Editorial

This Special Issue is based on the best papers from the International Services Marketing Conference 2002: Emerging issues in services marketing: emotions, e-marketing and encounters, that was held in Brisbane, 3-5 July 2002. The conference, co-chaired by Professor Janet McColl-Kennedy (Academic Chair), University of Queensland and Associate Professor Susan Dann (Industry Chair), Queensland University of Technology, was designed to create dialogue between senior managers and services marketing academics. It featured papers from Australia, Hong Kong, Korea, New Zealand, Singapore and the United States. Keynote academic speakers were Professor Roland Rust, Center for e-Service, University of Maryland, USA, Professor Eric Arnould, University of Nebraska, USA and Professor Beverley Sparks, Griffith University, Gold Coast. Professor Rust's paper 'The Rise of e-Service' addressed the sub-theme, e-marketing. Professor Arnould spoke on 'Relational Opportunities and Challenges in Services Marketing' focusing on encounters, and Professor Sparks' talk 'Emotional Responses to Perceived Injustice in the Service Encounter' pointed out the importance of emotions in service failure and recovery attempts.

Over one hundred and twenty delegates attended and presented papers on a range of topics primarily focused on emotions, e-marketing and encounters in services marketing – the theme of the conference. Two categories of academic papers were submitted for consideration for inclusion in the conference program. These were competitive double blind peer-reviewed papers (published as an abstract or in full) and peer reviewed posters (abstract only). The best peer-reviewed competitive papers were considered for inclusion in this Special Issue. The best papers from the conference underwent further peer review subsequent to the conference. Each of these papers was sent to two different reviewers. Track Chairs, Professor Paul Patterson, University of New South Wales and Associate Professor Lesley White, Macquarie University oversaw the initial review process leading up to the conference and then Professor Paul Patterson and Professor Janet R. McColl-Kennedy were responsible for the second phase of the peer-review process. Thus, the final set of papers were reviewed by at least four reviewers, revised and edited before being published in this Special Issue. The editorial team was assisted by Sharyn Rundle-Thiele who is now at the Graduate School of Business, Griffith University.

We take this opportunity of again thanking the many reviewers involved in this peer-review process. They were:

Rebekah Bennett, UQ Business School, University of Queensland, Australia

Suzan Burton, Macquarie Graduate School of Management, Australia

Francis Buttle, Macquarie Graduate School of Management, Australia

Susan Dann, School of Business, Queensland University of Technology, Australia

Judy Drennan, UQ Business School, University of Queensland, Australia

Greg Elliott, Macquarie Graduate School of Management, Australia

Robert T Green, University of Texas-Austin, USA

Railton Hill, School of Business, Swinburne University of Technology, Australia

Chris Hodkinson, School of Management, Griffith University, Australia

Jay Kandampully, School of Hospitality, Tourism and Leisure Management, University of Queensland, Australia

Rujirutana Mandhaehitara, Thammasat University, Thailand

Janet McColl-Kennedy, UQ Business School, University of Queensland

Paul Patterson, University of New South Wales, Australia

Randall Shannon, The University of the Thai Chamber of Commerce, Thailand

Mark Speece, Asian Institute of Technology, Thailand

Jillian Sweeney, University of Western Australia, Australia

Rhett Walker, Royal Melbourne Institute of Technology, Australia

Jay Weerawardena, UQ Business School, University of Queensland, Australia

Lesley White, Macquarie Graduate School of Management, Australia

The five papers cover a range of important services marketing issues. The first paper entitled, 'The Impact of Internet Use on Inter-firm Relationships in Australian Service Industries' by Rao, Perry and Frazer looks at the impact of internet use on inter-firm relationships in Australian service industries. The impact of the internet on relationships has received little attention to date despite the increasing use of the internet by firms. The paper provides a helpful review of the literature and presents the findings of ten convergent interviews, demonstrating that the internet does not appear to hinder inter-firm relationships as the internet is not being used in place of the more traditional forms of communication but rather to complement traditional methods. There is some evidence that internet use is linked to improved business performance.

The second paper also deals with e-marketing issues. In their paper, entitled 'Customer Service and Relationship Management in the Context of Technology-Enabled Service Delivery Systems - Managerial and Research Implications', Walker and Francis, present a thoughtful review of the literature on customer relationships and technology-enabled services. The authors develop a conceptual model derived from their literature review and set out potentially rich research opportunities that explore the particular determinants and moderators of trust, commitment and loyalty in the context provided by technology-enabled services. In addition, they argue that there is also an opportunity to investigate and describe the nature of customer risk and uncertainty in this context and to determine appropriate risk-reduction strategies.

The third paper, 'Goods and Services Differences in Television Advertising: An Australian Replication' by Gauci and Hill tests, using a sample of 352 commercials, whether there are any significant differences between advertisements for goods and services. The study found that Australian marketers were indeed using different advertising strategies for goods and services. In line with overseas findings, they found that commercials for goods favoured informational ads. But within the goods commercials the informational/transformational difference was not significant. Further, they found that services commercials adopted more transformational techniques rather than informational techniques. Services commercials used transformational techniques significantly more than goods commercials, with goods commercials using informational techniques more often than services commercials.

Nguyen and McColl-Kennedy's paper 'Diffusing Customer Anger During Service Recovery: A Conceptual Framework' provides a theoretical framework for diffusing anger drawing on psychological theories, particularly cognitive appraisal theories, attribution theory, as well as social exchange theory and justice theory. Specifically, the authors propose a two-phase conceptual model incorporating pre-service recovery (Phase 1) and service recovery (Phase 2). In Phase 1, the authors argue that an external cause produces anger and that cognitive appraisal is undertaken specifically in terms of: (a) goal relevance; (b) goal incongruence; and (c) ego-involvement – and this moderates the intensity of anger experienced by the customer. In Phase 2, they argue that customer anger can be reduced if the service provider undertakes the following: (a) listening; (b) engaging in blame displacement; and (c) providing an apology.

Finally, Murphy and Gomes' paper 'E-mail Customer Service by Australian Educational Institutions. This paper was included in this Special Issue as it fitted well with the Services Marketing theme. Considerable research has and is currently being undertaken on the use of the internet as a marketing tool. However little attention has been paid to the use of e-mail as a marketing and customer service tool. Using organizational diffusion of innovations theory, this study investigates the use of e-mail by Australian higher education institutions as a marketing tool in communicating with overseas students.

Janet R. McColl-Kennedy
University of Queensland

Paul Patterson
University of New South Wales

Executive Summaries

The Impact of Internet Use on Inter-Firm Relationships in Australian Service Industries

Sally Rao, Chad Perry & Lorelle Frazer

The impact of the internet on inter-firm relationships has received little attention in the academic literature. This paper develops a conceptual framework about internet-facilitated relationships based on the literature and research findings from convergent interviews. The convergent interviews were conducted with CEOs and/or marketing managers of 10 Australian service companies. Results show that the internet does not appear to hinder inter-firm relationships as it is not being used at the expense of more traditional and personal forms of communication. Furthermore, it was concluded that it has little impact on the level of trust among internet exchange partners and the dependence they have on one another at this relatively early stage of technology adoption, at least. However preliminary evidence emerged suggesting that internet use is linked with improved business performance and satisfaction with the exchange partner's performance.

The study found that the benefits of effectively implemented internet technology applications leads to positive outcomes in terms of relationship marketing. By using the internet, relationship partners can create a better understanding of each other through better communication and information exchange. Service firms can use the internet to strengthen relationships with exchange partners in two main ways. First, the internet reduces transaction costs and thus improves trade efficiencies. The second way for service firms to use the internet to enhance their relationships with customers is to improve service levels by providing new forms of service delivery, improved customer intimacy, responding more rapidly to customer needs, and offering customers the opportunity to help themselves via the internet. Hence we conclude the internet should be viewed as a complement, rather than as a substitute, to personal interactions.

Customer Service and Relationship Management in the Context of Technology-Enabled Service Delivery Systems – Managerial and Research Implications

Rhett H. Walker & Heather Francis

Increasingly contemporary theorists argue that the emergence of electronic markets and associated systems have enhanced the efficiency and effectiveness by which a marketer can establish, develop and maintain customer relationships. Notwithstanding, evidence suggests that this enthusiasm may need to be tempered, at least in some situations, by acknowledging that, for a sizeable group of customers, technology-enabled service delivery may lead to less than satisfactory experiences that ultimately impact upon the ability to develop relationships of mutual benefit. This paper explores issues associated with trust, reliability and a felt need for personal contact which impacts upon an individual's capacity and willingness to use technology-enabled service delivery. Providers must recognise that a production driven 'one-size-fits-all' approach to electronically enhanced service delivery may have negative implications for an organisation's objectives oriented toward customer relationship management. In this paper the authors discuss managerial implications and propose a research agenda.

Specifically, they suggest that research should be undertaken to investigate how important the desire for personal interaction is for different customers who make use of technology enabled services and what effect this desire has on attitudes regarding trial, non-voluntary and willing usage behaviour.

Goods and Services Differences in Television Advertising: An Australian Replication

David Gauci & Railton Hill

This research provides empirical support to the notion that Australian advertisers use different advertising strategies, in terms of types of appeals utilised, when promoting services rather than manufactured goods. The fact that these results challenge some previous findings from research undertaken many years ago in the US is probably less important than the pointers it may provide for contemporary Australian advertisers. It also raises the question of whether there are neglected or overused appeal types within current advertising in a particular service category, and whether managers are fully considering the specific nature of their service category in the selection of such strategies.

The finding that informative appeals are most common amongst advertisers of both goods and services will be welcomed by consumer advocates. It may however suggest that service categories in mature markets (e.g., insurance, banking, travel) which have few points of difference may be missing valuable opportunities to differentiate via the use of techniques such as associative, staged and plot based appeals. Even the use of testimonials, intuitively a technique well suited to making a service brand more tangible and which would appear to utilise the much discussed 'word of mouth', was not often used by service marketers.

The research challenges advertisers of services to consider their appeal strategies in terms of the distinctive nature of their service products. For the period into the 1980s service marketers struggled for recognition of the differences between goods and services offerings. Given the gradually emerging understanding of the differences between different services, it is unlikely that any one appeal strategy can be consistently more effective for every service category. This suggest that some appeal options should be revisited.

Diffusing Customer Anger in Service Recovery: A Conceptual Framework

Doan T. Nguyen & Janet R. McColl-Kennedy

Knowing how to handle angry customers following a service failure is an important aspect of a service provider's work role. This paper presents a conceptual framework to help better understand: (1) how customer anger is provoked by a service failure; and (2) how it may be reduced through specific service recovery attempts by service providers. The conceptual framework presented in this paper draws on psychological theories, particularly cognitive appraisal theories, attribution theory, as well as social exchange theory and justice theory. Specifically, the authors propose a two-phase conceptual model incorporating pre-service recovery (Phase 1) and service recovery (Phase 2). In Phase 1, the authors argue that an external cause produces anger and that cognitive appraisal is undertaken specifically in terms of: (a) goal relevance; (b) goal incongruence; and (c) ego-involvement – and this moderates the intensity of anger experienced by the customer. In Phase 2, they argue that customer anger can be reduced if the service provider undertakes the following: (a) listening; (b) engaging in blame displacement; and (c) providing an apology. The authors argue that listening gives a service provider a chance to identify the cause of the problem, decode the cause of the anger and decide upon appropriate response techniques. Blame displacement allows the service provider to redirect blame. Giving an apology compensates the customer in terms of ego-identity or self-esteem associated with the service failure.

E-mail Customer Service by Australian Educational Institutions

Jamie Murphy & Liza Gomes

As Australian educational institutions shift away from supplying education to local students and towards marketing education to overseas students, the internet plays an increasingly critical role for providing information and developing relationships. A wealth of internet research is emerging on business use of the World Wide Web, yet there is little research on business use of e-mail. This simple method for customers-initiated contact, e-mail, represents a potential opportunity that can influence future marketing relationship. Furthermore, harvesting this opportunity will probably be via e-mail, a cost effective way to convert opportunity into reality.

This paper draws upon organisational diffusion of innovations to investigate institutional use of e-mail for overseas marketing and customer service. The e-mail responses to a prospective Chinese student, by over 200 Australian establishments, support extending diffusion of innovations to e-mail customer service and highlight issues that institutions face when implementing this electronic marketing communication tool. The results also suggests several variables based on traditional business communication and one new variable, e-branding, which may be used to measure e-mail customer service.

This research gives institutions benchmarks and insights for improving e-mail marketing and online customer service. The results support past organisational research that size and industry sector relate to adopting innovations. The paper closes by proposing future research agendas for investigating e-mail customer service.

The Impact of Internet Use on Inter-Firm Relationships in Australian Service Industries

Sally Rao, Chad Perry & Lorelle Frazer

Abstract

The impact of the internet on inter-firm relationships has received little attention in the academic literature. This theory building research develops a conceptual framework about internet-facilitated relationships based on the literature and research findings from convergent interviews. The convergent interviews were conducted with CEOs and/or marketing managers of 10 Australian service companies. Results show that the internet does not appear to hinder inter-firm relationships as the internet is not being used at the expense of more traditional and personal forms of communication and has little impact on the level of trust in internet exchange partners and the dependence they have on one another at this relatively early stage of adoption. Rather, internet use is thought to be linked with improved business performance and satisfaction with the exchange partner's performance. The findings of this research add to the body of marketing knowledge and provide guidelines for managers to more effectively use the internet in managing their relationships with other businesses.

Keywords: Internet marketing, relationship marketing, B2B relationships

1. Introduction

The impact of the internet on business is increasing worldwide. Business-to-business transactions account for over 80 percent of all transactions conducted over the internet (Australian Bureau of Statistics, 2001), totalling more than US$400 billion in 2000 and an estimated US$2 trillion by 2003 (Global Internet Statistics, 2001). Australia is one of the leading nations in terms of using the internet in both business-to-customer (B2C) and business-to-business (B2B) settings. Recently, the focus of e-commerce in Australia has shifted from B2C e-commerce to the effective use of e-commerce tools to make business processes and B2B relationships more efficient (National Office for the Information Economy, 2001). While practitioners are realising this potential for using the internet to build profitable, long-term relationships with their trading partners, this topic has received little consideration from marketing scholars.

Moreover, the value of a high quality relationship, particularly the relationship between a service provider and their customers, is noteworthy in the service sector. Customers often rely on the credibility of service providers and their previous experiences with them due largely to the intangible nature of services. Next, the production of many services requires that customers and service providers interact with one another (Claycomb and Martin, 2001). Customers' perceptions of the quality of the relationship with a service provider may be commensurate with the quality of the service itself. Thus a strong relationship between customers and the service provider engenders trust that is necessary for customers to commit to the service. Essentially, we argue that relationship quality between trading partners and their business performance is enhanced through the use of the internet, with the internet affecting technical bonds more than social bonds.

This paper has three parts. First, research issues from the literature are identified. Then, the methodology of convergent interviewing is briefly described. Finally, findings are presented and discussed, and a theoretical framework presented that integrates the findings of the convergent interviews.

2. Conceptual Background

2.1 Relationship Marketing

This research investigates the intersection of relationship marketing and internet marketing. Relationship marketing was first investigated in the 1970s. Driven by global competition, relationship marketing was noticed when many businesses learnt that they must collaborate to compete (Palmer 1997, 2000). However, it was not until the late 1970s and the 1980s that the term "relationship marketing" emerged in the marketing literature. Simultaneously but independently, researchers in the United States (for example, Wilson, 1976; Jackson, 1985) and Europe (for example, Gummesson, 1987; Hakansson, 1982; Johanson and Mattsson, 1987) began to look beyond simple dyadic transactions and began to explore the notion of dyadic relationships (Healy, Hastings, Brown and Gardiner, 2001). The two major theoretical streams of relationship marketing were the Nordic school focusing on services marketing, and the Network Approach to industrial marketing developed by the international marketing and purchasing group (IMP) (Gummesson, Lehtinen and Gronroos, 1997).

