
Procurement portal model (Brokerage model)			

Source: Developed for this research

The findings from this research also produced two major results about the use of e-business models for conducting B2B e-commerce in the agribusiness industry. First, the findings have indicated three B2B e-business models; specialist originator, solution provider (supported by cases A, C, D and E) and sell-side asset exchange (supported by all cases) are not commonly used by agribusiness organisations. This can be explained by the respondents' acknowledgement of the complexity of these three e-business models that required a high level of coordination and trust between parties (among or between buyers and suppliers). In addition, e-business was seen as a relatively new concept in the agribusiness industry and consequently there was a lack of awareness of these e-business models by the respondents. This confirms the literature that not all the types of B2B e-business models identified in the literature are commonly used by agribusiness organisations.

Second, the literature highlighted limited empirical investigation of the use of the buy-side model. This research revealed that this model was the third most frequently mentioned e-business model in the agribusiness industry. Thus, suggesting that the buy-side model could be a common model used for conducting B2B e-commerce in the agribusiness industry. Cases A and E provided good examples, where they suggested that this model was common in large enterprises and could provide buyers with benefits such as the attraction of a list of potential suppliers and the ability to bargain at a lower price. However, a more conclusive study will be required to confirm if the buy-side model is in fact a commonly used model in the agribusiness industry.

Conclusions and Implications

In conclusion, this paper has explored the various e-business models used for conducting B2B e-commerce in the Australian agribusiness industry. Based on the literature and the findings, a list of e-business models commonly used for conducting B2B e-commerce in the Australian agribusiness industry was developed. In addition, further insight into the rationale of those models either being used (such as the procurement portal and mega-exchange models) or not being used (such as the sell-side asset exchange and solution

provider models) to conduct B2B e-commerce in the agribusiness industry was also highlighted. The list of models developed has contributed to a new understanding of the models commonly used and has implications for managers in their choice of models. Managers could identify the relevance of these models and determine their relative suitability to their respective organisations. This study was exploratory in nature and requires further conclusive research to be conducted to improve generalisability. Such conclusive research will enable each of these models to be quantified. The list of models proposed in this study can also be extended to other industries for further investigation.

References

Afuah, A. and Tucci, C. L. 2000, Internet Business Models and Strategies: Text and Cases, McGraw-Hill, USA.

Allen Consulting Group 2000, E-commerce beyond 2000, The Commonwealth Department of Communications, Information Technology and the Arts, Canberra, Australia.

Barnes, S. and Hunt, B. 2001, E-commerce & V-business: Business Models for Global Success, Butterworth-Heinemann, Oxford, Great Britain.

Barnes-Vieyra, P. and Claycomb, C. 2001, 'Business-to-Business E-Commerce: Models and Managerial Decisions', Business Horizons, vol. 44, no. 3, pp. 13-22.

Chan, W. H. (ed.) 2000, 'B2B Marketplace: Five Models', Business Next, December, pp. 26-32.

Cotton Australia (n.d.), Research and Technology, viewed 18 August 2004, <http://www.cottonaustralia.com.au/LI_research.html>.

Gartner Group 2004, B2B Leads and B2B Marketplace at Portal Site Entering into the $105 Trillion B2B Market, viewed 20 August 2004, <http://www.prweb.com/releases/2004/6/prwebxml133591.php>.

Hardaker, G. and Graham, G. 2001, Wired Marketing: Energizing Business for e-Commerce, John Wiley & Sons, Ltd, England.

Kalakota, R. and Robinson, M. 1999, e-Business: Roadmap for Success, Addison-Wesley Longman, Inc, Massachusetts, USA.

Kippola, T. 2000, "Under the Buzz" - Insights into B2B Net Markets, viewed 18 August 2004, <http://www.tcg-advisors.com/Library/utb/ub_vol2.pdf>.

Lawrence, E, Corbitt, B., Tidwell, A., Fisher, J. and Lawrence, J. R. 2000, Internet Commerce: Digital Models for Business, 2nd edn, John Wiley & Sons Australia, Ltd, Brisbane, Australia.

Malhotra, N.K. 1996, Marketing Research: An Applied Orientation, 2nd edn, Prentice-Hall, Inc, USA.

Neuman, W.L. 1994, Social Research Methods: Qualitative and Quantitative Approaches, Allyn and Bacon, Boston, USA.

NOIE 2001, B2B E-Commerce: Capturing Value Online, Canberra, Australia.

Osterwalder, A., Lagha, S.B. and Pigneur, Y. 2002, An Ontology for developing e-Business Models, viewed 20 August 2004, <http://inforge.unil.ch/aosterwa/Documents/eBusinessModels/Publications/cameraready_DSIage2002.pdf>.

Patton, M.Q. 1990, Qualitative Evaluation and Research Methods, Sage Publications, Newbury Park, California, USA.

Perrott, B. E. 2000, 'Towards an Internet Marketing Effectiveness Model', Faculty of Business, Working Paper Series no. 4, University of Technology, Sydney.

Pigneur, Y. (n.d.), The E-business Model Handbook, viewed 18 August 2004, <http://inforge.unil.ch/yp/Pub/00-ebmh.pdf>.

Rappa, M. 2001, Business Models on the Web, viewed 18 August 2004, <http://ecommerce.ncsu.edu/topics/models/models.html>.

Shapiro, C. and Varian, H. 1999, Information Rules, Harvard Business School Press, Boston.

Strauss, J. and Frost, R. 2001, E-Marketing, 2nd edn, Prentice Hall, New Jersey, USA.

The Australian Electronic Business Network 1998, Small business attitudes to electronic commerce: taking the plunge, The Department of Communications, Information Technology and The Arts, Australia.

Timmers, P. 1998, Business Models for Electronic Markets, viewed 18 August 2004, <http://www.electronicmarkets.org/modules/pub/view.php/electronicmarkets-183>.

Timmers, P. 1999, Electronic Commerce: Strategies and Models for Business-to-Business Trading, John Wiley & Sons, Ltd, Singapore.

Wise, R. and Morrison, D. 2000, "Beyond the Exchange: The Future of B2B," Harvard Business Review, no. 201, November/December, pp. 86-96.

Yin, R. K. 1994, Case Study Research: Design and Methods, 2nd edn, Sage Publications, USA.

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