

# **Examining the Relationships between Attributes of e-Service Delivery, Involvement, Trust and Behavioural Intentions in the Internet Environment**

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## **Abstract**

This study examines the influence that specific attributes of e-service delivery and product involvement have on the development of trust in a business-to-consumer Internet context. It also examines the influence trust has on behavioural intentions. Data were gathered via an online questionnaire, resulting in 518 responses of sports consumers. The results indicate that all attributes of e-service delivery were found to have a positive influence on trust, in the website product involvement was also found to have an effect, with trust influencing behavioural intentions. Conclusions, implications and future research directions are discussed.

## **Introduction**

As the development of electronically delivered services (or e-services) continues to grow, the provision of superior e-service through website attributes has emerged as an important issue in developing consumer satisfaction and loyalty in the business-to-consumer (B2C) Internet environment (Collier and Bienstock 2006; Evanschitzky et al. 2004; Srinivasan et al. 2002). Although a growing body of services marketing literature has begun to investigate the e-service, especially attributes and e-service quality (e.g. Collier and Bienstock 2006; Parasuraman et al. 2005), limited research has explored the performance of various attributes of e-service delivery together with corresponding consumer trust and involvement that may be instrumental to better understand consumer's e-service experiences. Better understanding these constructs and their relationships is of strategic importance since trust is a central construct in the value chain that leads to consumer commitment toward the firm, patronage behaviour and the development of long-term customer relationships (Doney and Cannon 1997; Pavlou 2003). Furthermore, product involvement has emerged as an important variable in the Internet context to explain the motivation of consumers to engage with various objects (Richards and Chandra 2005), such as the Internet and e-services. Therefore, the purpose of this study is to theoretically develop, and empirically test, a model showing the influence of consumers' e-service experience via delivery of specific web-attributes on the development of consumer trust, and consequently, the influence of trust on behavioural intentions. The study also proposes that product involvement impacts consumer trust in websites. To this end, a discussion of the relevant literature is provided, a conceptual model is developed and hypotheses derived. Finally, a discussion about contributions, implications and future research directions is presented.

## **Theoretical Development**

### **Developing Trust in e-Services**

One of the primary concerns in the continued development of e-commerce is building the trust of consumers (Belanger et al. 2002; Dillon and Reif 2004) and reducing the risk of purchase (Kim and Montalto 2002; Heijden et al. 2003). The role of trust is argued to be even more important in the Internet environment, since customers do not deal directly with the company, or its service personnel (Papadopoulou et al. 2001; Urban et al. 2000). Therefore, it can be argued that trust is to a greater extent developed through the performance of the attributes that deliver the service which is delivered via the website interface (i.e. the e-service encounter). This occurs because this is the tangible point of contact between a buyer and a seller on the

Internet. Consequently, to reduce concerns about risk and identify sources of trust, consumers must rely on evaluating the quality, or effectiveness, of various website attributes delivered to them by the organisation. On this basis, poor website design and delivery of substandard e-service can lead to the development of reduced trust resulting in a decrease in the number of visitors, shorter visiting times, abandoning of Internet shopping carts, and lower intention to revisit and negative recommendation behaviours to others about the website (Donthu 2001).

As previously noted, in the past decade there is a growing body of research in the services marketing and information systems domain investigating e-service, especially e-service quality. For example, previous studies from the service quality field have found that various e-service attributes including website design, fulfilment/reliability, security/privacy and customer service dimensions (Wolfenbarger and Gilly 2003); System availability, Efficiency, Fulfilment and Privacy (Parasuraman et al. 2005); Functionality/design, Enjoyment, Process, Reliability and Responsiveness (Bauer et al. 2006); Website design, Ease-of-use, and Functionality (Collier and Bienstock 2006); and Website design, customer service, assurance and order management (Cristobal et al. 2007) impact consumer perceptions of quality. From an information systems perspective, previous studies have used the technology acceptance model (TAM) to explore various issues in the Internet environment (O'Cass and Fenech 2003). Originally developed by Davis (1989) for predicting usage of information technology, the model has been expanded beyond the core dimensions of ease-of-use and usefulness. Previous studies extending TAM to the Internet environment have found that attributes include Visual representation, Customised design, Functional service, Ease-of-use, Reliability, and Information usefulness (Lee and Lee 2003); Quality of information, System use, Playfulness, Design (Liu and Arnett 2000). In perhaps the most comprehensive model emanating from the information systems field, Loiacono et al. (2002) identified twelve dimensions which include informational fit-to-task, interactivity, security, response time, ease of understanding, intuitive operations, visual appeal, innovativeness, emotional appeal, consistent image, online completeness and better than alternative channels. These 12 dimensions further collapse into four second order latent constructs: (1) usefulness, (2) ease-of-use, (3) entertainment, and (4) complementary relationship, later labelled Business Processes.