Since then relationship marketing has evolved over the last two decades with the emphasis shifting with different approaches. One of the earliest approaches to relationship marketing research was social exchange theory, which placed importance on interactive marketing activities (Anderson and Narus, 1984; Araujo and Easton, 1996; Sheth and Parvatiyar, 1995). Other approaches have been grounded in inter-organisation theory (Van de Ven, 1992) and industrial network theory (Mattson, 1985). Some scholars claim that only people create relationships, while others believe that customised and personalised technologically delivered services may strengthen long-term relationships (for example, Thirkell, 1997; Schultz, 1997). For example, a recent approach to relationship marketing is predicated on the interactivity of the internet and the opportunities this provides for relationship marketing to be practiced at a one-to-one level (Geiger and Martin, 1999; Gillenson, Sherrell and Chen, 1999; Peppers, Rogers and Dorf, 1999).

In brief, representative scholarly literature on relationship marketing is organised around several themes. There have been attempts at defining the components of relationships, but the number of components and their definitions are widely divergent. As well, there seems to be no consensus on the role of technology in the establishment of relationships.

2.2 Internet Marketing

In the last five years, internet marketing literature has increased dramatically as a result of the rapid adoption of the internet in marketing practice (Smith, 1998). The bulk of the early practitioner's literature on internet marketing was aimed at telling entrepreneurs how to go about establishing a place in cyber market space, such as how to set up a web page. In the 1990s, attention among scholars focused on the revolutionary impact of internet technologies on the marketing discipline. Hoffman and Novak (1996) were among the first to recognise the consequences of the development of a new medium in which all parties interact with each other. In the same vein, Deighton (1996) suggested that the practice of marketing would be completely remoulded by the emergence of the internet. Attention in the literature has focused on the revolutionary impacts of internet on the marketing discipline (for example, Hoffman and Novak, 1996; Deighton, 1997; Geller, 1998), particularly the connection between the internet and international marketing (Poon and Jeven, 1999; Quelch and Klein, 1996; Hamill, 1997; Hamill and Gregory, 1997; Bennett, 1997) and relationship marketing (Geller, 1998; Geiger and Martin, 1999).

Some scholars have argued that the internet has created a new marketing arena, moving organisations closer to their customers (Griffith and Palmer, 1999; Heinen, 1996). Others have even posed the question of whether a new marketing paradigm is required in an era of increasing electronic business (Berthon, Pitt and Watson, 1996; Schubert and Selz, 1999). However, most of the literature agrees with the notion that the internet can be placed in the technological context of emerging interactive marketing technologies. It is one of the most important marketing tools because it has the potential to facilitate relationships in both B2C and B2B contexts.

Business-to-business (B2B) internet marketing includes the use of all three forms of e-commerce (internet, intranet and extranet) for purchasing goods and services, buying information and consulting services, and submitting requests for proposals and receiving proposals (Kalakota and Whinston, 1997; Watson, Berthon, Pitt and Zinkhan, 2000). The B2B internet-based technologies provide effective and efficient ways in which corporate buyers can gather information rapidly about available products and services, evaluate and negotiate with suppliers, implement order fulfilment over communication links and access post-sales services (Vlosky, Fontenot and Blalock, 2000). From the supplier's side, marketing, sales, and service information is also readily gathered from customers (Archer and Yuan, 2000). This application of internet-based systems for improving supply chain performance forms the basis for B2B e-commerce. The pace of change in this area has been rapid, making it difficult for companies to examine thoroughly the advantages and disadvantages of different ways of managing inter-firm relationships.

2.3 Research Objectives

In brief, the literature suggests that B2B internet usage emphasises the generation and exploitation of new business opportunities, and the enhancement and transformation of inter-organisational relationships in order to make business more efficient. However, there have been no attempts to empirically test the relationship-facilitating aspects of the internet in a B2B situation. Indeed, most of what is known about the potential for internet-facilitated relationships seems to be anecdotal, experiential, ad hoc and descriptive (Peterson, Balasubramanian and Bronnenberg, 1997). Therefore there is a need to construct a comprehensive theoretical framework that incorporates the relationship facilitating aspects of the internet in a B2B context.

Two types of bonds should be incorporated into this theoretical framework. Researchers have identified and categorised elements in relationship exchange processes, using different terms such as technical and social elements (for example, Perry, Cavaye and Coote, 2002), or structural and social bonds (for example, Buttle and Ahmad, 1999; Gordon, 1998; Mattson, 1985; Turnbull and Wilson, 1989). To synthesise these elements, we use the terms "social bonds" and "technical bonds" to categorise the most mentioned elements in the literature because they describe the functions of these elements in a relationship. Social bonds are non-economic investments of time and energy that produce positive interpersonal relationships between the partners. These can range from formal, organisational contacts through to informal, personal ones. Social bonds are often non-economic and more personal than organisational bonds (Buttle and Ahmad, 1999; Rao and Perry, 2003). In contrast, technical bonds are forged when two organisations adapt to each other in some economic or technical way such as product or process adjustments (Wilson and Mummaleni, 1986). Examples include investments in assets that are dedicated to the relationship such as 'just in time' deliveries on demand, or internet capabilities.

Social bonds are not necessarily independent of technical bonds. For example, calculative commitment is centred on the presence of switching costs that 'lock in' at least one partner into the relationship. These switching costs may be created by investments in the technical bonds of the relationship. For example, switching by one partner in a relationship to another supplier could involve costly re-engineering of its processes. More generally, social bonds may need to be in place before knowledge-based technical bonds develop (Turnbull and Wilson, 1989). That is, opportunities for technical bonding emerge as a result of social bonds being in place (Buttle and Ahmad, 1999).

The scant literature on marketing relationships in an internet environment seems to emphasise the internet's influence on several relational constructs individually without distinguishing between the two types of bonds (social and technical) as this research does (for example, Morrison and Firmsone, 2000; Sahay, Gould and Barwise, 1998; Ratnasingam, 2000). For example, research into the internet as a communication medium has concluded that internet technologies are different from other information technology system in terms of the way they transform business operations and practices (Hoffman, Novak and Chatterjee, 1995; Sahay, Gould and Barwise, 1998), particularly the way in which they communicate. However, these bonds are affected by the use of the internet and this needs to be investigated to provide a more holistic view of the internet's impact on inter-firm relationships. In order to address the overall research question, 'How does B2B Internet usage affect bonding in inter-firm relationships in Australia service industries?', three more specific questions were developed:

1. How are the technical bonds in an inter-firm relationship influenced by internet use?
2. How are the social bonds in an inter-firm relationship influenced by internet use?
3. How do firms perceive the impact of internet use on their business performance?

3. Qualitative, Theory-Building Methodology

To explore the internet use and its impact on inter-firm relationships in Australian service industries, the qualitative methodology of convergent interviewing was used. This choice of methodology was justified for its theory-building capability (Bonoma, 1985; Carson, Gilmore, Gronhaug and Perry, 2001). That is, this research was exploratory in order to gather insights into the phenomenon and to provide a better understanding of the issues involved (Mahotra, Hall, Shaw and Oppenheim, 2002).

Table 1:
Summary of Results from Convergent Interviews

Comments	A	B	C	D	E	F	G	H	I	J
The internet's role in inter-firm relationships.										
■ The usage of the internet is a facilitator to the inter-firm relationship	√	√	√	√	√	√	√	√	√	√
The internet facilitates inter-firm communication.										
■ The internet does not replace other forms of communication	√	√	√	x	√	√	√	√	√	√
■ The use of the internet increased inter-firm communication quality.	*	*	√	√	√	√	√	√	√	√
■ The use of the internet facilitates inter-firm information sharing.	*	*	√	√	√	√	√	√	x	√
■ The use of the internet has a positive effect on participation	*	*	√	√	x	√	√	√	√	√
Internet use and technical bonds.										
■ The usage of the internet has little effect on interdependency between our customers and us.	√	√	√	√	√	√	√	√	√	√
■ We are still very dependent on strategic customers and suppliers.	√	√	√	√	√	√	√	√	√	√
■ We are not as dependent on less strategic suppliers.	*	x	√	√	x	√	√	√	x	√
■ Using the internet place higher barriers to leave our strategic relationships.	*	*	√	x	x	√	√	√	x	x
Internet use and social bonds.										
■ Need for cautious use of the internet in relationship management	*	√	√	√	√	√	√	√	√	√
■ Need to develop long-term, close relationship with customers	*	√	√	√	√	√	√	√	√	√
■ The use of the internet has little effect on trust development in the relationship.	x	√	√	x	√	√	√	√	√	√
■ The use of the internet has positive effect on the maintenance of trust	√	√	√	√	√	√	√	√	√	√
■ The use of the internet has positive effect on the satisfaction level with the relationship	√	√	√	√	√	√	√	√	√	√
■ The use of the internet has positive effect on commitment to the relationship	*	*	√	√	√	√	√	√	√	√
The internet is perceived to be positively associated with business performance.										
■ Internet use has positive effect on sales and market share	*	√	√	√	√	√	√	√	√	√
■ Internet use has little effect on short-term profit level	*	*	√	x	√	√	√	x	√	√
■ Internet use has positive effect on long-term profit level	*	*	√	x	√	√	√	√	√	√
■ Internet use has positive effect on return on asset	*	√	√	x	√	x	√	√	√	x

Notes: √ = interviewee is in conformity with the statement
x = interviewee is in disconformity with the statement
* = question had not been raised in the interview

Source: analysis of field data

This convergent interviewing process took the form of a series of ten in-depth interviews in which data was analysed after each interview and used to refine the content of subsequent interviews (Dick, 1990). That is, the process was structured, although the content of each interview remained unstructured to allow for the flexible exploration of the subject matter without determining the answers. Where there was consensus between more than one interviewee about a certain issue, a series of probes was initiated to test the information. Where there was disagreement, probes were initiated for clarification and explanation. Convergence was achieved when no new information could be uncovered (Nair and Riege, 1995).

The interviews were undertaken face-to-face with either the CEO or the general/marketing manager of each of ten services firms varying in size and age. These businesses represent a range of industries, including IT services, delivery, business consulting, financial services and telecommunication. A snowballing technique was used to recruit interviewees. That is, the interviewee was asked to recommend the next interviewee after being interviewed. These managers were key informants because they were closely involved in the relationship building activities in their respective firms and had an understanding of the entire decision making process. The interviews lasted for approximately one hour each in which a semi-structured interviewer's guide, with mainly broad, open-ended questions based on the literature review, was used to ensure a consistent pathway for the interviewing.

In addition, the usual quality control mechanisms including triangulation were used (Carson, Gilmore, Gronhaug and Perry, 2001). Content analysis was used to analyse the interview information, attaching codes to data. This research developed a starting list of codes prior to commencing the fieldwork that was progressively added to as the interviews proceeded. When the coding was complete, matrices were developed to summarise the data (Miles and Huberman, 1994).

4. Discussion of Findings

The first outcome of the convergent interviewing process is a list of issues or themes progressively raised and investigated in the interviews. Table 1 contains the list of the themes that arose from our interviews about our three research objectives. The table shows how the number of issues involved in the topic area increased as each interviewee in turn added their insights to what had been said before, until the final interview added no new issues. Agreements between interviewees are shown, as are disagreements that could be explained. The interviewees' names are disguised with the letters A to I used to maintain confidentiality. These findings are discussed next, before they are placed within the literature to develop a theoretical framework of internet-facilitated B2B relationships.

4.1 Overall Picture

Overall, the findings presented in Table 1 from the convergent interviews provided evidence that using the internet in a B2B setting affects the inter-firm relationship. However, it would appear that the internet does not change the general nature of an intended inter-firm relationship. Respondents agreed that delivery of service quality is essential to building and maintaining relationships. For example, one interviewee (Interviewee E) commented, 'If I don't have the solution to your problem or you don't have the needs for certain services, the relationship does not exist.'

Most interviewees believed that the use of the internet enables them to effectively and efficiently improve their services to customers, and that this has generally enhanced their relationship with another business, particularly, their customers. Moreover, interviewees agreed that the internet had become a strategic part of their overall business activities. More specifically, the internet appears to be a facilitator of inter-firm relationships because it provides a new information infrastructure which enables them to develop and maintain their relationship with core trading partners. Interviewees also emphasised that internet usage probably plays a more important role in customer relationship management than supplier relationship management. Most of the interviewees indicated that the usage of the internet has little effect on their relationships with suppliers. The bonds shown in the middle part of Figure 1 were the most important ones in each of the two categories explored. They appeared to be more relevant in an internet environment than other alternatives that are in the relationship marketing parent literature such as 'conflict'.

4.2 Technical Bonds

Technical or structural bonds, such as dependence and communication in the business process, emerged when the first research question was investigated ('How are the technical bonds in an inter-firm relationship influenced by internet use?'), as shown in Table 1. However, communication emerged as both a technical bond and a social bond. The importance of communication and sharing of information in exchange relationships has been particularly emphasised in the literature (Anderson and Narus, 1990; Bialaszewski and Giallourakis, 1985; Duncan and Moriarty, 1998; Wilson and Mummalaneni, 1986). Indeed, the study of communication is fundamental in a study of any relationship (Mohr and Sohi, 1995) and is the foundation of customer-centric relationship marketing (Duncan and Moriarty, 1998). Admittedly, communication is categorised as a social bond in most literature (for example, Buttle and Ahmad, 1999; Ulrich, 1989). Nevertheless, in this research about internet-facilitated relationships, the economic investment in technical infrastructure initially made communication seem to be a technical bond.

However, the convergent interviews showed that it is both a technical and social bond. The interviewees commented that while informal and personal contacts make internet-facilitated communication a social bond, it also acts as a technical bond because internet-facilitated communication involves economic investment in the communication technology and adjustments of business processes such as the exchange of formal documents such as agreements and invoices.

Convergent interviews also showed that the use of the internet improves communication quality and increases the amount of information that can be shared among the relevant parties. Firms still rely heavily on personal, face-to-face communication when establishing social bonds in their relationships with other businesses. The internet also makes communication flow easier when compared with other media. For example, one of the interviewees (Interviewee B) commented: ‘We communicate a lot more now with our overseas customers’. Furthermore, the internet creates time effectiveness and reduces errors in commercial data. As interviewee H stated: ‘When dealing with documents, graphs and figures, information can be shared in a timely and accurate manner.’ Nevertheless, there is an improvement in communication quality and effectiveness. In particular, the speed of transmission of documents, the number of businesses they can communicate with, the frequency and reach of communication are thought to have improved through the use of the internet. For example, one interviewee (Interviewee B) commented: ‘We communicate with a much larger range now…like our partners’ partners...the communication circle is certainly a lot wider.’

Most interviewees commented that the usage of the internet does not have much effect on the interdependency between the firm and their exchange partners. This is because dependence on an exchange partner is determined by a number of factors such as sufficient knowledge about the trading partner and the degree of operational integration, rather than just product-related factors such as price and location. For example, ‘The reliance on our customers is high regardless of whether we use the internet or not’ (Interviewee J). However, some interviewees commented that the internet creates switching barriers because the competency of using the internet has become one of the criteria for choosing new business trading partners. For example, ‘We don’t start anyone if they are not on the internet…Once they are locked in, not financially but in the sense of their business processes and systems, it is harder to leave the relationship’ (Interviewee F).

4.3 Social Bonds

Social bonds such as trust, satisfaction and commitment emerged when the second question was examined (‘How are the social bonds in an inter-firm relationship influenced by internet use?’). Findings indicate that the internet is considered by the interviewees to have had only little impact on the social bonds in an inter-firm relationship. Most interviewees agreed upon cautious use of the internet. That is, most interviewees emphasised that a business relationship cannot rely solely on the use of the internet to build trust. Indeed, if the internet is not used properly, it can damage and hinder the relationship. As one interviewee (Interviewee E) stated: ‘If it (the internet) is not used properly it can destroy the relationship built over time.’ As another example, most interviewees commented that emails could not convey emotions, body language, tone of voice and general atmosphere in the communications between the two parties – ‘…trust does not come from the relationship built over the internet. It comes from face-to-face contact and the ability to deliver satisfactory performance’ (Interviewee B).

