

Assessing The Performance Of An Electronic Marketplace: A Conceptual Model And Case Study

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Abstract

Theories of inter-organisational co-ordination propose that information processing capabilities (structure, process and technology) must be aligned with information processing needs (environmental, partnership and task uncertainty), and that the fit between both is a strong determinant of performance. Electronic marketplaces dominate new developments in electronic commerce. While traditional models predominately deal with one-to-one relationships, electronic marketplaces are mainly characterised as being one-to-many and many-to-many in nature. Such developments have meant performance is based on more than just the fit between information processing needs and information processing capabilities. A conceptual model is developed. This argues that the performance of an electronic marketplace is dependent on not only the fit between (a) information processing needs / information processing capabilities but also between the (b) value added / value demanded (c) governance / investment and (d) trust / security based mechanisms constructs. This paper will utilise a case studying the cotton industry to empirically test this model.

Keywords

Inter organisational systems, electronic marketplaces, performance

1. Introduction

The electronic markets hypothesis purports that organisations will migrate from a hierarchy to a market mechanism in order to trade goods due to the economic benefits of this approach (Malone *et al* 1987). However, this has not happened. Researchers have noted that in recent times the formation of electronic marketplaces has declined considerably and that failure rates are high (Klueber *et al* 2001). A major factor for this is that organisations have difficulty in evaluating the

performance of the marketplace (Klueber *et al* 2001). A comprehensive, agreed upon definition of what constitutes performance does not appear in the literature but common to all definitions are phenomenon such as revenue growth, profitability, improved efficiency and improved customer relationships (Morrison 1997). Traditionally, accounting measures have been used to measure performance (Bharadwaj *et al* 1999). However, researchers have noted that financial mechanisms are limited due to the fact that they only represent past performance. Such limitations have led to the development of a large number of strategic measuring tools such as the balanced scorecard which assumes that there is a cause and effect relationship between measures of organisational learning and growth, measures of internal business processes, measures of the customer perspective and financial measures. A major criticism of this approach is that there is no casual link as assumed by the balanced scorecard but in fact a logical link. Therefore, the possibility exists that the balanced scorecard may make invalid assumptions leading to the anticipation of performance indicators which are faulty and result in sub-optimal performance (Norreklit 1999). In the IS literature, DeLone and McLean (1992) propose a model for understanding IS success which is composed of six interdependent variables; system quality, information quality, use, user satisfaction, individual impact and organisational impact. Yet, as with the balanced scorecard, an inferred casual relationship is noted between the six factors. Therefore, the same criticisms may be levied at this model as the balanced scorecard; the two primary drivers, systems quality and information quality are inadequate to explain the performance of an electronic marketplace.

Performance in the context of an electronic marketplace relates to stakeholder satisfaction as this ultimately decides whether an electronic marketplace is successful or not (Soh and Markus 2002). Stakeholders would include any party with a vested interest in the electronic marketplace (Klueber *et al* 2001). Financial performance, improved processing and levels of innovation and growth in the marketplace may all be deemed to be measures of marketplace performance as they affect stakeholder satisfaction. However defining marketplace performance is only the starting point in relation to assessing the performance of the marketplace. The next section will outline the factors which influence the performance of an electronic marketplace.

2. Indicators of Performance in Electronic Marketplaces

Researchers have argued that electronic marketplaces have evolved from inter-organisational systems (Applegate 1995, Reimer 1996). Therefore, a useful starting point is to examine existing models for assessing the performance of interorganisational systems (IOS's). Bensaou and Venkatraman (1992) outlined a model for explaining the performance of a dyadic IOS. They assert that the fit between two constructs, namely the information processing needs and information processing capabilities of a dyadic inter organisational system (IOS) is a strong determinant of performance. The key determinants of information processing needs are environmental, partnership and task uncertainty. The key determinants of information processing capabilities are structure, process and information technology (Bensaou and Venkatraman 1992). The better the fit between the two constructs, the better the performance of the dyadic IOS (Bensaou and Venkatraman 1992). This approach is operationalised by identifying a set of ideal type configurations of contextual and organisational elements that maximise fit. In the context of fit and ideal types, Soh and Markus (2002) explore the concept of strategic archetypes from the literature on strategic alignment where fit between a firm's strategy and its environment is believed to have positive implications for

performance. A strategic archetype is an ideal type, a frequently occurring, named grouping of firms with similar configurations of multiple attributes (Soh and Markus 2002). Where significant deviations from the archetype exists, poorer performance results (Soh and Markus 2002).