Despite this growing volume of research investigating the attributes of e-service delivery, there is yet to be a clear consensus in the literature as to what are the key attributes of e-service delivery. However, an analysis of the literature indicates various themes that characterise effective e-service delivery. These include information content/functionality, aesthetic appeal elements, ease-of-use and security. For example, information content appears critical since the information provided must be up-to-date, easy to understand and relevant for consumers to make consumption-based decisions. Ease-of-use is considered important since the website must be intuitive, well organised, and easy to follow and find information, and include appropriate navigation structures for the customer to interact seamlessly within the website. Aesthetic appeal appears important which includes issues related to the visually attractiveness of the website such as colour, layout, text size and type, and multi-media features such as images, audio/video and animation. Reliability has been cited as an important since the website must process Internet-based transactions efficiently, the ability for the website to load quickly and respond to the requests of the customer for service. Finally, security has been cited as important covering the protection of personal and financial information.

As previously noted, despite the lack of agreement on the attributes of e-service delivery, in this study we adapt Loiacono et al.'s (2002) model to encapsulate the various attributes of e-service delivery. According to this model, e-service delivery attributes include Usefulness (i.e. informative, responsive and secure), Ease-of-use (i.e. easy to read, understand, operate and

navigate), Entertainment (i.e. the site is visually appealing, unique and creative), and Business Processes (i.e. enables necessary tasks to be easily completed online - such as purchasing, provides a better means of interacting with the company for service). Since it was previously discussed that trust is developed by the attributes delivered via the website interface, we argue that the consumers who perceive the e-service attributes of Usefulness, Ease-of-use, Entertainment and Business Processes to be positive, will be more likely to develop favourable trust perceptions towards the e-service. Consequently, negative perceptions of the e-service attributes will result in unfavourable trust perceptions. Thus,

H1: *Usefulness will have a significant positive influence on trust*

H2: *Ease-of-Use will have a significant positive influence on trust*

H3: *Entertainment will have a significant positive influence on trust*

H4: *Business Processes will have a significant positive influence on trust*

### **The Role of Product Involvement**

Over the last three decades, the concept of product involvement has become an important theme in the consumer behaviour literature as a psychological variable that explains individual differences that impact on consumption related behaviour (Evrard and Aurier 1996; Zaichkowsky 1985). According to Zaichkowsky (1985, p. 342), product involvement can be defined as "...a person's perceived relevance of the object" and reflects the extent of personal relevance of the decision to the individual in terms of her/his basic values, goals, and self-concept (Celsi and Olson 1988). Essentially, involvement has been identified as being at the heart of the person-object relationship, and largely based on the interaction of consumers with objects (O'Cass 2001). In the context of the Internet, previous studies available have found that highly involved consumers are more concerned with a website if the information, and other attributes delivered via the website, are related to the object of involvement (i.e. 'the product/brand') (Balbanis and Reynolds 2001; Hoffman and Novak 1996). Thus, website attributes such as information content and visual design, which are related to the object of involvement, are more likely to attract the interest and engage highly involved consumers than less involved consumers, since these consumers are motivated to process information in detail that can influence judgements about the website and the firm, such as trust perceptions.

Previous research in a variety of different contexts indicates that product involvement has a direct impact on consumption related attitudes and behaviours (O'Cass 2000; Slarma and Tashchian 1985). These include increased motivation to engage in problem solving activities such as searching, information processing, decision-making, and purchase behaviour (Evrard and Aurier 1996; Kapferer and Laurent 1986). Prior studies focusing on various Internet issues have argued that highly involved consumers gain more information about a product or service; possess a higher 'intention to interact' with a 'product' related website of interest, exhibit more extensive information search habits (e.g. Jee and Lee 2002; Richards and Chandra 2005) and conduct online purchases (Balabanis and Reynolds 2001; Richards and Chandra 2005). On the basis that involvement with a product influences consumption related attitudes and behaviours, it can therefore be argued that highly involved consumers (e.g. with a favourite sports team or fashion clothing) who engage with a stimulus environment related to the object of interest (e.g. a favourite sports team website or retailing website), will influence the development of favourable trust perceptions. Thus,