Nevertheless, the internet is thought to have some impact on satisfaction with the relationship with trading partners. For example, one interviewee commented that, ‘The internet allows us to provide something we wouldn’t or couldn’t do before…it certainly improved customers’ satisfaction levels’ (Interviewee B); and ‘The internet provides information to our business partners as to how well we are performing on the particular job, and that determines how satisfied they are’ (Interviewee C). Similar to its effect on trust, the internet has some effect on commitment. In turn, the social bonds like commitment are somewhat related to technical bonds such as dependence. For example, one interviewee commented that '…the more you are dependent on another business, the more likely you are committed to the relationship with them' (Interviewee D).

Finally, we address the last research question 'How do firms perceive the impact of internet use on their business performance?'. When firms consider the impact of the internet use on their business performance, they define this with reference to sales and market share, profit level and return on assets. Indeed, our findings indicate that businesses believe that the use of the internet is, or should be, integrated into the business strategy, and that it is perceived to have positive effects on long-term business performance. For example, as one interviewee (E) commented: '…there is a lag time from the time we started and the time we actually started making money from it.' In turn, this perceived positive or negative feedback about their business performance determines the level of internet use by a firm.

In brief, the convergent interviews found that the major relational bonds affected by internet usage are communication, dependence, trust, satisfaction and commitment, which underpins the theoretical framework discussed in the next section.

4.4 Theoretical Framework of Internet-Facilitated B2B Relationships

From the scant internet/relationship marketing literature and the findings discussed above, the final outcome of the convergent interviewing methodology – a new theoretical framework – was developed. This framework links together the technical and social bonds in an inter-firm relationship when firms use the internet in their exchange processes. Versions of the framework were discussed and progressively revised with each convergent interviewee. The final framework is provided in Figure 1. The model's linkages between the bonds are discussed next, within the context of the non-internet relationship marketing literature because the internet/relationship marketing literature is so sparse.

The literature suggested the interactivity and customisation elements of the internet can not only enhance the interchange of information between partners (Teich, Wallenius and Wallenius, 1999), but also overcome time and geographic limitations and multimedia transmission (Poon and Swatman, 1996). The convergent interviews confirmed this influence of internet usage on communication, thus, in the framework, B2B internet usage is thought to be positively associated with communication. As well, the internet may empower buyers to find lower-priced suppliers at lower search costs, thus serving as a relatively cost-effective, alternative form of information-gathering for businesses (Hoffman and Novak, 1996), and thus facilitating substitutability of the exchange relationship (Poon and Swatman, 1996). Thus, a firm's dependency on a single supplier or a single buyer may be reduced (Ratnasingam, 2000). However the convergent interviews disconfirmed this influence of the internet usage on dependence. Indeed, exchange partners may be locked into an internet-facilitated relationship. Thus, we argued that B2B internet usage is positively associated with dependence.

Next, the benefits provided by the internet such as availability and transparency of information, efficient information transfer and interactivity have a positive effect on trust when exchange partners deal with each other via the internet (Warrington, Abgrab and Caldwell, 2000; Bauer, Grether and Leach, 2002). The internet also has the potential to increase customer satisfaction levels (File and Prince, 1993; Pine, Peppers and Rogers, 1995), particularly through customisation and personalisation of the technologically-delivered service (Peterson and Lucas, 1996; Kalakota and Whinston, 1997). Therefore, B2B internet usage is positively associated with both trust and satisfaction.

Our convergent interviews also confirmed the interaction of structural and social bonds. That is, literature identifies communication as a major precursor of trust (Anderson and Weitz, 1989; Anderson and Narus, 1990; Morgan and Hunt, 1994). Communication fosters trust by assisting in resolving disputes and aligning perceptions and expectations. Similarly, trust in an exchange partner significantly enhances satisfaction with business performance. That is, trust is the critical determinant of greater satisfaction (Achrol, 1997; Siguaw, Simpson and Baker, 1998; Garbarino and Johnson, 1999).

In turn, according to the framework, high levels of trust lead to high levels of commitment to the relationship, as noted in the literature (Moorman, Zaltman and Deshpande, 1992; Morgan and Hunt, 1994). Indeed, relationships with high levels of trust are highly valued and therefore participants are willing to commit themselves (Morgan and Hunt, 1994). Next, in the service context of the framework, customer satisfaction

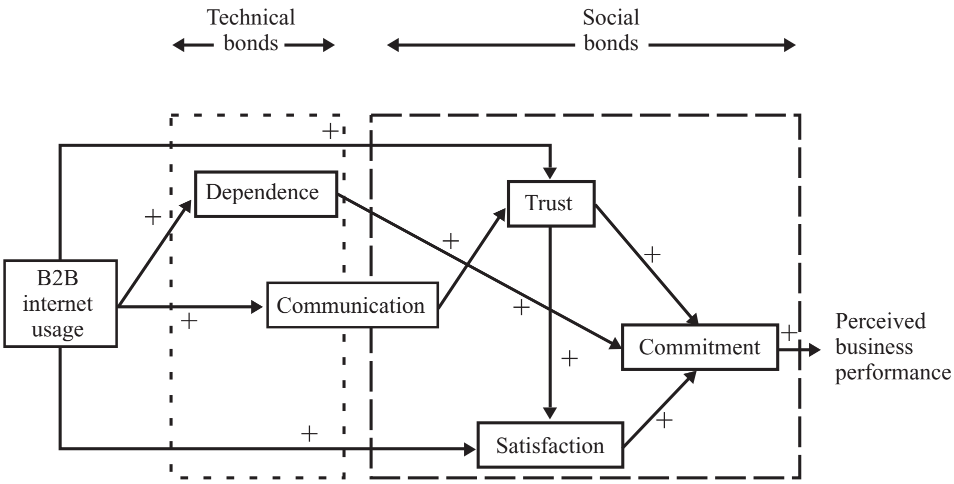

Figure 1. A model of the Theoretical Framework Developed from the Literature and Interview Data

Source: developed for this research.

leads to commitment to a service provider (Keaveney, 1995). Dependence of a buyer on a supplier leads to buyer compliance (Joshi and Arnold, 1998), acquiescence (Morgan and Hunt, 1994; Bendapudi and Berry, 1997) and commitment (Ganesan, 1994). High interdependence between exchange partners not only allows mutual adjustments in the ongoing relationship in order to cope with the changing environment more effectively (Heide, 1994), but also motivate exchange partners to cooperate with each other, proactively share information, commit to the relationship, and align individual interests to the ongoing relationship. The final part of the framework shows that the outcomes of social and technical bonding are linked with higher levels of business performance, although this had not been identified in the literature.

5. Conclusions and Implications

In summary, this research found that the internet does not hinder inter-firm relationships. The internet is not being used at the expense of more traditional and personal forms of communication. Moreover, internet use seems to have little influence on the level of trust in internet exchange partners and the dependence they have on one another at this relatively early stage of adoption. It is also thought that internet use is linked to improved business performance.

Earlier research asserted that the relationship between end consumers and businesses may suffer because of a reduced level of interpersonal interaction (for example, Sweeney, 2000). In contrast, this research found that the internet had little negative impact on relational bonding in the B2B context studied. This suggests that internet use in service industries is not detrimental to established relationships because trade efficiencies are more of a concern for businesses than the social aspects. In brief, because to date there is little research about the impact of internet use on an inter-firm relationship, the major contribution of this paper is the conceptual framework that has been developed in the light of findings of the exploratory work undertaken to date. In turn, this work can be used to guide future research in this growing area of academic inquiry.

The results of this study point to several issues that managers need to consider when incorporating the internet into their exchange processes. The focus on both technical and social bonds in an inter-firm relationship should further help managers by more precisely identifying the issues that their businesses may wish to consider in their relationship management.

First, the study found that the benefits of effectively implemented internet technology applications leads to positive outcomes in terms of relationship marketing. By using the internet, relationship partners can create a better understanding of each other through better communication and information exchange. Service firms can use the internet to strengthen relationships with exchange partners in two main ways. The internet can be used to reduce transaction costs and thus improve trade efficiencies. The second way for service firms to use the internet to enhance their relationships with customers is to improve customer service levels by providing new forms of service delivery, improving customer intimacy, responding more rapidly to customer needs, and offering customers the opportunity to help themselves through the internet. This suggests that the internet should be viewed as a complement, rather than as a substitute, to personal interactions.

5.1 Limitations and Need for Further Research

The findings in this research are limited to the business service sectors and to Australia specifically. The impact of the internet may differ from industry to industry, and even from business to business (Pires and Aisbett, 2002). An industry characterised by greater or lesser internet adoption is likely to have different patterns of communication and, in turn, have different effects on exchange relationships as a whole.

Finally, further research is needed to test the theoretical framework proposed in this paper. Specifically, further work is required to validate and generalise the findings to broader settings, using a survey methodology. Thus, after the analytic generalisation summarised in Figure 1 was finalised, structural equation modelling of survey data from firms about how their relationships with banks had changed with internet banking, tested the model of Figure 1 for statistical generalisability. Most of the model's variables and relationships were shown to be valid. Another direction for further research would be to expand the framework to include other variables such as value (Kothandaraman and Wilson, 2000; Eggert and Ulaga, 2002) to further enrich the understanding of the impact of the internet on inter-firm relationships.

References

Achrol, R., 1997. Changes in the Theory of Interorganizational Relations in Marketing: Toward a NetworkParadigm. Journal of the Academy of Marketing Science 25 (1), 56-72.

Anderson, J. and Weitz, B., 1989. Determinants of Continuity in Conventional Industrial Channel Dyads. Marketing Science 8 (4), 310-23.

Anderson, J. and Narus, J. A., 1984. A Model of the Distributor's Perspective of Distributor-Manufacturer Working Relationships. Journal of Marketing 48 (4), 62-74.

Anderson, J. and Narus, J.A., 1990. A Model of Distributor Firm and Manufacture Firm Working Partnerships. Journal of Marketing 54 (1), 42-59.

Araujo, L. and Easton, G., 1996. Network in Socioeconomic Systems. In: Iacobucci, D. (ed.) Networks in Marketing. London, Sage, pp. 63-107.

Archer, N. and Yuan,Y., 2000. Managing Business-to-Business Relationships Throughout the e-Commerce-Procurement LifeCycle. Internet Research: Electronic Networking Applications and Policy 10 (5), 385-395.

Australian Bureau of Statistics, 2001. Australians Embrace the Internet. Australian Government Publishing Service Media Release. Available, http,//www.abs.gov.au/Ausstats/, [Accessed 20 November 2001].

Bauer, H.H., Grether, M. and Leach, M., 2002. Building CustomerRelations Over the Internet. Industrial Marketing Management 3 (2), 155-63.

Bendapudi, N. and Berry, L., 1997. Customer's Motivations for Maintaining Relationships with Service Providers. Journal of Retailing 73 (1), 15-37.

Bennett, R., 1997. Export Marketing and the Internet, Experiences of Web Site Use and Perceptions of Export Barriers Among UK Businesses. International Marketing Review 14 (5), 324-344.

Berthon, P., Pitt, L. and Watson, R., 1996. Marketing Communication and the World Wide Web. Business Horizon 39 (5), 24-32.

Bialaszewski, D. and Giallourakis, M., 1985. Perceived Communication Skills and Resultant Trust Perceptions Within the Channel of Distribution. Journal of the Academy Marketing Science 13 (1/2), 206-17.

Bonoma, T. V., 1985. Case Research in Marketing, Opportunities, Problems, and a Process. Journal of Marketing 49 (5), 199-208.

Buttle, F. and Ahmad, R., 1999. Bonding With Customers. Proceedings of Academy of Marketing Conference. University of Stirling.

Carson, D., Gilmore, A., Gronhaug, K. and Perry, C., 2001. Qualitative Research in Marketing. Sage, London.

Claycomb, C. and Martin, C., 2001. Building Customer Relationships: An Inventory of Service Providers' Objectives and Practices. Marketing Intelligence and Planning 19 (6), 385-399.

Deighton, J., 1996. The Future of Interactive Marketing, Harvard Business Review 74 (6), 151-162.

Deighton, J., 1997. Commentary on 'Exploring the

Implications of the Internet for Consumer Marketing'. Journal of Academy of Marketing Science 25 (4), 347-353.

Dick, B., 1990, Convergent Interviewing, Version 3, Chapel Hill, Brisbane.

Duncan, T. and Moriarty, S.E., 1998. A Communication-based Marketing Model for Managing Relationships. Journal of Marketing 62 (2), 1-13.

Eggert, A. and Ulaga, W., 2002. Customer Perceived Value: A Substitute for Satisfaction in Business Markets? Journal of Business and Industrial Marketing 17 (2/3), 107-18.

File, K.M. and Prince, R.A., 1993. Evaluating the Effectiveness of Interactive Marketing. Journal of Services Marketing 7 (3), 49-58.

Gabarino, E. and Johnson, M.S., 1999. The Different Roles of Satisfaction, Trust and Commitment in Customer Relationships. Journal of Marketing 63 (2), 70-87.

Geiger, S. and Martin, S., 1999. The Internet as a Relationship Marketing Tool – Some Evidence from Irish Companies. Irish Marketing Review 12 (2), 25-36.

Geller, L. K., 1998. The Internet, the Ultimate Relationship. Direct Marketing 6 (5), 36-38.

Ganesan, S., 1994. Determinants of Long-term Orientation in Buyer-Seller Relationships. Journal of Marketing 58 (2), 1-19.

Gillenson, M., Sherrell, D. and Chen, L., 1999. Information Technology as the Enabler of One-to-One Marketing. Communications of the Association for Information Systems [Online], Available, http,//cais.isworld.org/articles/2-18/article.htm, [Accessed 24 January 2000].

Global Internet Statistics, 2001. [Online], Available, http,//www.glreach.com/globstats/index.php3, [Accessed 21 November 2001].

Gordon, I., 1998. Relationship Marketing. Brisbane, John Wiley and Sons.

Griffith, D. A. and Palmer, J. W., 1999. Leveraging the Web for Corporate Success. Business Horizons 42 (1), 3-11.

Gummesson, E., 1987. The New Marketing - Developing Long Term Interactive Relationships. Long Range Planning 20 (4), 10-20.

Gummesson, E., Lehtinen, U. and Gronroos, C., 1997. Comment on Nordic Perceptive on Relationship Marketing. European Journal of Marketing 31 (1), 10-16.

Hakansson, H., 1982. International Marketing and Purchasing of Industrial Goods, An Interaction Approach by IMP-Group, John Wiley and Sons, London.

Hamill, J. and Gregory, K., 1997. Internet Marketing in the Internationalisation of UK SMEs. Journal of Marketing Management 13 (1), 9-28.

Hamill, J., 1997. The Internet and International Marketing. International Marketing Review 14 (5), 300-323.

Healy, M., Hastings, K., Brown, L. and Gardner, M., 2001. The Old, the New and the Complicated - A Trilogy of Marketing Relationships. European Journal of Marketing 35 (1-2), 182-93.

Heide, J., 1994 Inter-Organization Governance in Marketing Channels, Journal of Marketing, 58, (1), 71-86.

Heinen, J., 1996. Internet Marketing Practices. Information Management and Computer Security (4,5), 7-14.

Hoffman, D. L. and Novak , T. P., 1996. Marketing in Hypermedia Computer-mediated Environments: Conceptual Foundations, Journal of Marketing 60 (3), 50-68.

Hoffman, D., Novak, T. and Chatterjee, P., 1995. Commercial Scenarios for the Web: Opportunities and Challenges. Journal of Computer Mediated Communications [Online], Available, http://shun.huji .ac.il/jcmc/vol1/issue3/hoffman/html, [Accessed 24 January 2000].