While researchers have argued that electronic marketplaces have evolved from inter-organisational systems, questions need to be asked about the suitability of Bensaou and Venkatramans (1992) model. Researchers noted that many differences exist between traditional dyadic IOS's and electronic marketplaces in the context of interaction patterns, control, networks, buyer/seller agreements, structures and electronic support (Senn 2000). The information processing perspective is only one facet which impacts the performance of an electronic marketplace. In this section, we evolve Bensaou and Venkatramans (1992) model, developing a more comprehensive model of performance (Figure 1). Performance affecting factors in addition to Bensaou and Venkatramans information processing view are summarised under the constructs of (a) Value Added / Value Demanded (b) Governance / Investment (c) Trust / Security Based Mechanisms.

2.1 Value Added / Value Demanded

Numerous researchers have documented the value added in an electronic marketplace in relation to the functions supported; aggregation, matching and integration (Soh and Markus 2002). Numerous combinations of these functions are possible with value added being dependent on the specific combination of these functions that maximise stakeholder satisfaction (Soh and Markus 2002). This leads to the development of the value demanded construct, the value demanded by a stakeholder from the marketplace. Kambil and Van Heck (1998) noted that in the context of Dutch flower auctions, the value demanded by stakeholders from various auctions differed. The marketplaces ability to improve market reach (Bakos 1998, Kerrigan *et al* 2001), the impact it has on pricing (Bakos 1998), its impact on operational costs (Bakos 1998), its ability to create industry best practices (Kerrigan *et al* 2001) and the inherent value of the content management solution (Raisch 2001) are all elements which impact the marketplaces ability to create value for the stakeholders involved. The industry structure (Cavaye and Cragg 1995, Grover and Ramanlal 1999) and an organisation's business strategy (Grover and Ramanlal 1999, Senn 2000) will impact the value which is demanded by a stakeholder involved in the marketplace. Following the logic of the "fit" argument, we propose that the fit between the value added and value demanded constructs will affect the performance of the marketplace.

2.2 Governance / Investment

Governance is critical in the context of an electronic marketplace as it gives parties "*the power to execute control*" (Grossman and Hart 1986). Two elements which impact the governance of an electronic marketplace are the ownership structure in place (Bakos and Nault 1997) and the element of risk in acquiring equity (Bakos and Nault 1997) and getting commitment on intangible assets such as expertise (Bharadwaj 2000) and know how (Teece 1998). Bakos and Nault (1997) argue that ownership is important because it affects the level of network specific assets which in turn determines the profitability and in some case the viability of electronic networks. The more that is invested in an electronic marketplace, the more likely it is to succeed and achieve critical mass together with liquidity (Bakos and Nault 1997). Two types of investment were noted in the literature; contractible and non-contractible/cooperation (Bakos and Nault 1997, Bharadwaj 2000). Firstly, in the context of contractible investment, Bakos and Nault (1997) state that network

participants make investment decisions based on the contractible payoffs they will receive under a given governance structure. Secondly, electronic marketplaces require substantial investment in specific assets such as information, expertise, training and human capital, investments that are non-contractible. Such non-contractible investments are crucial, and gaining the cooperation of parties to invest such resources is paramount to the success of the marketplace. We propose that the fit between the governance and investment constructs will affect the performance of the marketplace.