H5: *Product involvement will have a significant positive effect on trust*

### **Consumer Trust and Website Behavioural Intentions**

The growth of the Internet has seen organisations across many sectors use this medium to sell their goods and services and to communicate and inform consumers. An important aspect of the development of the Internet as a marketing medium has been consumer trust. Trust has

been identified as a precondition for patronage (Ribbink et al 2004) and the maintenance of continued revisits. We define trust using the Moorman et al (1992) definition where trust is seen as the willingness to rely on an exchange partner in whom one has confidence. In effect, this encompasses the view that the consumer has confidence, certainty and faith in the ability of the e-service provider to deliver on their promises. Trust is argued to be important in e-commerce and e-service delivery, since consumers do not deal directly with the organisation or its service employees. In this area, trust has been argued to have an effect on loyalty (Corbitt et al 2003; Herington and Weaven 2007; Ribbink et al 2004). We argue that when consumers have greater trust in the e-service provider, they will be more likely to revisit the website, be more likely to purchase from the website in the future and have positive word of mouth about the e-service provider. Thus,

*H6: Trust will have a significant positive effect on website behaviour intentions.*

## **Methodology**

A convenience sampling method was selected to collect data for the study. The sample consisted of consumers who browse (and were regular visitors of) sports team websites. Thus, respondents were able to base their prior Web-based experiences on their preferred sporting team, regardless of sporting code (i.e. any service provider [sporting team] within the professional sport sector). Respondents were approached to participate and sent an email invitation to participate with an embedded link to the website hosting the survey. Measurement of the attributes of e-service delivery were adapted from Loiacono et al. (2002) WebQUAL scale and focused on the experience with the website. Items used to measure product involvement were sourced from O'Cass (2001). Items used to measure trust focused on consumer's assessments of website ability to deliver the identified service, with items focusing on trust, security and faith in the delivery. The website behavioural intentions measure was adapted from Zeithaml et al's (1996) behavioural intention battery, which was used to assess consumer behavioural intentions (e.g. revisit, purchase and word of mouth). All items were measured on seven-point Likert-type scales (strongly disagree (1) to strongly agree (7)).

## **Results**

In total, 518 responses were gathered. To test the hypotheses, Partial Least Squares (PLS) analysis via PLSgraph was used as it is a comprehensive statistical approach for testing hypotheses about relations among observed and latent variables (Hoyle 1995). Typically the outer and the inner models of PLS are evaluated and Johnson et al. (2006) suggest that the outer model is evaluated on the reliability and discriminant validity of the constructs and the inner model is evaluated on the size and significance of the path coefficients and the models ability to predict, in this case, behavioural intentions. This was undertaken and all tests indicated the measures performed well, exceeding all identified benchmarks. For example, the composite reliability (CR) for e-service delivery its was 0.93 and Average Variance Explained (AVE) was 0.56 for usefulness, for ease-of-use the CR was 0.87 and the AVE was 0.53, for entertainment the CR was 0.91 and AVE was 0.59, and for business processes CR was 0.92 and AVE was 0.57. For trust the CR was 0.93 with an AVE of 0.77, for involvement CR was 0.95 and AVE 0.72 and website intentions CR was 0.90 with an AVE of 0.64.

As shown below in Table 1, all paths exceeded the recommended criterion and are significant and exhibit positive relationships, except for the entertainment to trust relationship. For example, the results indicate that the AVA for the endogenous variables was 0.51 and the individual r-squares are all greater than the recommended 0.10 cut-off (Falk and Miller 1992) for the predicted variables of trust and website intentions. With all r-squared estimates being

larger than the recommended level, it is appropriate, then, to examine the significance of the individual paths associated with these variables (Falk and Miller 1992), with 0.015 (1.5%) of the variance being the recommended cut-off point (O'Cass 2002).

**Table 1 PLS results for the hypotheses tests**

Predicted variable	Predictor Variables	Hypothesis	Path	Variance due to path	R <sup>2</sup>	Critical Ratio
Trust	Usefulness	H1	0.36	0.264		2.566
	Ease-of-use	H2	0.14	0.0857		1.42
	Entertainment	H3	0.056	0.0348		0.40
	Business Process	H4	0.49	0.358		3.68
	Product involvement	H5	0.28	0.123	0.626	6.35
Website Intentions	Trust	H6	0.63	0.398	0.401	13.32
AVA					0.51	

<sup>a</sup> Average Variance Accounted

### Discussion, Conclusion and Limitations

The purpose of this study was to empirically examine the influence of the e-service experience via delivery of specific Web-attributes and product involvement (i.e. favourite sports team) on the development of trust, and the influence of trust on behavioural intentions. The findings suggest that the Web-attributes (i.e. Usefulness, Ease of use) and involvement had a significant positive influence on the development of trust towards the website (i.e. the e-service). However, entertainment did not have a significant influence on the development of trust.