Jackson, B. B., 1985. Building Customer Relationships that Last. Harvard Business Review 6 (6), 120-128.

Johanson, J. and Mattsson, L. G., 1987. Inter-organisational Relations in Industrial Systems - A Network Approach Compared with the Transactional Cost Approach. International Studies of Management and Organisations 17 (1), 34-48.

Joshi, A. and Arnold, S., 1998. How Relational Norms Affect Compliance in Industrial Buying. Journal of Business Research 41 (2), 105-14.

Kalakota, R. and Whinston, A.B., 1997. Electronic Commerce, A Manager's Guide, Addison-Wesley, Reading, Massachusetts.

Keaveney, S.M., 1995. Customer Switching Behaviour in Service Industries: an Exploratory Study. Journal of Marketing 59 (2), 71-82.

Kothandaraman, P. and Wilson, D.T., 2000. Implementing Relationship Strategy. Industrial

Marketing Management 29 (4), 339-49.

Lewis, M.C. and Lambert, D.M., 1991. A Model of Channel Member Performance, Dependence and Satisfaction, Journal of Retailing 67 (2), 205-25.

Malhotra, N., Hall, J., Shaw, M. and Oppenheim, P., 2002. Marketing Research: An Applied Orientation, 2nd Edition, Prentice Hall, Sydney.

Mattson, L. G., 1985. An Application of a Network Approach to Marketing, Defending and Changing Marketing Positions. In: Dholakia, N. and Greenwich, J. (eds.), Changing the Course of Marketing Alternative and Paradigms for Widening Marketing Theory. JAI press.

Miles, M.B. and Huberman, A.M., 1994. An Expanded Sourcebook, Qualitative Data Analysis. Sage, Thousand Oaks.

Mohr, J. and Sohi, R.S., 1995. Communication Flows in Distribution Channels: Impact on Assessments of Communication Quality and Satisfaction. Journal of Retailing 7 (3), 393-417.

Moorman, C., Zaltman, G. and Deshpande, R., 1992. Relationships Between Providers and Users of Market Research: The Dynamics of Trust Within and Between Organisations, Journal of Marketing Research 29 (4), 314-28.

Morgan, R. and Hunt, S., 1994. The Commitment - Trust Theory of Relationship Marketing. Journal of Marketing 58 (3), 20-38.

Morrison, D. and Firmsone, J., 2000. The Social Function of Trust and Implications for e-Commerce. International Journal of Advertising 19 (2), 599-623.

Nair, G. S. and Riege, A. M., 1995. Using Convergent Interviewing to Develop the Research Problem of a Post Graduate Thesis. Marketing Education and Researchers International, Gold Coast.

National Office for the Information Economy (NOIE), 2001. B2B e-Commerce, Capturing Value Online [on line], Available, http,www.noie.gov.au/publications/NOIE/B2B, [Accessed on 26 September 2001].

Palmer, A., 1997. Defining Relationship Marketing: an International Perspective. Management Decision 35 (4) 319-321.

Palmer, A., 2000. Co-operation and Competition: A Darwinian Synthesis of Relationship Marketing. European Journal of Marketing 34 (5/6) 687-704.

Peppers, D., Rogers, M. and Dorf, B., 1999. Is Your Company Ready for One-to-One Marketing? Harvard Business Review 77 (1), 151-160.

Perry, C., Cavaye A. and Coote, L., 2002. Technical and Social Bonds Within Business-to-Business Relationships. Journal of Business and Industrial Marketing 17 (1), 75-88.

Peterson, R.M. and Lucas, G.H., 1996. Consumers and Technology: Are We Creating Relationships or Distance? Proceeding in the Research Conference in Relationship Marketing: Theory, Methods and applications, Center for Relationship Marketing, Roberto C, Goizueta Business School, Emory University, Atlanta.

Peterson, R.A., Balasubramanian, S. and Bronnenberg, B.J., 1997. Exploring the Implications of the Internet for Consumer Marketing. Journal of the Academy of Marketing Science 25 (4), 329-46.

Pine, B.J., Peppers, D. and Rogers, M., 1995. Do You Want to Keep Your Customers Forever? Harvard Business Review 73 (2), 103-14.

Pires, G.D. and Aisbett, J., 2002. The Relationship Between Technology Adoption and Strategy in Business-to-Business Markets: The Case of e-Commerce. Industrial Marketing Management 31 (9), in press.

Poon, S. and Swatman, P., 1996. Internet-Enabled Strategic Advantage: a New Perspective on Small Business Inter-organisational Relationships. Working paper, Swinburne University of Technology.

Poon, S. and Jeven, C., 1997. Internet-Enabled International Marketing, a Small Business Perspective. Journal of Marketing Management 13 (1), 35-58.

Quelch, J.A. and Klein, L.R., 1996. The Internet and International Marketing. Sloan Management Review 38 (Spring), 60-75.

Rao, S. and Perry, C., 2003. Thinking About Relationship Marketing: Where Are We Now, Journal of Business and Industrial Marketing, forthcoming.

Ratnasingham, P., 2000. The Influence of Power on Trading Partner Trust in Electronic Commerce. Internet Research: Electronic Networking Applications and Policy 10 (1), 56-63.

Sahay, A., Gould, J. and Barwise, P., 1998. New Interactive Media: Experts' Perceptions of Opportunities and Threats for Existing Businesses. European Journal of Marketing 32 (7/8), 616-28.

Schubert, P. and Selz, D., 1999. Web Assessment: Measuring the Effectiveness of Electronic Commerce Sites Going Beyond Traditional Marketing Paradigms. The 32nd HICSS Conference, Hawaii.

Schultz, D. E., 1997. Relationship Marketing: Cutting Both Ways. Marketing News (31) 8.

Sheth, J. and Parvatiyar, K., 1995. Relationship Marketing in Consumer Markets, Antecedents and Consequences. Journal of the Academy of Marketing Science 23 (4), 255-71.

Siguaw, J.A., Simpson, P.M. and Baker, T.L., 1998. Effect of Supplier Market Orientation and Channel Relationship: the Distributor Perceptive, Journal of Marketing 62 (3), 99-111.

Smith, M. L., 1998. One to One, Put the Customer in the Information Driver Seat and Build Better Relationships. Direct Marketing 60 (9), 37-40.

Sweeney, A., 2000. The Internet and Customer Relationships in a Financial Institution. PhD thesis, University of Southern Queensland.

Teich, J., Wallenius, H. and Wallenius, J., 1999. World-Wide-Web Technology on Support of Negotiation and Communication. International Journal of Technology Management 17 (1,2), 223 - 39.

Thirkell, P. C., 1997. Caught by the Web: Implications of Internet Technologies for the Evolving Relationship Marketing Paradigm. Proceedings of the Three American Marketing Association Special Conferences, Dublin, Ireland.

Turnbull, P. W. and Wilson , D., 1989. Developing and Protecting Profitable Customer Relationships. Industrial Marketing Management 18, 233-238.

Ulrich, D., 1989. Tie the Corporate Knot: Gaining Complete Customer Commitment. Sloan Management Review 30 (2), 19-27.

Van de Ven, A. H., 1992. Suggestions for Studying Strategy Process, A Research Note. Strategic Management Journal 13 (4), 169-188.

Vlosky, R.P., Fontenot, R. and Blalock, L., 2000. Extranets' Impacts on Business Practice and Relationships. Journal of Business and Industrial Marketing, 15 (6), 438-457.

Warrington, T.B., Abgrab, N.. and Caldwell, H.M., 2000, Building Trust to Develop Competitive Advantage in e-Business Relationships, Competitiveness Review, 10, (2), 160-168.

Watson, R. T., Berthon, P., Pitt, L.F. and Zinkhan, G.M., 2000. Electronic Commerce, The Strategic Perspective. Fort Worth, The Dryden Press.

Wilson, D. T. and Mummalaneni, V., 1986. Bonding and Commitment in Buyer-Seller Relationships, A Preliminary Conceptualisation. Industrial Marketing and Purchasing 1, (3), 44-58.

Wilson, D.T., 1976. Dyadic Interaction: An Exchange Process. In: Anderson, B.B. (ed.) Advances in Consumer Research, Association for Consumer Research, Urbana.

Biographies

Chad Perry is a retired Professor of Marketing and Management at the Graduate Management College of Southern Cross University, Gold Coast, Queensland, Australia. He has written or co-written three textbooks, and more than 100 journal, conference and other papers, including articles published in international journals such as The European Journal of Marketing, Qualitative Market Research: an International Journal (he is on the Editorial Board of these journals), International Business Review, Journal of Business and Industrial Marketing, Asia Journal of Marketing and Management Science. He has been invited to present at more than 20 research seminars at more than 12 Australian, New Zealand and European universities. He is included in the 2001 Edition of Who's Who in Australia.

Sally Rao is a Lecturer in Marketing at School of Commerce of the University of Adelaide. Her PhD is currently under examination. She has published in several journals including Journal of Business and Industrial Marketing, Journal of Qualitative Market Research, and European Journal of Marketing.

Lorelle Frazer is an Associate Professor in the School of Marketing at Griffith University. She holds degrees in education and business and a PhD in marketing. Her research has been published in journals such as the Journal of Business Research, Journal of Consumer Marketing, European Journal of Marketing and the Journal of Marketing Channels. Lorelle is a member of the International Society of Franchising and she chaired their international conference in Las Vegas, 2001.

Correspondence Addresses

Sally Rao, School of Commerce, The University of Adelaide, 233 North Terrace, Adelaide, SA 5000, Australia, Telephone: +61 (8) 8303 4755, Facsimile: +61 (8) 8303 4368, E-mail:

sally.rao@adelaide.edu.au; Chad Perry, Graduate College of Management, Southern Cross University, PO Box 113, Coolangatta, QLD 4225, Australia, Telephone: +61 (7) 5536 2964, Facsimile: +61 (7) 5536 6794, E-mail: cperry1@scu.edu.au; Lorelle Frazer, School of Marketing, Griffith University, Brisbane, QLD 4111, Australia, Telephone: +61 (7) 3382 1142, Facsimile: +61 (7) 3382 1981, E-mail: l.frazer@mailbox.gu.edu.au

Components of Wine Prices for Australian Wine: How Winery Reputation, Wine Quality, Region, Vintage, and Winery Size Contribute to the Price of Varietal Wines

Bith-Hong Ling & Larry Lockshin

Abstract

Australian wines are identified by the varietal names of the grapes rather than the regions as in France and other traditional wine producing countries. This paper uses the concept of hedonic price theory to investigate a range of extrinsic characteristics' ability to predict prices for different climate regions (warm and cool) and four major wine varieties of Australian wines, two reds (shiraz and cabernet) and two whites (chardonnay and riesling). The effects of winery reputation (wine company/brand), winery size (production scale), age of the wine, and region of origin (wine grape source) contributing to the relationship between price and quality attributes of Australian wines are investigated, based on 1880 observations of bottled wines. Wine quality rating and winery/brand reputation have major effects on the price, while region and size of winery have differential effects depending on the variety of grape. Vintage has only a minor effect.

Keywords: Australian wine, Wine attributes, Wine brand, Wine price, Hedonic price analysis

1. Introduction

The vibrant nature of the Australian wine sector is typified by the compound annual growth rate of exports of over 18% from 1988 to 2001. This compares to a world growth rate of just 3.6% over the same period (AWBC, 2001). Australian wines have increased from just over one percent of world wine export value to 5.5% in the same period. The growth in volume and value of exports has been accompanied domestically with an increase in the consumption of bottled wine compared to the consumption of cask (or bag in the box) wine (Anderson et al., 2001). Both of these trends have raised the price of the average bottle of Australian wine over the same 13 year period.

Australian wine production practices have differed in many key ways from those of the traditional European wine producing countries (Halliday, 1999). Wines are identified by the varietal names of the grapes rather than the regions as in France and other traditional wine producing countries. Also, wines are often blended across regions. Brands are important identifiers for the wines, and like in Europe, some producers have better reputations than others for wine quality. But there is a trend to single region wines and the establishment of the Australian-EU trade agreement for wine has resulted in the formal identification of regions, now called geographic indicators (AWBC, 1994; Ryan, 1994). This has awakened interest in the value of regions compared to wine brands (Tustin and Lockshin, 2001). Also wine companies have merged and created multiple wines under specific brand names, so the reputation that accrues to a brand may be related to a number of different wines at different price points. This vertical ranging is similar to how automobile brands seek to establish a halo effect from the higher priced models to the lower end of the range.

Hedonic price analysis has been used to measure the marginal value or contribution to the price for a number of different products. Wine is one product well suited to this type of analysis, due to its highly differentiated forms and the difficulty in objectively assessing quality (Oczkowski 2001). This paper uses hedonic price analysis to measure the impact on price of winery brand name, wine quality, region, size of the winery (processing capacity), and vintage date. These objective elements are available to consumers when making a choice of wines. The quality rating of the wine is available to consumers through ratings published by various wine writers and critics. Often these are displayed on the retail shelf. Understanding the value of each of these elements is useful for wine marketing managers. Knowledge of the relative importance of brand or region to consumers would allow marketing managers to decide how much each should be emphasized in promotion or even how to organize products on the shelves. Small producers need to know whether region is an important component, because with limited funds to spend, they could band together to promote regions rather than their own brands. Though the quality of the wine is a subjective judgment, wine writers are believed to influence consumer perceptions. Hedonic price research, using wine critics' evaluations, can estimate the value of these judgments. The results then are useful for allocation of scarce resources to the most efficient factors in informing consumers and maintaining or increasing prices.

The major difference between this paper and the previous use of the hedonic price function for Australian wines (Combris et al., 1997, 2000; Oczkowski, 1994, 2001; Schamel and Anderson, 2001) is the specification of an equation for each variety. This allows us to measure the value of the independent variables separately for each type of wine. This makes sense, as the reputations of different regions for wine quality are linked to specific varieties, and this is usually related to the climate as either cool or warm (White, 1995). One can add regions and varieties to a single equation to find the partial value of each, but this method does not allow differential values to be estimated for each variety, and therefore, we don't know if all varieties behave similarly. Following Oczkowski (2001), we also used two stage least squares (2LS) in order to first estimate the quality rating before including it in the hedonic price equation. This methodology takes explicit account of the fact that quality itself is subjective and even in the mind of the quality rater (James Halliday here) it is often influenced by the reputation (brand) and price of the wine.

We present our work in several sections. First we review the literature on hedonic pricing and follow that with the model specification and data. We present the results next along with the discussion. We conclude with implications and some ideas for future research.

2. Review of Literature

Hedonic price analysis is based on the hypothesis that any product represents a bundle of characteristics that define its quality and therefore price. The theoretical foundation for this type of research was first examined by Rosen (1974). The observed price for a good is the sum of the implicit prices for the attributes. Various independent variables, often quality indicators, are regressed on the retail price. The major issue with this type of analysis is that supply and demand factors are part of the price as well as the quality attributes (Unwin, 1999). The solution proposed by Arguea and Hsiao (1993) is to pool cross sectional data specific to a particular side of the market rather than measure a single product. We follow their recommendation.

Wine is a product that varies with vintage year, producer, region, and production technique among other factors. Consumers often find it difficult to judge the quality of wine before actually drinking the wine (Charters et al., 1999). They use label information to help make an informed choice. These extrinsic factors (Olson and Jacoby, 1972) are typically the major source of quality determination before purchase. The reputation of the winery (brand), the region of origin, the variety, and even third party quality ratings can be used by the consumer to help make the purchase decision. Shapiro (1983) modeled the reputation effects for high quality products. He showed that reputation allows some producers to sell their products for a premium, and he based this on the interpretation that these reputation effects are the outcome of investments in building that reputation. He also stated that it is costly for consumers to gain information in some environments and that learning about reputations is an effective way to reduce their decision making costs.