2.3 Trust / Security Based Mechanisms

Trust has been identified as a key factor for successful business relationships. Achieving trust in the vendor (Money *et al* 1998) and trust in the technology (Kim and Prabhakar 2000) is crucial in the context of achieving and maintaining trust in an electronic marketplace. Kim and Prabhakar (2000) noted that putting in place security mechanisms in the guise of guarantees can help to maintain and improve the level of trust a party feels about a given situation. Trust and security based mechanisms are safeguard protective measures that help to determine the level of firm trust in electronic marketplaces. Such protective measures include security technologies (Ratnasingham and Kumar 2000), legislation (Soh and Markus, 2002), third party assurance seals (Noteberg *et al* 2000) and online communities (Raisch 2001). We propose that the fit between the constructs of trust and security based mechanisms will affect the performance of the marketplace.

Therefore, upon evolving Bensaou and Venkatramans model on IOS performance and combining the individual elements which have been mentioned as influencing performance in an electronic marketplace, we propose a new model as shown in Figure 1 for describing the performance of an electronic marketplace.

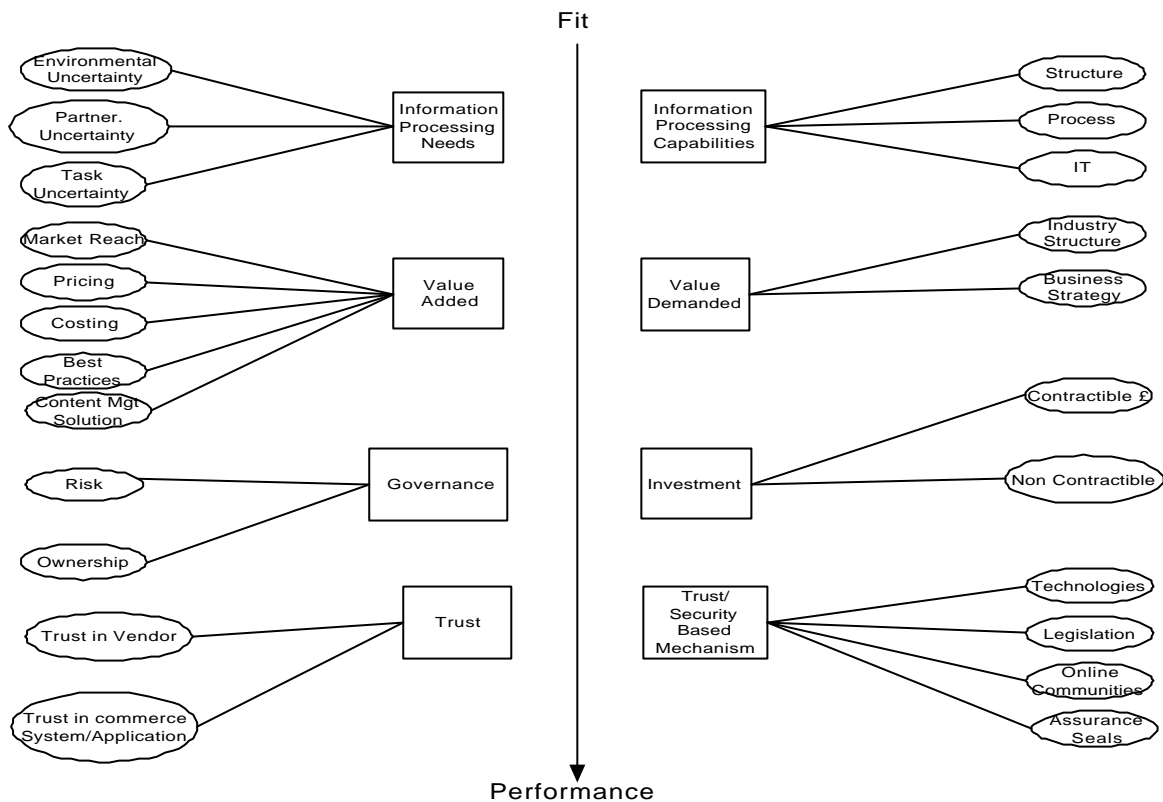


Figure 1. A conceptual model for assessing the performance of an electronic marketplace