Given the limited research available in measuring trust as a consequence of e-service/Web attributes of sports consumers in the Australian B2C Internet environment, the findings shed new light on the influence that the e-service experience and involvement have on consumer trust in websites. Interestingly, the results indicate that product involvement (i.e. with a sporting team) influences sports consumers' development of consumer trust towards the e-service more than the service delivery attributes. Because limited research has addressed the relationship between product involvement (with the sports team) and consumer trust, the findings shed new light on the influence this construct has on consumers within the B2C Internet environment. The findings also suggest that trust has a significant positive influence on website related behavioural intentions of sports consumers. In the context of this study, the findings indicate that if sports organisations identify and deliver specific attributes to consumers, then consumers will evaluate the various Web attributes to form their perceptions of trust. This in effect leads sports consumers to develop favourable trust perceptions towards the e-service which result in forming positive consumer behaviour outcomes such as site revisitation, purchase intentions, word-of-mouth behaviour and reduced likelihood of switching behaviour.

The findings of this study in the specific context of sport have important implications for e-services marketing theory in that they add to our understanding of e-service experiences in other service contexts other than the pure e-retailing domain which dominates the services marketing literature. This indicates that these relationships need to be empirically tested to other e-service contexts such as tourism, banking and e-retail websites. In addition, since the study was conducted within the Australian consumer context, future studies should explore the framework with consumers across cultures to further understand e-service experiences and the internationalisation of e-service delivery.

## References

- Balabanis, G. and Reynolds, N. 2001. Consumer Attitudes Towards Multi-Channel Retailers' Websites: The Role of Involvement, Brand Attitude, Internet Knowledge and Visit Duration. *Journal of Business Strategies*, Vol. 18 Fall: 105-131.
- Bauer, H., Falk, T. and Hammerschmidt, M. 2006. eTransQual: A Transaction Process-Based Approach for Capturing Service Quality in Online Shopping. *Journal of Business Research*, Vol. 59: 866-875.
- Belanger, F., Hiller, J. and Smith, W. 2002. Trustworthiness in electronic commerce: the role of privacy, security and site attributes. *Strategic Information Systems*, Vol. 11: 245-270.
- Celsi, R. and Olson, J. 1988. The role of involvement in attention and comprehension processes. *Journal of Consumer Research*, Vol. 15, 210-224.
- Collier, J. and Bienstock, C. 2006. Measuring service quality in e-retailing. *Journal of Service Research*, Vol. 8(3): 260-275.
- Corbitt, B.J., Thanasankit, T. and Yi, H. 2003. Trust and e-commerce: a study of consumer perceptions. *Electronic Commerce Research and Applications*, Vol. 2(3): 203-215.
- Cristobal, E., Flavian, C. and Guinaliu, M. 2007. Perceived e-service quality (PeSQ): Measurement validation and effects on consumer satisfaction and website loyalty. *Managing Service Quality*, Vol. 17(3): 317-340.
- Davis, F. 1989. Perceived Usefulness, Perceived Ease of Use, and User Acceptance Of Information Technology. *MIS Quarterly*, Vol. 13(3): 319-340.
- Dillon, T. and Reif, H. 2004. Factors influencing consumers' e-commerce commodity purchases. *Information Technology, Learning, and Performance Journal*, Vol. 22(2), 1-12.
- Doney, P. and Cannon, J. 1997. An examination of the nature of trust in buyer-seller relationship. *Journal of Marketing*, Vol. 61: 35-51.
- Donthu, N. 2001. Does your web site measure up? *Marketing Management*, Vol. 10(4): 29-32.
- Evanschitzky, H., Iyer, G. and Hesse, J. 2004. E-satisfaction: A re-examination. *Journal of Retailing*, Vol. 80(3): 237-247.
- Evrard Y. and Aurier P. 1996. Identification and Validation of the Components of the Person-Object Relationship. *Journal of Business Research*, Vol. 37(2): 127-134.
- Falk, R. and Miller, N. 1992. *A Primer for Soft Modelling*. Akron, OH: University of Akron Press.
- Heijden, H., Verhagen, T. and Creemers, M. 2003. Understanding online purchase intentions: contributions from technology and trust perspectives. *European Journal of Information Systems*, Vol. 12(1) 41-48.