Oczkowski (1994) did the first hedonic pricing study of Australian wine. He showed that the log linear form was the best function to model retail prices for six wine attributes. Reputation effects were significant, but quality effects were not. Nerlove (1995) examined the Swedish wine market, a government monopoly, which allowed him to assume totally exogenous prices. His form of the equation was similar to Oczkowski with similar results. Combris et al. (1997) estimated a hedonic price equation for Bordeaux wines using intrinsic wine quality judgments of acid, fruit, palate by expert tasters, as well as the extrinsic factors of reputation and vintage. There most of the variance in price was explained by extrinsic factors, especially the reputation as measured by the classification of the winery (first growth, second growth, etc.). The same authors recently published a paper using the same methodology for Burgundian wines rather than Bordeaux wines (Combris et al 2000). The same effects were noted, with reputation as measured by ranking (rather than classification) and vintage having the largest effect, but some of the sensory measures 'boosted' these objective quality effects, because the sensory characteristics were correlated with the ranking of the wineries. Landon and Smith (1997, 1998) added extrinsic factors and intrinsic factors to their hedonic price analysis for Bordeaux wines. They found that reputation factors were most significant in explaining the price consumers were willing to pay for Bordeaux wines, but the estimated coefficients varied over vintages.

Schamel and Anderson (2001) used two separate wine quality rating sources to analyse Australian and New Zealand wines. Their method pooled all the wines and regions in a series of equations for each year. They showed that winery reputation, region, variety, and quality estimation were all significant in some of the equations using Barossa shiraz as the relative comparison point in the dummy variable estimation. The trends were similar in both data sets. They also showed that region has become more important over the 10 year period of their data.

One of the major issues in using hedonic price techniques with wine is the subjective measure of quality (Oczkowski 2001). The objective characteristics on the label are easy to define and easy for consumers to view. However, ratings or reputations of wineries and ratings of individual wines by wine writers are purported to carry weight with the consumer, but little empirical evidence exists as to their effects. The two papers by Combris et al. (1997, 2000) demonstrate that the reputation as measured by the classification of Bordeaux wineries, or the ranking of Burgundian wineries has a major effect on the price, while quality assessments by tasters have little effect. Oczkowski's paper (2001) uses multiple reputation ratings by different wine writers to demonstrate this factor has the largest effect on wine prices as well.

Oczkowski (2001) incorporated the error rates in his analysis by using multiple wine writer ratings in a confirmatory factor analysis prior to the regression. He then goes on to use 2SLS to measure both quality and reputation as attributes containing measurement error. The fit statistics and error rates show that 2SLS is superior to OLS using this specific data set. He also shows that when combined reputation and quality measures are used in the same equation, there is little price variance explained by quality added to reputation. One of the major issues with the analysis is that in order to utilize multiple indicators of quality and reputation, Oczkowski could only find 276 wines in common across the four datasets, as compared to over 1200 in his previous paper (1994). This small sample size made measuring the effects of regions or varieties with separate equations impossible. This also may have impacted the measurement of reputation and quality. We use reputation (brand name) to help predict quality and then do not use reputation in the second stage.

We are most interested in the effect of different regions on the prices of selected varieties. We use the same Halliday (1999) data set as Schamel and Anderson (2001) to investigate a range of extrinsic characteristics' ability to predict retail prices for four major varieties of grapes. We understand the criticism of using only a single wine writer's subjective measures or wine quality (Oczkowski 2001), however we strongly believe that consumers are unlikely to compare different wine writer's evaluations before buying wine. Our experience also shows that wine stores in Australia may use a single score from one writer on the edge of the shelf below a bottle of wine (shelf talker), but never use multiple writer's scores. We run equations for each variety separately in order to be able to see the effect of region and winery reputation by variety. Previous hedonic research has used interaction terms to measure the impact of region and variety (Schamel and Anderson 2001; Oczkowski 1994, 2001). However, we feel that both regions and wineries have gained reputation for specializing in a few varieties, so our method separates the effects along the lines of four major grape varieties. We also use winery size, age of winery and vintage to see how these influence price for each variety.

3. Model Specification

Several studies have attempted to estimate the relationship between the price of a wine and its various characteristics and hedonic wine functions by using the ordinary least squares (OLS) technique in recent years. Oczkowski (2001) first addressed the measurement error issue on the previous hedonic wine studies when the OLS regression was used to estimate the single measures of wine quality and reputation given the presence of regressors which contain measurement error. According to Johnson (1987) and Greene (1993), when explanatory variables are endogenous in the equation, applying OLS may lead to biased estimates of the coefficients, which are correlated with the error term. The essence of two stage least squares (2SLS) is the replacement of endogenous variables by the predicted values, which could be purged of the stochastic elements. The consistent 2SLS estimator is obtained by OLS regression of the dependent variable on predicted endogenous variables and predetermined variables in the equations.

Due to the concern that the reputations for wine quality of different wine-growing regions are linked to specific varieties, we estimate a separate equation for each type of climate region (warm vs. cool) and wine variety (red vs. white) and then make a comparison of price-quality relationships between the different equations. Our model, to be estimated by 2SLS regression for the hedonic price function for Australian wines, assumes that wine price is influenced by quality and the objective characteristics of attributes as follows in Equation 1.

The hedonic wine price equations for different climate (warm vs. cold) regions and wine varietals (two whites vs. two reds) are postulated in Equations 2 and 3, respectively.

where:

PRICE: the natural logarithm of wine retail price, recommended in the Halliday's wine guide (1999), and sourced from each wine producer.

$QUALITY_{PRED}$: the predicted values of the quality rating score of the wine (by Halliday on a 100 point scale), which is obtained from the 1st stage of 2SLS by the OLS regression of wine quality rating score (*QUALITY*) on the recommended retail price (*PRICE*) and the subjective characteristics - its associated producing winery (including wine group) reputation rating score (*WINERY*). These variable values are all subjectively judged by wine expert James Halliday.

Objective characteristics of wines:

$VARIETAL_K$: the dummy variable for wine varietal k, including two whites (chardonnay and riesling) and two reds (shiraz and cabernet sauvignon).

$SIZE_l$: the dummy variable for the wine producer size (tonnes of wine grapes crushed) class l, including very small size (under 100 tonnes); small size (100~499 tonnes); medium size (500~2,499 tonnes); large size (2,500~9,999 tonnes); and very large size (over 10,000 tonnes).

$$PRICE = f(QUALITY_{PRED},\ Objective\ characteristics\ of\ wines) \quad (1)$$

$$PRICE^{CLIMATE} = \alpha + \beta_q QUALITY_{PRED} + \sum_{k=1}^{K} \beta_k VARIETAL_k + \sum_{l=1}^{L} \beta_l SIZE_l + \sum_{m=1}^{M} \beta_m AGE_m + \sum_{n=1}^{N} \beta_n ORIGIN_n + \mu \quad (2)$$

$$PRICE^{VARIETAL} = \alpha + \beta_q QUALITY_{PRED} + \sum_{l=1}^{L} \beta_l SIZE_l + \sum_{m=1}^{M} \beta_m AGE_m + \sum_{n=1}^{N} \beta_n ORIGIN_n + \mu \quad (3)$$

Table 1:
Means, standard deviations (S.D.) and correlations of retail price (*PRICE*) and quality rating score (*QUALITY*) for Australian wine

	Sample	PRICE		QUALITY		Correl.
Classification	Size	Mean	S.D.	Mean	S.D.	P and Q
All samples	1880	25.96	20.05	87.99	4.75	0.338
Climate of region						
Warm regions	1262	26.47	23.18	87.86	4.84	0.358
Cool regions	618	24.92	11.17	88.26	4.55	0.321
Variety of wine						
Chardonnay	637	23.25	9.66	87.31	4.95	0.501
Riesling	326	16.17	4.19	88.21	4.47	0.454
Shiraz	531	32.94	31.50	88.57	4.64	0.352
Cabernet Sauvignon	386	29.08	16.05	88.14	4.69	0.428
Rating of winery reputation						
Typically good (3 star)	90	17.40	5.47	82.50	5.02	0.302
Good (3.5 star)	257	20.68	8.33	85.53	4.30	0.329
Very good (4 star)	590	20.62	7.16	87.19	4.30	0.162
Extremely good (4.5 star)	501	28.79	17.85	88.94	4.29	0.312
Outstanding (5 star)	442	34.68	32.91	90.53	4.10	0.347
Size of wine producer						
< 100 tonnes (very small)	369	21.73	8.96	88.00	4.45	0.292
100 ~ 499 tonnes (small)	454	24.52	12.02	87.59	4.73	0.296
500 ~ 2,499 tonnes (medium)	449	30.97	23.67	88.40	4.87	0.388
2,500 ~ 9,999 tonnes (large)	188	22.67	12.42	86.92	4.84	0.288
> 10,000 tonnes (very large)	420	27.34	29.28	88.45	4.76	0.397

AGE_m: the dummy variable for the wine age class m where m = under 3 years (vintage year after 1997); m = 3~4 years (1996 and 1997); m = 5~6 years (1994 and 1995); m = 7~8 years (1992 and 1993); and m = over 8 years (before 1992). Although previous research (Combris et al., 1997; Landon and Smith, 1997 and 1998) used vintage date as a variable, according to the Australasian Wine Exchange (2000), vintage is not as important in Australia as brand and specific wine.

$ORIGINAL_n$: the dummy variable for the wine region of origin class n, which is classified into two groups - warm climate regions (including Barossa Valley, Clare Valley, Great Southern, Hunter Valley, Margaret River and McLaren Vale,) and cool climate regions (including Adelaide Hills, Coonawarra, Mornington Peninsula, Tasmania and Yarra Valley).

The parameters ($ß_q$, $ß_k$, $ß_l$, $ß_m$ and $ß_n$) are to be estimated for forming the price contribution of the product characteristics of Australian wines. The structure of hedonic price (*PRICE*) is hypothesized to be positively related to the wine quality rating score ($ß_q > 0$). According to the different objective characteristics of the wines, the positive/negative values of coefficients for dummy variables reflect relative price premiums/discounts, as compared with the dummy base variable. Moreover, the degrees of $ß_k$, $ß_l$, $ß_m$ and $ß_n$ and values respectively, represent the effects of wine varietal, production scale (producer size), age of the wine, and region of origin (wine grape source) contributing to the relationship between retail price and quality attributes of Australian wines.

The econometric package PcGive 9.0 (Doornik & Hendry, 1996) is used to generate the properties of the data and all 2SLS estimations for the study. Multicollinerity might be a potential problem when several linear relationships exist between a set of dummy variables in Equations 2 and 3. Using the Wald test statistics, the linear restrictions test on the variance-covariance matrix for the estimated parameters is performed and points to no serious problem of multicollinerity in the equation.

4. Data

The total final sample covered 1880 observations of bottled wines, including 1262 warm climate wines and 618 cool climate wines; 637 chardonnay wines, 326 riesling wines, 531 shiraz wines, and 386 cabernet sauvignon wines. Only wines from single regions and single varieties were used in our analysis; multi-region and multi-varietal blends were excluded in order to measure the impact of region on each chosen variety of wine. All basic data on technical specifications and retail prices of bottled wines selected were obtained from the database set provided by well-known Australian wine expert James Halliday (1999). The exception is that data on the production capacity of each wine company/group is collected from *The Australian & New Zealand Wine Industry Directory* (Winetitles, 2001).

Summary statistics of data on price of selected Australian wines categorized by the climate of region and wine variety are provided in Table 1. We can see that by separating the wines into varieties, quite different average prices are charged for each. Riesling has the lowest average price at AU$16.17 per 750ml bottle,

Figure 1: The impact of winery reputation on wine quality rating score

Notes: The dummy base is the five-star outstanding winery.

while the highest is for shiraz at AU$32.94. In addition, the correlation values of price and quality for chardonnay and riesling are 0.50 and 0.45 respectively, which are higher than other types of wine varieties. Overall, price does not count for a major portion of the variation in quality, even though it is positively correlated. The relatively high of standard deviation (S.D.) of wine price can be found for warm region wines, shiraz wines, and wine produced by outstanding wineries (5 star) and very large size wine producers (> 10,000 tonnes).

We can also see that even though there are fewer large wineries than small ones in Australia, the number of wines made by each size class is relatively similar. Large wineries produce many types of wines in each variety under different brand names. We should note here that the winery rating (reputation) is for the brand names, but the size class is for the parent company. For example, Southcorp is Australia's largest wine group and all brands made by that company are given a dummy variable for the largest size, but each brand has a different rating based on its long term reputation: Penfolds, Lindemans, Wynns, Seppelt, etc. We feel that the production practices (type of equipment, expertise of the wine maker, etc.) are best identified with the parent company, while the reputation effects accrue to the name the consumer sees on the bottle.

5. Results and Discussion

5.1 Winery Reputation

According to the winery star rating system of Halliday (1999), the Australian winery reputation is classified into five stars for an outstanding winery regularly producing exemplary wines; four and a half stars for an extremely good winery virtually on a par with outstanding one; four stars for a winery consistently producing high-quality wines; three and a half stars for a solid, reliable producer of good wine; and three stars for typically good producer, but may have a few lesser wines. Winery ratings are for the overall reputation of the winery, not for individual types of wines made. The impact of winery reputation on wine quality rating score, obtained from the 1st stage of 2SLS regression is shown in Figure 1. The five-star outstanding winery is used as the comparison for other four classifications of winery reputation.

As expected, each rating below five stars results in a decrease in wine quality rating score, except for riesling. The degrees of sensitivities are different for each of the regions and wine varieties. In terms of the climate for growing wine grapes, cool region wines have a relatively higher change in wine quality for each change in winery reputation than warm region wines. A one half star reduction in reputation from five to four and a half would result in a 2.5 point decrease in quality rating points (100 point scale) for riesling, 1.4 for cabernet, and only slight quality change for chardonnay (0.82) and shiraz (0.07). The effect of being a lower than four star winery becomes larger. The estimated coefficients across all four varieties are similar for being a three and one half star winery versus a five star. As the winery rating decreases to three stars, however, greater variation in the coefficients can be found, ranging from -8.2 (for cabernet), -7.0 (for shiraz), -5.7 (for chardonnay) to -1.9 (for riesling). Clearly, having a good winery reputation is relatively important for cabernet and shiraz but less so for riesling. Also, the quality effects of region (greater for cool regions than warm regions) seem to concur with the general viticultural situation; it is more difficult to achieve good quality in cool regions, due to the potential for frosts and poor ripening, but the results may warrant the difficulty.

5.2 Region: Warm vs. Cool

Table 2 presents the results of 2SLS regressions conducted based on the model in Equation 2, using the above definition for dependent variable (*PRICE*) and independent variables ($QUALITY_{PRED}$) and objective characteristics of wine. The coefficients for independent variables are directly interpreted as a percentage price effect. The regression for all regions together is shown in first column and then warm and cool region equations are reported in second and third columns. We first can look at the effect of the wine quality rating from Halliday's book (1999). The effect of the quality score out of 100 points represents an increase of 12.5% in price for each point increase in quality score for all regions and 14.5% for warm and 8.6% for cool climate regions. A larger quality effect on wine price is found for the warm climate regions. If a warm region wine increases in quality from 85 points to 90 points, we could expect a price increase of 72.5%. For a cool region wine the price increase would be only 43%. This may occur because Australian consumers prefer wines from warmer regions or perhaps because warmer regions were planted earlier and consumers have more knowledge of them and are therefore willing to pay higher prices for their wines.