3. Research Approach

The next step in the research process is to empirically test the model outlined in Figure 1. Marshall and Rossman (1989) indicate that when the state of knowledge in a field is at an early stage of investigation, a need exists for the research purpose to focus on 'discovery' and 'theory building',

The unit of analysis must also provide for sufficient breath and depth of data to be collected to allow the research objective to be adequately answered. Galliers (1992) states that for a theory building / theory testing approach, a case study is a valid research method. The single case study method is considered to be a potentially rich and valuable source of data, suited to exploring relationships between variables in their given context (Benbasat *et al* 1987) and is appropriate where it represents a critical case (Yin 1994). The subject of the case was chosen as it represents a critical case in the cotton industry. The data gathering technique used was a combination of semi-structured interviews and document analysis. Semi-structured interviews enhance the overall quality of the data gathered by allowing the researcher where necessary to clarify questions and responses and to explore new dimensions. Yin (1994) argues that documentation can be utilised to supplement and verify data from other sources supporting verbal accounts. Remenyi (1998) states that it is essential that a researcher uses multiple sources of evidence when conducting a single case study. Furthermore the use of multiple sources is considered to be a particularly strong tactic in ensuring the validity of research (Remenyi 1998).

4. Case Study Findings

Dealcotton launched in 2001, is an online international exchange for the cotton industry. Cotton is a commodity which is traded worldwide in locations as diverse as the United States, China, CIS, Australia and Uzbekistan. At its inception, the focus of the marketplace was on trading; to provide a forum where buyers and sellers of cotton could interact to trade cotton. An auction style model was adopted whereby the market would set the price for cotton. Today, Dealcotton no longer utilises the auction style model and focuses not only on trading, but on better access to and sharing of information that facilitates every kind of collaboration between buyers and sellers. The focus, in addition to trading, became the contract based integration of both internal and external documents between buyers and sellers.

Financial performance was the primary performance indicator identified in Dealcotton. However, non-financial measures such as improved processes, innovation and growth and improved customer satisfaction were also examined in the context of performance. The next section examines the fit between the four constructs outlined in the conceptual model as impacting performance, illustrated by our analysis of Dealcotton.

4.1 Information Processing Needs / Information Processing Capabilities

The cotton industry is one of the most uncertain industries in the world. It suffers from a great deal of price volatility due to environmental and partnership uncertainties in relation to demand and supply. A natural grown fibre that is highly dependent on weather and water conditions, the production environment is fraught with uncertainty and risk. Currently a vast surplus of cotton sits in inventory in the world market. New and old trading parties from diverse geographical locations are entering and leaving the cotton marketplace on a daily basis due to legal and financial issues and risks. This makes the task of trading cotton in an already complicated value chain much more uncertain. Operating in such a volatile environment means that accurate and timely information on all aspects of the global marketplace is crucial. When Dealcotton was launched, the structure put in place was an auction model whose aim was to provide all parties involved in trading cotton, through Dealcotton, with accurate and timely information. Initially, it was believed that this structure would have a positive impact on performance. However, feedback from the financial indicators proved that this had limited success as most parties involved in cotton trading on Dealcotton obtained price information externally from the Cotlook "A" index, a third party information bureau and the New York futures exchange. Consequently, this structure was abandoned in favour of a closed marketplace structure, whereby all trades were processed in a private corridor between the parties involved in a specific trade. This maximises the information available to parties on that specific task in relation to the party they were dealing with and environmental factors including, but not limited to price.

The value chain in the cotton industry is complex with gins, buyers, suppliers, warehousemen, banks, insurers and underwriters all having a role to play in cotton trading, therefore making the task of procuring cotton quite complex. Coupled with this complex and multi-partied value chain is the fact that cotton is traded worldwide with parties in various countries operating under different rules and applying different standards. Cotton is classified according to many grades and types by originating countries and by international merchants resulting in the possibility of huge disparities. One grade

and type may be contracted for, yet another grade and type may be shipped. Before procuring cotton it is crucial to have accurate and reliable information on its quality, either in the form of scientific measurements of the cotton once it becomes available, or according to predefined types and grades or according to samples. From its outset, Dealcotton put in place processes to ensure that cotton adheres to certain predefined standards. By utilising information technology, traders receive accurate up to date information on the quality and price of cotton. This has had the effect of increasing customer satisfaction therefore leading to an increase in the quantity of cotton traded on the marketplace.