- Herington, C. and Weaven, S. 2007. Can banks improve customer relationships with high quality online services? *Managing Service Quality*, Vol. 17(4): 404-427.
- Hoyle, R. 1995. *Structuring Equation Modelling: Concepts, Issues and Applications*. Sage Publications, London.
- Hoffman, D. and Novak, T. 1996. Marketing and hypermedia computer-mediated environments: conceptual foundations. *Journal of Marketing*, Vol. 60: 50-68.
- Jee, J. and Lee, W. 2002. Antecedents and Consequences of Perceived Interactivity: An Exploratory Study. *Journal of Interactive Advertising*, Vol. 3(1), available at [www.jiad.org/v013/n01/jee/index.htm](http://www.jiad.org/v013/n01/jee/index.htm) (accessed March 3, 2003).
- Johnson, M., Herrmann, A. and Huber, F. 2006. The Evolution of Loyalty Intentions. *Journal of Marketing*, Vol. 70 (April): 122-132.
- Kapferer, J. and Laurent, G. 1986. Consumer involvement profiles: A new practical approach to consumer involvement. *Journal of Advertising Research*, Vol. 25(6): 48-56.
- Kim, S. and Montalto, C. 2002. Perceived risk of privacy invasion and the use of online technology by consumers. *Consumer Interests Annual*, Vol. 48: 1.
- Lee, K. and Lee, S. 2003. A Cognitive Map Simulation Approach to Adjusting the Design Factors of The Electronic Commerce Web Sites. *Expert Systems with Applications*, Vol. 24: 1-11.
- Liu, C. and Arnett, K. 2000. Exploring the Factors Associated with Website Success in the Context of Electronic Commerce. *Information and Management*, Vol. 38: 23-33.
- Loiacono, E., Watson, R. and Goodhue, D. 2002. WebQual: A Measure of Website Quality. *American Marketing Association Conference Proceedings*, 432-438
- Moorman, C., Zaltman, G. and Deshpande, R. 1992. The relationship between providers and users of market research: the dynamics of trust within and between organizations. *Journal of Marketing Research*, Vol. 29(3): 314-328.
- O'Cass, A. 2000. An assessment of consumers product, purchase decision, advertising and consumption involvement in fashion clothing. *Journal of Economic Psychology*, Vol. 21: 545-576.
- O'Cass, A. 2001. Consumer Self-monitoring, Materialism and Involvement in Fashion Clothing. *Australasian Marketing Journal*, Vol. 9(1): 46-60.
- O'Cass, A. 2002. Political advertising believability and information source value during elections. *Journal of Advertising*, Vol. 31(1): 63-74.
- O'Cass, A. and Fenech, T. 2003. Web retailing adoption: exploring the nature of internet users Web retailing behaviour. *Journal of Retailing and Consumer Services*, Vol. 10: 81-94.

- Papadopoulou, P., Andreou, A., Kanellis, P. and Martakos, D. 2001. Trust and relationship building in electronic commerce. *Internet Research: Electronic Networking Applications and Policy*, Vol. 11: 322-332.
- Parasuraman, A., Zeithaml, V. and Malhotra, A. 2005. E-S-Qual: a multiple-item scale for assessing electronic service quality. *Journal of Service Research*, Vol. 7(3): 213-233.
- Pavlou, P. 2003. Consumer acceptance of electronic commerce – integrating trust and risk with the technology acceptance model. *The International Journal of Electronic Commerce*, Vol. 7(3): 101-34.
- Ribbink, D., Riel, A., Liljander, V., Streukens, S. 2004. Comfort your online customer: quality, trust, and loyalty on the internet. *Managing Service Quality*, Vol. 14(6): 446-456.
- Richard, M. and Chandra, C. 2005. A model of consumer Web navigational behavior: conceptual development and application. *Journal of Business Research*, 58(8): 1019-1029.
- Slama, M. and Tashchian, A. 1985. Selected socioeconomic and demographic characteristics associated with purchasing involvement. *Journal of Marketing*, Vol. 49(1): 72-82.
- Srinivasan, S., Anderson, R. and Ponnnavolu, K. 2002. Customer Loyalty in e-Commerce: An Exploration of its Antecedents and Consequences. *Journal of Retailing*, Vol. 78: 41-50.
- Urban, G., Sultan, F. and Qualls, W. 2000. Placing trust at the center of your internet strategy. *Sloan Management Review*, Vol. 42(1): 39-48.
- Wolfenbarger M., and Gilly M. 2003. eTailQ: Dimensionalizing, measuring and predicting e-tail quality. *Journal of Retailing*, Vol. 79(3): 183-198.
- Zaichkowsky, J. 1985. Measuring the involvement construct. *Journal of Consumer Research*, Vol. 12(3): 341-352.
- Zeithaml, V., Parasuraman, A. and Berry, L. 1996. The Behavioural Consequences of Service Quality. *Journal of Marketing*, Vol. 60(April) 31-46.