Taking chardonnay as the comparative benchmark for wine variety, the coefficients for are highly significant in

Table 2:
Hedonic price equation for Australian wines by climate of region

	All regions		Warm regions		Cool regions	
PRICE ^{CLIMATE} (dependent variable)	Coeff.	t-value	Coeff.	t-value	Coeff.	t-value
QUALITY $_{PRED}$	0.125**	(39.00)	0.145**	(35.91)	0.086**	(19.03)
VARIETY $_k$						
Shiraz	0.181**	(9.35)	0.163**	(6.86)	0.183**	(5.72)
Cabernet	0.152**	(6.95)	0.112**	(4.10)	0.234**	(7.01)
Riesling	-0.245**	(-10.56)	-0.263**	(-8.81)	-0.209**	(-6.21)
Chardonnay	Base		Base		Base	
SIZE $_1$ [a]						
< 100 tonnes (very small)	0.168**	(6.27)	0.182**	(5.46)	0.104*	(2.21)
100 ~ 499 tonnes (small)	0.167**	(7.17)	0.163**	(5.72)	0.144**	(3.49)
500 ~ 2,499 tonnes (medium)	0.167**	(7.51)	0.149**	(5.93)	0.186**	(4.06)
2,500 ~ 9,999 tonnes (large)	-0.001	(-0.04)	0.019	(0.57)	-0.091*	(-1.60)
> 10,000 tonnes (very large)	Base		Base		Base	
AGE $_m$(vintage year)						
1 ~ 2 years (after 1997)	-0.136**	(-3.10)	-0.095*	(-1.77)	-0.164*	(-2.34)
3 ~ 4 years (1996 and 1997)	-0.093*	(-2.34)	-0.063	(-1.36)	-0.096	(-1.47)
5 ~ 6 years (1994 and 1995)	-0.078*	(-1.97)	-0.045	(-0.95)	-0.089	(-1.37)
7 ~ 8 years (1992 and 1993)	-0.066	(-1.60)	-0.032	(-0.64)	-0.082	(-1.22)
Over 8 years (before 1992)	Base		Base		Base	
ORIGIN $_n$ [b]						
Barossa Valley (W)	-0.053	(-1.57)	-0.040	(-1.14)		
Clare Valley (W)	-0.109**	(-3.02)	-0.098**	(-2.58)		
Great Southern (W)	-0.127**	(-3.43)	-0.122**	(-3.14)		
Hunter Valley (W)	-0.149**	(-4.20)	-0.142**	(-3.85)		
Margaret River (W)	Base		Base			
McLaren Vale (W)	-0.109**	(-3.32)	-0.090**	(-2.64)		
Adelaide Hills (C)	-0.054	(-1.36)			0.113**	(2.82)
Coonawarra (C)	-0.105**	(-2.88)			Base	
Mornington Penins (C)	-0.002	(-0.05)			0.178**	(4.04)
Tasmania (C)	-0.026	(-0.63)			0.122**	(2.91)
Yarra Valley (C)	-0.070*	(-1.89)			0.114**	(2.95)
Constant	-7.899**	(-26.86)	-9.592**	(-26.19)	-4.597**	(-11.15)
R^2	0.592		0.640		0.524	
Wald test [c]	8853.2**	(0.000)	7227.4**	(0.000)	5450.1**	(0.000)

Notes: * Significantly different from zero at the 5% level and ** at the 1% level.
[a] Measured by the tonnes of wine grapes crushed of wine producers.
[b] W referring for warm climate region and C for cool climate region.
[c] Wald statistics show the linear restrictions test (Doornik and Hendry 1996, pp.241).

all three equations. The positive sign on the coefficient for shiraz and cabernet reflects that these two red wine varieties have price premiums as compared to chardonnay. However, a negative sign indicating a price discount is found for riesling. We also investigate the price effect of winery size, which has not been part of other hedonic price research papers for wine. Our results indicate that the largest size wineries (greater than 10,000 tonnes) have no effect on price compared to the 2,500 to 9,999 tonne wineries across all four varieties. As we move to the small and medium size (less than 2,500 tonnes) wineries, we find significant and positive coefficients for , indicating that smaller wineries charge more (and presumably consumers are willing to pay more) for their wines than the largest wineries. Most interestingly, the greatest price premiums are received by the smallest wineries (less than 100 tonnes) for producing warm region wine, while the medium wineries (500~2,499 tonnes) receive a premium for cool region wine.

As compared to wines from Bordeaux (Combris et al., 1997; Landon and Smith, 1997 and 1998), where older vintages often increase in price, we find little price effect of older vintages for Australian wines. Our results show that the values of coefficients on nearly approach to zero (except for less than 3-year-old young wine), indicating not much price change for different vintages of Australian wines for two reasons. First, there are not many older wines sold in Australia. Wines are mainly made for early drinking and only a small percentage are cellared commercially and resold (Halliday, 1999). Second, the prices of Australian wines have been rising over the last 10 years (Anderson et al., 2001) and any increase in price of older wines might be hidden by overall price rises.

For the past decade, many Australian wine companies have used region along with their brand names as a wine branding and marketing tool to differentiate the quality and type of wine from a specific region and generate awareness of the region itself. (Lockshin, 1997; Rasmussen and Lockshin, 1999) The coefficients of $ORIGIN_n$ reported in Table 2 represent the regional reputation effects on the price of the wines. Compared with Margaret River as a warm region, wines from the other warm regions receive a significant price discount, ranging from 9.0% for McLaren Vale and 9.8% for Clare Valley to 12.2% for Great Southern and 14.2% for Hunter Valley. On the other hand, while Coonawarra is thought of as the comparative benchmark for cool region red wines, our results show that all other cool regions have a significant price premium, ranging from 11.3% for Adelaide Hill to 17.8% for Mornington Peninsula. These summary effects may mask effects on price for specific wine varieties.

5.3 Wine Variety: Red vs. White

Table 3 details the results of separate hedonic price equations for each of four wine varieties. Our results show that the effect of the wine quality rating for shiraz and cabernet is a 14.1% and 13.1% price rise per rating point, whereas that of chardonnay and riesling reaches 10.9% and 9.3%. Furthermore, the largest size wineries have no effect on price for cabernet and riesling as compared to all other size of wineries. However, the coefficients for the small size (100~499 tonnes) and medium size (500~2,499 tonnes) winery dummy variables for shiraz and chardonnay are significantly positive, implying that the small and medium size wineries received a premium price compared to the largest sized wineries. In particular, the premium price (26.6% and 21.7%) in the case of chardonnay is greater than shiraz (11.5% and 18.3%). In comparison to the oldest vintage for wine, the younger chardonnay commands a decreasing price premium, but the younger shiraz commands a rising price. The differences in the vintage effect suggest the existence of unequal price behaviours according to the wine variety. As stated earlier, the prices of shiraz have increased dramatically over the last decade (Schamel and Anderson 2001), while those for chardonnay have not. The increases in the prices of shiraz may mask vintage effects.

Overall, for each variety there are regions that command a higher price than other regions, given the same quality score. In Table 3 we can easily see that the magnitude of the coefficient on the wine region effect ($ORIGIN_n$) for the red varieties (shiraz and cabernet) is statistically significant and larger than for white varieties (chardonnay and riesling). Barossa is often thought of as the comparative benchmark for shiraz. In general our results show that all the warm regions, which are significantly different from Barossa, have a negative coefficient; they all have a negative effect on the price of shiraz compared to Barossa. Barossa is classed as a warm region, but the regions which do not differ significantly from Barossa are all cool (Adelaide Hills, Mornington Peninsula, and Yarra), with the exception of Coonawarra. Because shiraz doesn't ripen as well in cool areas, the lack of a significant difference could be due to small samples from each of those regions or possibly

Table 3:
Hedonic price equation for Australian wines by wine varietal

	Shiraz		Cabernet	
PRICE ^{CLIMATE} (dependent variable)	Coeff	t-value	Coeff	t-value
QUALITY $_{PRED}$	0.141**	(18.55)	0.131**	(23.07)
SIZE $_{1}$ [a]				
< 100 tonnes (very small)	0.114	(1.64)	0.047	(0.85)
100 ~ 499 tonnes (small)	0.115*	(2.25)	0.065**	(3.13)
500 ~ 2,499 tonnes (medium)	0.183**	(3.82)	0.042**	(3.14)
2,500 ~ 9,999 tonnes (large)	0.089	(1.32)	0.024	(1.61)
> 10,000 tonnes (very large)	Base		Base	
AGE $_{m}$(vintage year)				
1 ~ 2 years (after 1997)	-0.282*	(-2.17)	-0.221	(-1.80)
3 ~ 4 years (1996 and 1997)	-0.187	(-2.09)	-0.103	(-1.91)
5 ~ 6 years (1994 and 1995)	-0.151	(-1.69)	-0.092	(-1.76)
7 ~ 8 years (1992 and 1993)	-0.160	(-1.75)	-0.117*	(-2.18)
Over 8 years (before 1992)	Base		Base	
ORIGIN $_{n}$ [b]				
Barossa Valley (W)	Base		-0.116**	(-2.71)
Clare Valley (W)	-0.172**	(-2.75)	-0.174**	(-3.02)
Great Southern (W)	-0.275**	(-3.37)	-0.214**	(-2.84)
Hunter Valley (W)	-0.281**	(-4.51)	-0.427**	(-4.78)
Margaret River (W)	-0.192**	(-2.13)	-0.018	(-0.35)
McLaren Vale (W)	-0.134**	(-2.60)	-0.114**	(-2.52)
Adelaide Hills (C)	0.049	(0.49)	-0.155	(-1.34)
Coonawarra (C)	-0.261**	(-3.67)	Base	
Mornington Penins (C)	-0.064	(-0.50)	n.a.	n.a.
Tasmania (C)	n.a.	n.a.	-0.115	(1.31)
Yarra Valley (C)	0.068	(0.76)	-0.119	(-1.73)
Constant	-6.855**	(-24.62)	-5.511**	(-23.97)
R^2	0.507		0.659	
Wald test [c]	2045.3**	(0.000)	3091.7**	(0.000)

Notes: * Significantly different from zero at the 5% level and ** at the 1% level.
[a] Measured by the tonnes of wine grapes crushed of wine producers.
[b] W referring for warm climate region and C for cool climate region.
[c] Wald statistics show the linear restrictions test (Doornik and Hendry 1996, pp.241).

higher demand due to lower availability. McLaren Vale and Hunter Valley are both thought to be good regions for shiraz, but both have a significant price discount in comparison to Barossa, 13.4% and 28.1% respectively.

The benchmark region for cabernet is Coonawarra. Our results reinforce this with all significant comparisons for cabernet from warm regions being negative, with the exception of Margaret River, which has a good reputation for cabernet wine. For instance, the price discounts range from 42.7% for Hunter Valley to 11.4% for Mclaren Vale and 11.6% for Barossa Valley. The regions that do not significantly differ in its effect on price with Coonawarra, like with shiraz and Barossa, are cool climate regions such as Adelaide Hills, Tasmania and Yarra Valley, probably for the same reason of small samples or limited availability.

Chardonnay is priced the highest from Margaret River, which is classed as a warm region, especially in comparison to Adelaide Hills, Yarra Valley and Tasmania. Surprisingly, we find that the coefficient on the regional effect ($ORIGIN_n$) for almost all other wine regions as compared to Margaret River is statistically insignificant (except for Clare Valley) and approach to zero, which can not support the existence of the regional reputation effect on the price of the Australian chardonnay wines. The story with riesling is not so clear. Clare Valley is thought by some to be Australia's premiere riesling region. But our analysis shows that Clare only receives a 13.9% premium by compared to Tasmania and is actually discounted by 10.6% ~ 12.7% in relation to riesling from Coonawarra, Margaret River and Yarra Valley.

6. Implications and Future Research

Our research has added to the use of hedonic pricing for wine by adding several new parameters: winery reputation and size and by calculating quality as a function of the other characteristics before using it in the hedonic pricing equation. We also derive equations for two climate regions and four major wine varieties separately, rather than treat all the regions or varieties as one. Keeping the varieties in one equation probably makes sense for European regions, where there are restrictions on which varieties can be grown, but it still mixes up white and red varieties. When a range of varieties are put into one equation for a country like Australia, we only can see the price effect of the varieties in general; we cannot untangle the effects of different varieties in each region.

Our first table shows that across three of the four varieties, Halliday's rating of winery reputation is highly correlated with quality. This gives credence to his rating system, that wineries with higher ratings do indeed produce better quality wine. This could be an artifact of his system, where he gives higher quality scores to his higher rated wineries, but the fact that reputation is significant in the hedonic price equations shows that wineries that have invested in better quality over the years command higher prices. Shapiro's (1983) observation of reputation effects does hold in the Australian wine industry. This should give heart and direction to wine marketing managers to keep investing in long term brand building at the same time as their wine making colleagues strive to make better quality wines. The analysis shows that wines from wineries with the highest (five star) reputations charge an average of $6.00 more per bottle than a comparable four and a half star winery, and an amazing $14 more than a four or three and a half star winery. This price differential when multiplied over the production capacity of the winery shows the value of a top reputation and gives some indication of how much a wine company could invest in both production and promotion to gain this level of status.

There is also a return to quality above winery reputation (Table 2). Each quality point increases the price of the wine between 9% and 14%, which again gives some measure of how much a winery could invest to improve quality and make a reasonable return for that investment. The word 'quality' is mentioned too often in the wine industry without regard to its costs or to its benefits. Our analysis puts some real numbers on quality as rated by James Halliday. For example, if a winery had done some small batch experiments and shown that by reducing yields on a certain shiraz vineyard from 6 tonnes per hectare to 3 tonnes would result in the quality rising from 88 points to 91 points, they should be able to raise their prices by 14% X 3 (points) or 42%. If their bottle price for shiraz was $18, they might be able to raise their price to $25. This would mean about $3.50 more per bottle at the winery wholesale price. If they made about 3000 cases of this wine, this would mean an increase in gross margin of $105,000, which could be compared to the cost of the reduced yields in the vineyard to see if this is a feasible investment.

Our research has shown that winery size can have an effect on the price of the wines sold. Wineries crushing greater than 2,500 tonnes of grapes get substantially less for each bottle of wine than smaller sized wineries, and the effect is fairly constant down to the smallest size

(Table 2). Large wineries are more efficient and probably charge lower prices as a competitive measure (Wollan, 1998). Smaller wineries are not as efficient, but may charge prices. Small and medium sized wineries most likely must charge a higher price for their wines in order to make a profit, and yet they also must use distributors rather than sell direct. We have no evidence that the wines from small and medium sized wineries are perceived to be better than the wines from large wineries, but it may be that these sized wineries are large enough to develop a national reputation and yet are perceived as relatively small or as boutique by consumers. If this is the case, then wineries within these size groups can benchmark their prices against others and some of them may find that they are undercharging and can raise prices and profits. The price premiums are substantial at between 10 and 18% across the various sizes compared to the largest two categories of wineries. Also, wineries that are larger cold take advantage of consumer's perceptions by positioning individual brands as coming from boutique-style wineries.

One of the key areas of interest is the effect of region on wine price. We decided to separate the varieties and run an equation for each, so that we could see what effect regional reputation has on the wines by variety. Even though there are no restrictions of what can be grown where in Australia, anecdotally, different regions have better reputations for different varieties of wines. Our research gives weight to that observation. Barossa for shiraz, Coonawarra for cabernet and Clare Valley for riesling all show increased value compared to other regions producing that variety. Along with Schamel and Anderson's observation (2001) that region is gaining in importance in Australia, we find that different regions certainly are valued more highly for different grape varieties than others.

From a marketing manager's point of view our results provide some direction for both promotion and pricing. There certainly is evidence that region can add to the price consumers are willing to pay for wine. Wineries from regions with a comparably positive price impact should utilize that fact on the label and in promotions. Probably the most important advice is for wineries in each region to keep working together. This collaborative effort is relatively unique in Australia, but seems to have borne fruit and can continue to do so. Wineries with strong reputations for specific varieties can emphasize this fact in group promotions.