4.2 Value Added / Value Demanded

The ability of the marketplace to extend market reach, to aid price discovery, to reduce transaction costs, to purport industry best practices and to improve process management through a content management solution all impact the value added by the marketplace. However, value added must be aligned with the value a participant demands from involvement. The industry structure and the strategy pursued by a participant will impact value demanded.

The value added through price discovery in Dealcotton was negligible given a low margin business with high risks and relatively widespread availability of price indicators. The key reasons for this is industry structure and the strategy pursued by participants in relation to obtaining information on prices. The industry structure notates that the price of cotton is usually determined by external mechanisms such as the Cotlook "A" index or the New York futures market. Therefore the price discovery element which was initially incorporated under the auction model structure had little impact on value added and was therefore abandoned in the short to medium term. Performance was not positively impacted by full price transparency.

Some of the key values demanded by participants are that their transaction costs should be decreased and post contract shipment transparency and information availability increased. In 2002, the management decided to adopt a strategy of utilising a workflow and document management solution to integrate all of the diverse functions of the value chain. Contract implementation, execution, transportation and insurance were all integrated into the content management solution. Traditionally, the value chain in cotton is notorious for the amount of paper utilised and the lack of standardisation. Participants demanded that generic templates be utilised in order to reduce transaction costs. By utilising the generic templates of the content management solution, the marketplace improves standardisation in the value chain, thereby reducing transaction costs. This lead to improved fit between the value added and value demanded constructs.

The cotton industry at a global level is notorious for its lack of best practices. Default of contracts, contract washouts (cash settlement to nullify a contract), piracy, and bribes are some of the less endearing elements of the industry both now and in the past. Many bodies exist such as the Liverpool Cotton Association and The American Cotton Shippers in an attempt to establish best practice and arbitrate cases brought by members that have agreed to trade according to self-regulated rules. Yet because of politics and the lack of consensus among the many groupings involved in cotton, industry best practices is something which is being strived for rather than exists internationally. Participants in Dealcotton demand an environment where they can trade cotton, divorced from the risks and politics that exist in the industry. Dealcotton is striving to establish best practice through their Internet based cotton trading platform so that financial (counterpart credit), settlement (timely and accurately delivered contracts) and quality risks can be better quantified and

managed. Thus, Dealcotton through providing real value to their members will meet the value demanded by participants for establishing industry standards and their demand for a neutral and safe trading environment, thereby improving fit between the value added and value demanded constructs. The correlation with performance is reaffirmed by a director of Dealcotton who states that *'By meeting peoples demands, by providing value added, that's when you start to make the real money'*.

4.3 Governance/Investment

When launched in 2001, the ownership structure in place was one where Dealcotton was 100% owned and governed by Dealcottononline, a venture capitalist styled organisation whose goal was to maximise their return on their investment. As this was a startup venture, the inherent risks were high. Initially, Dealcotton had limited success as it was 100% governed by venture capitalists with no input from the participants utilising the marketplace. In 2001, Dealcotton spoke to a number of parties about using the marketplace to trade cotton and got verbal commitment from many parties on using the marketplace. However, while many parties agreed to use Dealcotton to trade cotton, getting parties to actually use the marketplace was a more difficult task.