More importantly, regions where the wine quality is good, but suffer from lower prices need to engage in activities to build the reputation for their regions wines, and consequently be able to raise prices. McLaren Vale is a good example. Here the shiraz wines have won many awards and are highly demanded within Australia. However, the reputation for the region is lower than for Barossa, and this is especially true in export markets (Murphy 2001). Some idea of the price increase can be predicted, which would help decide what a regional promotional budget might be over a period of years. McLaren Vale wineries have begun to promote their wines in Australia with festivals, dinners, and a new visitor's center. However, the prices paid domestically for Australian wines are partly determined by their international value, and obviously McLaren Vale needs to do more international promotion. At the beginning of the 1990s, Barossa Valley wineries made several trips as a group to the UK market to conduct tastings, dinners, music and wine events, and Barossa food and wine events. McLaren Vale should follow in this same mode. With prices 13% lower than Barossa, but similar climate and quality, wineries in McLaren Vale can calculate the returns to improving their reputation through promotional activities. Although these are not as high as those returns to winery reputation, they are substantial. The same advice can be given to the other newer regions with good quality, but relatively lower prices. Regional promotions are less expensive per winery than individual wineries conducting the same events and over a period of time, raising the regional reputation will help all the wineries achieve higher prices.

Of course hedonic price analysis does have some shortcomings. We must assume that the quality and reputation ratings have validity, since they are subjective judgments. We used James Halliday (1999), one of the foremost authorities on Australian wine. We could use the same logic as Schamel and Anderson's (2001) and accord Halliday influence status, so that his wine and winery ratings actually help create the prices charged. In our opinion, the quality of the wine and the winery reputation do have a relationship with price, regardless of which is cause and which is effect. We also must assume a balance of supply and demand for the equations to have meaning.

There is scope for future research. In the area of hedonic price analysis, a simple but powerful confirmation would be to use a different set of quality and reputation indicators, like Schamel and Anderson (2001) did, which showed similar relationships. One might also use separate equations for each variety over a historical period in order to confirm Schamel and Anderson's observation that overall region is gaining in importance in Australia. Outside of hedonic price analysis, conclusions on the various indicators of value, like winery reputation, wine quality, and region could be tested with different techniques. Preliminary research by Tustin and Lockshin (2001) showed that region and brand did have a significant impact on consumer choice, but the pattern differed for low and high involvement consumers. A well known wine region added about $5.00 to the price consumers were willing to pay for a bottle in a choice-based conjoint experiment. More research using actual choice situation experiments could confirm the effects of the variable found significant in this analysis. This is important for wineries, so management can decide whether focusing on the brand or the region has the largest payback in price received.

It is also important to know what consumers actually have in their minds when choosing wine. Do they have Halliday or other quality ratings in their mind when buying wine? What is the effect of putting those ratings on the shelf? This is done more regularly in the US with Wine Spectator ratings than in Australia. How many consumers use winery reputation as part of their decision process? Looking at the process a different way, does price act as a signal, rather than as an outcome of the other factors? Does merely setting a higher price result in greater sales or a higher reputation? These are just a few of the useful questions remaining to be answered in future research.

7. References

Anderson, K., Norman, D., Wittwer, G., 2001. Globalization and the world's wine markets: An overview, CIES Workshop Paper 01, Centre for International Economic Studies, University of Adelaide, Adelaide.

Arguea, N., Hsiao, C., 1993. Econometric issues of estimating hedonic price functions. Journal of Econometrics 56, 243-67.

Ashenfelter, O., Ashmore, D., Lalonde, R., 1995. Bordeaux wine vintage quality and the weather. Chance 8 (4), 7-14.

Australasian Wine Exchange, 2000. http://www.aawx.com.au/newsletters/news001.html, Website accessed on 11 December 2002.

Australian Wine and Brandy Corporation (AWBC), 2001. Wine Export Approval Report, Winetitles Publisher, Adelaide.

Australian Wine and Brandy Corporation (AWBC), 1994. Guidelines for applicants for the determination of Australian geographical indications, Winetitles Publisher, Adelaide.

Charters, S., Lockshin, L., Unwin, T., 1999. Consumer responses to wine bottle back labels. Journal of Wine Research 10 (3), 183-196.

Combris, P., Lecocq, S., Visser, M., 2000. Estimation of a hedonic equation for Burgundy wine. Applied Economics 32, 961-967.

Combris, P., Lecocq, S., Visser, M., 1997. Estimation of a hedonic price equation for Bordeaux wine: Does quality matter? The Economic Journal 107, 390-402.

Doornik, J.A. and Hendry, D.F., 1996. Empirical Econometric Modelling Using PcGive 9.0 for Windows. London, International Thomson Business Press.

Greene, W.H., 1993. Econometric Analysis, Macmillan Publishing Company, New York.

Halliday, J., 1999. Australia and New Zealand Wine Companion 2000, Harper Collins, Sydney.

Johnson, J., 1972. Econometric Methods, McGraw-Hill Book Company, New York.

Landon, S., Smith, C.E., 1997. The use of quality and reputation indicators by consumers: The case of Bordeaux wine. Journal of Consumer Policy 20, 289-323.

Landon, S., Smith, C.E., 1998. Quality expectations, reputation, and price. Southern Economic Journal 64 (3), 628-647.

Lockshin, L., 1997. Branding and brand management in the wine industry. Australian and New Zealand Wine Industry Journal 12 (4), 386-387.

Murphy, H., 2001. Personal Communication of the results of a survey of wine consumers at Australian tastings in the UK.

Nerlove, M., 1995. Hedonic price functions and the measurement of preference: The case of the Swedish wine consumers. European Economic Review 36, 1697-1716.

Oczkowski, E. 2001. Hedonic Wine Price Functions and Measurement Error. The Economic Record 77 (239), 374-82.

Oczkowski, E., 1994. A hedonic price function for Australian premium table wine. Australian Journal of Agricultural Economics 38, 93-110.

Olson, J.C. and Jacoby, J., 1972. Cue utilization in the quality perception process. Proceedings of the Third Annual Conference, Association for Consumer Research, Ann Arbour, pp. 167-179.

Rasmussen, M. and Lockshin, L., 1999. Wine choice behaviour: The effect of regional branding. International Journal of Wine Marketing 11 (1), 36-46.

Rosen, S., 1974. Hedonic prices and implicit markets: Product differentiation in pure competition. Journal of Political Economy 82, 34-55.

Ryan, D., 1994. The protection of geographical indicators in Australia under the EC/Australia wine agreement. European Intellectual Property Review 16 (2), 521-524.

Schamel, G. and Anderson, K., 2001. Wine Quality and Varietal, Regional, and Winery Reputations: Hedonic Prices for Australia and New Zealand. CIES Workshop Paper 20, Centre for International Economic Studies, University of Adelaide, Adelaide.

Shapiro, C., 1983. Premiums for high quality products as returns to reputations. Quarterly Journal of Economics 98 (4), 659-679.

Tustin, M., Lockshin, L., 2001. Region of origin: Does it really count? The Australia and New Zealand Wine Industry Journal 16 (5), 139-143.

Unwin, T., 1999. Hedonic price indexes and the qualities of wine. The Journal of Wine Research 10 (2), 95-104.

White, T., 1995. Fine lines in Coonawarra. Financial Review, Friday, 17th March, 15.

Winetitles, 2001. The Australian & New Zealand Wine Industry Directory. Winetitles Publsiher, Adelaide.

Wollan, D., 1998. The Australian Wine Industry- a Sceptic's view? The Australia and New Zealand Wine Industry Journal 13 (1), 22-24.

Biographies

Bith-Hong Ling is an associate professor in the Department of Marketing at the National Chung Hsing University in Taiwan. She received her Masters in Agribusiness from the Arizona State University and a Ph.D. in Agricultural and Resource Economics from the University of Hawaii. Her research interests are in the areas of wine economics, marketing in the Asia-Pacific, global marketing strategy, international business and brand management. Bith-Hong holds a 2003 visiting fellow of Dentsu Ikueikai and Yoshida Hideo Memorial Foundation (Japan) in the Center of Business and Market Studies of the Faculty of Economics at the University of Tokyo and works on the brand choice decision and strategic brand marketing.

Larry Lockshin is Professor of Wine Marketing at the University of South Australia. He has spent more than 20 years working with the wine industry, first as a viticulturist and now as a marketing academic and consultant. He received his Masters in Viticulture from Cornell University and a PhD in Marketing from Ohio State University. His research interests are consumer choice behaviour for wine and wine industry strategy. Dr. Lockshin is the Associate Editor for Wine Marketing for the Australia and New Zealand Wine Industry Journal and a regular marketing columnist for the last 5 years. He writes monthly for Harpers, The Wine and Spirit Weekly, in the UK and he is also the Associate Editor for Business and Economics for the Journal of Wine Research.

Correspondence Addresses

Dr. Bith-Hong Ling, Associate Professor, Department of Marketing, National Chung-Hsing University, 250 Kuo Kuang Road, Taichung, Taiwan, R.O.C., Telephone: +886 (4) 2284 0392 ext 43, Facsimile: 886 (4) 2285 6691, Email: bhling@dragon.nchu.edu.tw; Dr. Larry Lockshin, Professor and Director, Wine Marketing Research Group, University of South Australia, GPO Box 2471, Adelaide, South Australia 5001, Telephone: +61 (08) 8302 0261, Facsimile: +61 (8) 8302 0442, Email: larry.lockshin@unisa.edu.au

Goods and Services Differences in Television Advertising: an Australian Replication

David Gauci & Railton Hill

Abstract

Services possess a number of well-known characteristics that differentiate them from goods. Previous research indicates that goods and services marketers may adopt different advertising strategies, presumably in order to overcome or exploit these differences in the nature of service products. 352 Australian television commercials for goods and services were content analysed to determine whether the advertising strategies for goods and services were, in fact, different. Each commercial was categorised according to two classification schemes. The study found that goods and services marketers did appear to adopt different advertising strategies. However, mixed results emerged in terms of predictions based on previous overseas research. Several possible explanations for these findings are offered.

Keywords: Advertising, Services

1. Introduction

It is widely acknowledged that services possess several unique characteristics that differentiate them from goods (Hill and Ghandi 1992; Zinkham, Johnson and Zinkham 1992; Lovelock, Patterson and Walker 1998). Researchers have suggested that as a result of differences such as intangibility, inseparability from the provider, perishability and heterogeneity (variability of quality), marketers may, or perhaps should, adopt different advertising strategies for goods and services, to allow for or to exploit these unique service characteristics (George and Berry 1981; Twimble and Hemsel 1991). However, most of the discussion to date is largely speculative, with only a small number of studies actually testing advertisements to see what differences exist in reality. Further, a majority of this discussion originates in United States and European based contexts.

A key objective of this study was to ascertain whether Australian marketers of services are executing their advertising differently on the basis of the focal product being predominantly a good or a service, as evidenced in the campaigns put to air on television. The study provides further evidence concerning any differences evident in the advertising execution strategies adopted by goods and services marketers in general, but will also specifically examine evidence for such differences within the Australian context.

If such differences are found, future research could link this knowledge with data concerning advertising effectiveness. This could provoke changes in the conduct of service campaigns. If the results support overseas findings, it may suggest that Australian marketers have reached similar conclusions to their overseas counterparts concerning the value of treating goods and services advertising differently. If the findings do not replicate the differences found previously, the question should be asked, 'does this contradict previous theory, or is it the result of Australian conditions?' A failure to find such differences could suggest that the recommendations found in the academic literature have been rejected by Australian practitioners, that awareness of the research based recommendations has yet to penetrate to Australian business, or that advertising in both Australia and the US has changed in the two decades since research commenced in this area.

2. Review of Literature

While various classification schemes contrast consumer and industrial goods, durable and non-durable goods, and the like, there is no one single definition of a 'goods' product. We are defining goods primarily according to the dominance of tangibility, in line with the continuum concept developed by Shostack (1977).

Kotler, Chandler, Brown and Adam (1994) define services as 'activities, benefits or satisfactions that are offered for sale' (p. 262). Lovelock, Patterson and Walker (1998) offer two further definitions. One suggests services are 'any act or performance that one party can offer, and one that is essentially intangible and does not result in the ownership of anything…production may or may not be tied to a physical product' (p. 5). Their second definition states that 'services are economic activities that provide time, place and form utility, while bringing about a change in, or for, the recipient of the service' (p. 5).

Four characteristics differentiating services from goods are intangibility, heterogeneity, perishability and inseparability of production and consumption (Hill and Ghandi 1992; Lovelock, Patterson and Walker 1998; Zinkham, Johnson and Zinkham 1992). Intangibility refers to the fact that services cannot be seen, tasted, felt, heard or smelt before they are bought. It has often been argued that intangibility is the critical goods-services distinction from which all other differences arise.

The implications of the characteristics of intangibility, inseparability, heterogeneity, and time dependence (perishability) for both goods and services are summarized in Table 1. Whilst all these characteristics are examples of the differences that marketers perceive exist, and possible advertising strategy responses, it has been found that the prime concern of consumers is 'ease of evaluation' (Hartman and Lindgren, 1993). Hartman and Lingren suggest that a major concern of service advertising should be to overcome this.

These characteristics suggest the importance of certain marketing approaches that are not necessarily considered priorities for goods marketing. For example, because services are essentially intangible, special marketing attention should be devoted to making them more tangible (George and Berry, 1981). Special techniques which might be used to improve tangibility include, using 'vivid language' in the ad (Twible and Hensel, 1991), providing 'metaphorically similar cues' for the service (Stern, 1987) and using 'emotion' to make the service seem more realistic, concrete and vivid (Young, 1981). Emotional appeals may be particularly appropriate in services advertising (Upah, 1983).

Others (e.g. Firestone, 1983 and Crane, 1990) have suggested that one of the main roles of services marketing is to build a personality or image for the company. As the quality of service performance is generally difficult for consumers to assess with confidence – especially for credence type services (due to intangibility and heterogeneity), it has been proposed that service advertisements emphasising quality can be

Table 1:
Contrasting goods and services

	Goods	Services
Intangibility	■ Item is highly tangible ■ Quality can be confidently evaluated prior to purchase.	■ Item is highly intangible. ■ Quality is difficult to evaluate prior to purchase.
Heterogeneity	■ Item is highly standardised.	■ The service experience may vary from purchase to purchase.
Inseparability	■ Item is easily customised to meet the customer's needs.	■ Item requires high quality customer contact personnel.
Perishability	■ Item is easily available in retail stores or shops when needed. ■ Item can be stored.	■ Customers may need to wait in line or make an appointment. ■ Item cannot be stored in inventory.

influential (Freiden and Goldsmith, 1989). Because customers perceive service purchases to have a higher risk than good purchases, they look for tangible cues to associate with service quality (George and Berry, 1981). As service quality may be variable (the 'heterogeneity' characteristic) and many services are usually people intensive, some authors have stressed the importance of the employee-customer relationship (Parasuraman, 1987 and Gronroos, 1981). It has also been suggested that service advertisements should stimulate word-of-mouth (Mittal, 1999).

Studies examining the actual differences between the advertising of goods and services are limited (Cutler and Javalgi, 1993; Zinkham, Johnson and Zinkham, 1992; Abernethy and Butler, 1992). Some studies have looked at the differences in print ads, while others have examined television commercials. Very few studies relate to the Australian context.

Cutler and Javalgi (1993) investigated 471 magazine ads using the content analysis procedure. The classification categories used in this study were consumer services, consumer non-durable products, consumer durable products and 'other'. Cutler and Javalgi found that service commercials more often contain an emotional appeal than do goods commercials. Zinkham, Johnson and Zinkham (1992) analysed 760 television commercials for services, goods and retailers using the hierarchy of effects model, the informational/transformational dichotomy and Hefzallah and Maloney's (1979) commercial message structure typology. It was found that services marketers were more likely than goods marketers to use a transformational appeal, attempting to associate the experience of using a particular service with a set of psychological characteristics that would not usually be associated with the brand experience. Transformational appeals were thought to bring life to intangible service attributes. In general, all six of Hefzallah and Maloney's (1979) categories (discussed below) were evident in services, goods and retail advertisements. However it was also found that service advertisers were more likely to use message structures with staged action, that is, a commercial portraying a service being used and the subsequent satisfaction of the users. Zinkham et al's study provides conformation that differences do exist in the way goods and services advertisers present their messages.