In an attempt to alleviate some of these problems and in order to improve the efficiency, effectiveness and long term financial performance of the marketplace a decision was taken in July 2002 to sell Dealcotton to a US-based company Cotton US. The major advantage of this was not only an injection of contractible capital but more importantly the knowledge and expertise of the new members who were experts in the cotton industry. The new investors/members could control between 20% and 45% of the equity in the marketplace, thereby having a contractible investment in the marketplace. They also possess the expertise, contacts and knowledge, key non-contractible variables to entice key participants in the cotton industry to invest and commit to the marketplace. In order to eliminate the risk of key personnel leaving, these people were tied to long term contracts. Retaining these is an invaluable investment for Dealcotton and greatly influences the governance structure of the marketplace through their knowledge, contacts and experiences of the intricacies of the cotton industry.

Initially, a key difficulty experienced by Dealcotton was getting participants to utilise the marketplace. In 2002 with the change in ownership structure, a new strategy was pursued to get the commitment of all participants. In the context of investment, those who are utilising the marketplace must take out a contractible financial stake in it and become involved in the governing of the marketplace. This has the effect of improving the fit between governance and investment. All participants must sign a cotton trade commitment agreement whereby participants must contract to trade a minimum number of bales of cotton through the marketplace. This "minimum commitment" is based on an average monthly trading commitment of a prespecified number of bales per month. This contractible commitment is given for a period of two years. In order to alleviate the problem of the lack of input key participants had in the governance structure, all investors in Dealcotton are given the opportunity to vote people onto the board of governors. *"It either works or it doesn't. However, you want to make sure that people have a true commitment, will get on board, buy shares in the marketplace and trade cotton"* stated one director.

4.4 Trust / Security Based Mechanisms

There are two elements to trust which need to be examined in the context of an electronic marketplace, trust in the vendor and trust in the application. The consensus among those involved in Dealcotton is that achieving trust in the vendor is crucial, and trust in the application is secondary. *"Its all about trust in the vendor, everything else is secondary"* argues the managing director. In order to achieve trust in the marketplace, Dealcotton utilises a number of security based mechanisms. A large part of the 2002 budget is being spent on attending conferences and visiting various parties worldwide in order to increase referrals to the marketplace. By emphasising the value added element of the marketplace, it has led to increased participant satisfaction and further word of mouth referrals. Dealcotton utilises the latest security technologies in their marketplace in order to achieve / maintain the level of trust in the vendor and the application. Dealcotton's goal is to establish an online community for the cotton industry, with achievement of trust in the vendor being paramount to this strategy. By offering a solution which is fully transparent in relation to the information provided on all participants, this should help to increase the level of trust in the parties trading on the marketplace. Similarly, in the context of legislation, Dealcotton does not set down legislation but its members will adhere to the legislation of the countries in which they are trading. Getting universal approval on legislation in relation to the trading of cotton is impossible with geographical locations as diverse as the United States and Uzbekistan involved in the cotton industry. At present, Dealcotton does not officially utilise any third party assurance seals. The reason for this is that many of its members do not necessarily believe that there is any real value at present in being associated with the Liverpool Cotton Association and the American Cotton Shippers for example. As participant satisfaction is paramount, Dealcotton believes that forcing its members into any affiliation with which they are not happy will have an adverse affect on the marketplaces performance. *"Dealcotton will do whatever its members want it to do"*, states the managing director.

5. Conclusion

The authors outlined and empirically tested a conceptual model for assessing the performance of an electronic marketplace. The fit between the four constructs (a) Information processing needs / Information processing capabilities (b) Value added / Value demanded (c) Governance / Investment (d) Trust / Security based mechanisms was examined in the context of their impact on performance.

A notable improvement was identified in the fit between the information processing needs / information processing capabilities constructs in Dealcotton since its inception. From the outset, Dealcotton put in place structures and processes and utilised technology for the efficient delivery of information to participants in the marketplace. These elements are continuously changing and evolving in order to maximise the fit between the constructs. For example, the fit between the information processing needs and capabilities was improved with the abandonment of the auction structure which provided little information of any value to the participants in favour of a third party marketplace which utilised technology for the efficient provision of accurate and timely information to participants in the context of trades which were directly relevant to their business. This had the effect of minimising the uncertainties caused by environmental, task and partnership uncertainties. Fit was therefore improved between the two constructs.

The next aspect of our model is the fit between the value added and value demanded constructs. Initially, Dealcotton pursued an auction model, providing what was deemed value added to their members through price discovery. However, this was not aligned with the value demanded construct, as full price transparency already exists in the cotton industry. Participants did not demand such transparency from their marketplace. Therefore the fit between the value added / value demanded construct was not aligned. A change in business strategy brought about an improvement in fit with the abandonment of such a model in favour of a private third party marketplace. Participants in the marketplace demanded reduced transaction costs and the provision of industry best practices. Dealcotton met these demands in relation to the value added services it provides to its members. It pursued strategies and implemented solutions which improved the fit between the value added of the marketplace and the value demanded by participants who utilised the marketplace.

Next we explored the fit between the governance and investment constructs. Initially, Dealcotton got verbal commitments from various parties to trade on their marketplace. Actually getting people to trade proved much more difficult. Therefore, in 2002, parties utilising the marketplace were given an opportunity to invest in the marketplace and gave a contractible commitment to utilise the marketplace to trade cotton. Key personnel who possessed the necessary knowledge and expertise, crucial in the context of governing the marketplace were tied to long term contracts and participants were given the opportunity to vote members onto the board. All of these initiatives had the effect of improving the fit between the governance and investment constructs.

The final element of our model is trust. For Dealcotton, achieving and maintaining trust in a vendor is deemed critical, trust in the application secondary. Presently, word of mouth referrals and security technologies are the predominant mechanisms utilised to achieve and maintain trust in the marketplace. Such mechanisms have the effect of improving the level of trust which exists in the marketplace.

The improved fit between the constructs is reflected in the financial performance of the marketplace which has improved dramatically between 2001 and 2002. As stated by the managing director, "you have to start with something to generate cash". Secondary indicators of performance such as customer satisfaction, continued innovation and growth and improved process integration have also seen notable improvements. While this case is an initial step in testing the model, this case may be viewed as a test case, as one possible ideal type in the context of identifying archetypes; multivariate alignment between constructs which maximise the performance of electronic marketplaces. Yet no singular path to maximising fit exists and therefore further research is necessary in order to additionally test and validate the model and to identify other ideal types.

References

- Applegate, L (1995) 'Managing in an Information Age'; *Harvard Business School Publishing*
- Bakos, Y and Nault B (1997) 'Ownership and Investment in Electronic Networks', *Information Systems Research*, Volume 8, Number 4, December
- Bakos, Y (1998) 'Towards Friction-Free Markets: The Emerging Role of Electronic Marketplaces on the Internet,' *Communications of the ACM*, Volume 41, No. 8

- Benbasat, I., Goldstein, D.K., and Mead, M (1987) 'The Case Research Strategy in Studies of *MIS Quarterly*, 369-386
- Bensaou M and Venkatraman N, (1992) 'Inter-organisational relationships and Information Technology: A Conceptual Synthesis and a Research Framework'; *Published in the Proceedings of the Second European on Information Systems*, Nijenrode University Press.
- Bharadwaj, A. (2000) 'A Resource-Based Perspective on Information Technology Capability and Firm Performance: An Empirical Investigation', *MIS Quarterly*, vol 24, no 1, pp 169 – 196
- Cavaye, A and Cragg P(1995) 'Factors contributing to the success of customer oriented interorganisational systems', *Journal of Strategic Information Systems*, 4(1) 13-30
- Dai, Q and Kauffman, R (2002) 'Business Models for Internet-Based B2B Electronic Markets' *International Journal of Electronic Commerce*, Vol 6, no 4, pp 41-72
- Galliers, R.D (1992) *Choosing Information Systems Research Approaches*, in *Information Systems Research: Issues, Methods and Practical Guidelines*, Galliers, R.D. (Ed.) Alfred Waller Ltd., Henley-on-Thames, 144-162
- Grossman S and Hart, O (1986). 'The Costs and Benefits of ownership: A Theory of Vertical and Lateral Integration', *The Journal of Political Economy*, Volume 94, Issue 4,
- Grover Varun and Ramanlal P. (1999) 'Six Myths of Information and Markets: Information Technology Networks, Electronic Commerce and the Battle for Consumer Surplus', *MIS Quarterly*, Volume 23 Number 4, pp 465-495
- Kambil and Van Heck. (1998) Reengineering the Dutch flower auctions: A framework for analyzing exchange organisations, *Information Systems Research*, 9, 1
- Kaplan, R and Norton D. (1996) "Using The Balanced Scorecard as a Strategic Management System", *Harvard Business Review*, January-February
- Kim K and Prabhakar, B. (2000) 'Initial Trust, Perceived Risk and the Adoption of Internet Banking', *Published in the Proceedings of the 21st International Conference on Information Systems*, December 10-13.
- Klueber, R; Leser, F and Kaltenmorgen, N (2000) 'Concept and Procedure for Evaluating E-Markets' in *Proceedings of the Seventh Americas Conference on Information Systems*, Boston.
- Malone T, Yates J and Benjamin R. (1987) 'Electronic Markets and Electronic Hierarchies', *Communications of the ACM*, June, volume 30, number 6
- Marshall, C., and Rossman, B.G.(1989) *Designing Qualitative Research*, Sage Publications, 1989, Newbury Park, California
- Money, R; Gilly, M and Graham, J. (1998) 'Explorations of National Culture and Word-Of-Mouth Referral Behaviour in the Purchase of Industrial Services in the United States and Japan', *Journal of Marketing*, Volume 62
- Norreklit, H (1999) 'The balance on the balanced scorecard-a critical analysis of some of its assumptions', *Management Accounting Research*, 11, pp 65-88

- Noteberg A, Christiannse E. and Walage P (1999) 'The Role of Trust and Assurance Services in Electronic Channels: An Exploratory Study' in *Proceedings of the Twentieth International Conference on Information Systems*, Charlotte, NC.
- Raisch, Warren D (2001) *The E-Marketplace: Strategies for Success in B2B Ecommerce*, McGraw Hill, New York
- Ratnasingham P. and Kumar K(2000) 'Trading Partner Trust in Electronic Commerce Participation', in *Proceedings of the Twenty First International Conference on Information Systems*, P.De and J.I DeGross (eds), Brisbane, Australia.
- Reimer, K(1996) 'The non-market preconditions of electronic markets: implications for their evolution and applicability'; *European Journal of Information Systems*; (5), pp 75-83
- Remenyi, D (1998) *Doing Research in Business and Management: An Introduction to Process and Method*, Sage, London
- Senn, James A (2000) 'Business-To-Business E-Commerce', *Information Systems Management*, Spring.
- Sitkin S and Pablo, A (1992) 'Reconceptualising the Determinants of Risk Behaviour' *The Academy of Management Review*, pp 9-34
- Soh, C and Markus, M (2002) 'Business-To-Business electronic marketplaces: A Strategic Archetypes Approach' in *Proceedings of the Twenty-Third Conference on Information Systems*, Barcelona
- Subramani, M and Walden, E (2000) 'Economic Returns to firms from business-to-business electronic commerce initiatives: An Empirical Investigation'; in *Proceedings of the Twenty First International Conference on Information Systems*, P.De and J.I DeGross (eds), Brisbane, Australia
- Tecce, D.J.(1998) 'Capturing Value from Knowledge Assets: The New Economy, Markets for Know How and Intangible Assets' *California Management Review*, (40:3), Spring, pp. 55-79.
- Yu, L. and Chaturvedi, A.[2001] "Competition between B2B Electronic Marketplaces: Differentiation, Pricing Strategy and Industrial Structure," in *Proceedings of the Seventh Americas Conference on Information Systems*, Diane Strong, Detmar Straub and Janice I. De Gross[eds], Boston.
- Yin, R.K. [1994] *Case Study Research, Design and Methods*, Sage Publications, Newbury Park