Abernethy and Butler (1992) examined the information content of 562 newspaper advertisements for goods, services and goods/services combinations using the Resnik and Stern (1977) coding analysis methodology. They concluded that print service advertisements often include performance information. Price information was used less often in service ads than in goods advertisements or in advertisements for goods/services combinations. They also found that quality cues were more likely to appear in services commercials than in those for goods or goods/services combinations.

Abernethy and Butler (1993), using the same advertisements as the 1992 study, examined the relative importance placed on contact personnel in the advertising strategy of both services and goods marketers. They found illustrations and descriptions of contact people to be a key part of service marketing strategy. It was also found that the experience of service employees was mentioned more often in services commercials than in commercials for goods or goods/services combinations. Finally, advertisements for services and goods/services combinations contained significantly more information about employee training than advertisements for goods. Grove, Pickett and Laband (1995) examined 27,403 advertisements investigating the extent to which advertisers of services emphasise factual information cues in their messages. They found that ads for services contain more factual information than do ads for goods in terms of price, guarantees/warranties availability and evidence of excellence. This contradicts the finding of Resnik and Stern (1977) concerning the use of pricing information.

Overall, researchers have concluded that services are likely to be advertised differently from goods. Based on the empirical studies reviewed, it would be expected that commercials for goods are more likely to have informational/factual appeals rather than transformational ones, while services would be expected to be more likely to emphasise quality, service personnel and portrayals of the service experience to provide tangible cues. It was decided to test in the current study for differences within two established classification schemes. These were the informational/transformational dichotomy and Hefzallah and Maloney's (1979) categories for television commercials, on the basis that these can be assessed in a relatively objective manner

An informational advertisement provides consumers with factual, relevant brand data in a clear and logical manner such that they have greater confidence in their ability to assess the merits of buying the brand after seeing the advertisement. An important part of the definition is that the advertisement becomes informational if consumers perceive it as such. For an advertisement to be judged informational, if must reflect the following characteristics: 1) present factual, relevant information about the brand; 2) present information which is immediately and obviously important to the potential consumer; and 3) present data which the consumer accepts as being verifiable (Puto and Wells, 1984, p. 638). For example, a commercial for computer products such as a printer may communicate technical and price information

A transformational advertisement, on the other hand, is one that associates the experience of using the advertised brand with a unique set of psychological characteristics, which typically would not be associated with the brand experience to the same degree without exposure to the advertisement. Specifically, the advertisement links the brand with the capacity to provide the consumer with an experience that is different from the consumption experience, which would normally be expected to occur without ad exposure. For an ad to be judged transformational, it must reflect the following characteristics: 1) the experience of using the product must be richer, warmer, more exciting, and/or more enjoyable than that obtained solely from an objective description; and 2) the experience portrayed in the advertisement and the experience of using the brand should be tightly connected such that the consumer cannot remember the brand without recalling the experience generated by the ad (Puto and Wells 1984). For example, a bank commercial may associate some of its services with another real life experience e.g. a teenager's first pay cheque is associated with opening a new account.

As noted, Zinkham, Johnson and Zinkham (1992) found that services marketers were more likely than goods marketers to use a transformational appeal. This is suggested as a means of overcoming their relative intangibility and enhancing consumer understanding about the brand (Zinkham et al., 1992). Informational commercials were found to be associated with goods as the veracity of factual claims is easier to assess prior to purchase.

There are other conceptual reasons springing from the nature of services themselves why we may expect the Zinkham et al. (1992) findings to be replicated. Research has highlighted the role of customer involvement in much service provision (Kelley, Donelly & Skinner, 1990; Bitner, Faranda, Hubbert & Zeithaml, 1997). Within service categories ranging from self service vending to complex management consulting services where much briefing and raw material for analysis must be provided by the consumer, the customer him or her self is clearly 'part of the product' as much as are contact staff (a consultant; a receptionist). Consumers are a part of such self or interactively delivered services in a way they cannot be with a good from which the customer is fundamentally separate. Such a personally involved 'act or performance' as per Kotler et. al's, (1994) definition, seems much more likely to be amenable to the internal emotional and psychological effects implied by transformational appeals than would be goods which are fundamentally 'external' to, or physically independent of the customer. Further, Lovelock et. al's (1998) definition of a service specifically refers to a service yielding 'change in … the recipient of the service', such as is implied by the notion of psychological 'transformation'.

Based on the preceding discussion, hypotheses 1 – 4 explore differences in advertising strategies between goods and services in the Australian context, using the above Zinkham et. al classification system. Hence:

H1: *Goods commercials will use informational techniques more frequently than transformational techniques.*

H2: *Services commercials will use transformational techniques more frequently than informational techniques.*

H3: *Services commercials will adopt transformational techniques more frequently than goods commercials.*

H4: *Goods commercials will adopt informational techniques more frequently than services commercials.*

Hefzallah and Maloney (1979) identified six types of television commercials, namely: associative, demonstration, informative, plot, staged and testimonial. In an associative advertisement, the product is associated with a particular experience. The rationale for this type of commercial is that repeated exposure to the experience in the advertisement will transfer positive feelings towards the advertised product (good or service). For example, a commercial for an amusement park might portray a family laughing and enjoying the rides. Demonstration ads portray the use or functions of the advertised good or service. The intangibility of many services makes this difficult at times. We may see the service being performed (for example, an accountant works at a desk) but it is not immediately obvious what core benefit (for example, company financial auditing) is actually being delivered. This example also suggests how the high credence qualities of some services may also be difficult to communicate. However, a goods commercial may readily demonstrate the functions of for example, a new kitchen appliance or toy. Such a product exhibits much higher level of search qualities.

Informative commercials present information on the characteristics of the good or service. For example, a gymnasium may emphasise that it is a 'women's only' service. However because the features/attributes of physical goods are more immediately apparent, they lend themselves to informative commercials. A commercial that presents a problem and then illustrates how that problem can be solved by use of the good or service falls into the plot category. For example, a commercial for health insurance may describe the inability to obtain an affordable rate and then suggest a product offering certain exclusions that provides a low rate. A staged commercial illustrates a situation in which the advertised good or service is being used and the users are obviously satisfied with the results. Since intangible service outcomes are often difficult to assess with confidence at the pre-purchase phase, a staged advertisement simulating satisfaction can be effective for intangible service. For example, a bank commercial may portray customers sitting around a bank manager's desk discussing their home loan needs, then show the customers enjoying their new home. Even the highly intangible core benefits offered by say, counselling services may be at least suggested by expressions of relief in an enacted counselling encounter. Finally, commercials can focus on personal endorsements or recommendations. Testimonials seek to persuade by using a credible and sometimes famous person who praises the benefits of the good or service. For example, a commercial may use a former Reserve Bank director as an expert in superannuation to promote a super fund. Again, the effect sought is to make tangible (via personification) the relatively intangible service benefit offered.

This discussion of Hefzallah and Maloney's (1979) typology leads us to propose hypotheses 5 to 8:

H5: *Services commercials will fall into the staged television commercial category more frequently than goods commercials.*

H6: *Services commercials will fall into the testimonial television commercial categories more often than goods commercials.*

H7: *Goods commercials will fall into the informative category more often than services commercials.*

H8: *Goods commercials will fall into the demonstration category more often than services commercials.*

No hypotheses are offered regarding whether staged TV commercials or testimonials are used more often in services.

3. Methodology

Content analysis of commercials contained in free to air Australian television broadcasts was the chosen research method. Content analysis is a reputable and widely applied tool for marketing research studies, including advertising (Cutler and Javalgi 1993). These communications can be analyzed at many levels (image, word, roles, etc.). Kolbe and Burnett (1991) define content analysis as 'an observational research method that is used to systematically evaluate the symbolic content of all forms of recorded communication (p. 243). Content analysis allows for an unobtrusive appraisal of communications (Kolbe and Burnett, 1991). There are many precedents for the use of this technique in marketing research concerning the 'portrayal' of products, companies and various groups of people in a variety of media (Kassarjian, 1977).

All commercials that make up the sample were assessed by three judges. These comprised one researcher, and two research assistants. Each judge was trained in the content analysis procedure, including how to apply the proposed categories to each commercial. A test of inter-judge reliability was conducted using the coefficient of agreement, the total number of agreements divided by the total number of coding decisions. This test is widely used to test inter-judge reliability for content analysis (Kolbe and Burnett, 1991).

Commercials were categorised on several levels. The first level was to determine whether the commercial was predominantly for a good, service or 'other'. As discussed, a goods commercial is one that is predominantly for a tangible physical object. Service commercials promote relatively intangible services. Any commercial for a product that does not clearly fall into either of these categories, was classified as 'other'.

The second level of categorisation involved classifying goods and services commercials according to the informational/transformational dichotomy, and according to Hefzallah and Maloney's (1979) categories for television commercials, as outlined above. Table 2

Table 2:
Summary of classification schemes

Classification	Key Characteristic
Informational/Transformational Dichotomy	
Informational	Promote factual data
Transformational	Associate product use with psychological characteristics
Hefzallah and Maloney Model	
Associative	Associate product with experience
Demonstration	Portray uses/functions
Informative	Transmit information
Plot	Describe problem and product solution
Staged	Illustrate situation for product use
Testimonial	Present personal endorsements

provides a summary of the above classification schemes.

The population relevant to this study can be defined as all commercials that appear on Australia's three free to air commercial networks, that is networks Seven, Nine and Ten. Advertisements sampled were those aired on the three networks between 6 pm and 10 pm ('prime time') on three nights (Monday, Tuesday and Wednesday) during the second week of June, 2000. These were videotaped. This time frame was selected on the basis that 'prime time' commercials would be likely to target a broad range of ages and both genders, to promote a wide range of products. This sample then is purposive rather than random.

All commercials appearing during this period were used for analysis. However, to avoid redundancy of information, each commercial was only included in the sample once, with any subsequent appearance of the same commercial disregarded. In excess of 1000 commercials aired during the designated time, yielding 352 different commercials that were used to make up a manageable and generalisable sample (Kolbe and Burnett, 1991). All commercials were placed into one of three categories, goods, services or other. Each commercial was then categorised according to the classification schemes mentioned above. A questionnaire comprising items relating to each of the above mentioned classification schemes was used independently by each judge to assess each commercial. Any disagreement for any of the classification schemes for each of the commercials was then discussed among all judges, with any final decision being made by the researcher.

4. Analysis and Results

Inter-judge reliability was found to be high. Coefficient of Agreement scores of 0.88 or better being found

Table 3:
Inter-judge coefficient of agreements

	Judge 1	Judge 2	Judge 3
Judge 1	__	.97	.88
Judge 2	.97	__	.89
Judge 3	.88	.89	__

Table 4a:
Informational/transformational Commercials BY Goods or Services

		Informational	Transformational	Neither	Total
Goods	(n)	90	107	30	227
	(%)	39.6 %	47.1 %	13.2 %	100 %
Services	(n)	39	70	12	121
	(%)	32.2 %	57.9 %	9.9 %	100 %
Total	(n)	129	177	42	348
	(%)	37.1 %	50.9 %	12.1 %	100 %

$x^2 = 4.05$, df = 2, sig. = 0.14

Table 4b:
Informational/transformational Commercials BY Goods or Services (with 'Neither' category deleted)

		Informational	Transformational	TOTAL
Goods	(n)	90	107	197
	(%)	45.6 %	54.4 %	100 %
Services	(n)	39	70	109
	(%)	35.7%	64.3 %	100 %
Total	(n)	129	177	306
	(%)	42.1%	57.9 %	100 %

$x^2 = 8.8$, df = 1, sig. =.003

between any two of the judges, with an overall inter-judge reliability score of 0.87 between all three judges. Table 3 depicts scores between all judges.

As the data was nominal, Chi-square analysis was used to test for any significant differences between the observed distribution of data among categories and the expected distribution based on the null hypothesis (Cooper and Schindler, 1998).

The data obtained provides a breakdown of commercials for goods and services that aired during the sample period. 64.5 per cent of the 352 (227) commercials were for goods products, with 34.4 per cent (121) for services.

Four commercials (1.1 per cent) were deemed unclassifiable as primarily for a good or service. As this category is so small, it was excluded from the remainder of the analysis.

Table 4 shows the number of commercials that adopt each of the techniques. Chi-square tests were conducted to determine the significance of any differences.

An analysis of goods commercials was conducted to determine whether there was a statistical association between advertising strategy and goods/services dichotomy. The data in Table 4a is inconclusive because of the presence of the "neither" category. However the data in Table 4b (i.e. after eliminating the "neither" category) indicates a statistically significant relationship between advertising strategy and goods/services dichotomy. As predicted, goods firms made greater use of informational strategies than did service firms. Some 45.6% of goods firms advertising used an informational content compared with only 35.7% by service firms (sig. $p < .00$). This supports H4. Conversely, for a transformational strategy, service firms displayed a higher frequency of usage (64.3%) than did goods firms (54.4%). This finding supports H3, which stated that commercials for services would favour transformational techniques.

An analysis within goods commercials did not find any statistically significant differences. Thus H1 was not supported. An analysis of services commercials was also conducted to determine if services advertisers had a preference for either informational or transformational techniques. A statistically significant difference (sig. $p < .05$) was found. 64.3 per cent of services commercials were found to use transformational techniques, whilst only 35.7 per cent adopted informational techniques (Table 4b refers). This finding supports H2 that services commercials will adopt transformational techniques more frequently than informational techniques.

Services commercials use transformational techniques significantly more than goods commercials, supporting H3. Similarly, goods commercials use informational techniques more often than services commercials, supporting H4.

Table 5 shows frequencies using Hefzallah and Maloney's television commercial categories. All six commercial categories were found in both goods and services commercials.

The most frequently employed category in services commercials was the informative structure with 38.8 per cent of all service commercials. 18.2 per cent of service commercials used the plot structure and 17.4 per cent the associative structure. The informative structure was also the most frequent category in goods commercials, used in 28.2 per cent. Furthermore, the data indicates more usage is made of the informative structure in commercials for services rather than in those for goods (38.8% v 28.2%) as was predicted ($p < .10$).

Concerning the associative structure, 27.8 per cent of the goods commercials used this structure compared with only about 17 percent of services commercials (sig. $p<.00$). Some 13.2 per cent of goods commercials were found to adopt the staged structure, while only five per cent of services commercials used this structure. This result is opposite from that predicted, failing to support H5. With regard to testimonial commercials, H6 predicted that services commercials would fall predominantly into the testimonial category more often than goods commercials. This was the case, but not at a level of statistical significance.

Table 5:
Hefzallah and Maloney's television commercial categories BY goods and services

		Associative	Demonstration	Informative	Plot	Staged	Testimonial	Total
Goods	(n)	63	29	64	23	30	18	227
	(%)	27.8 %	12.8 %	28.2 %	10.1%	13.2 %	7.9 %	100 %
Services	(n)	21	13	47	22	6	12	121
	(%)	17.4 %	10.7 %	38.8 %	18.2 %	5.0 %	9.9 %	100 %
Total	(n)	84	42	111	45	36	30	348
	(%)	24.1 %	12.1 %	31.8 %	12.9 %	10.3 %	8.6 %	100 %
	x^2	21	6.1	2.6	.0	16	1.2	
	df	1	1	1	1	1	1	
	sig	.000	.014	.107	.881	.000	.273	

Table 5. Summary of Results

Hypothesis	Proposition	Outcome
H1	Goods commercials will use informational techniques more frequently than transformational techniques	Not supported
H2	Services commercials will use transformational techniques more frequently than informational techniques.	Supported
H3	Services commercials on Australian television will adopt transformational techniques more frequently than goods commercials.	Supported
H4	Goods commercials on Australian television will adopt informational techniques more frequently than services commercials.	Supported
H5	Services commercials will fall into the staged television commercial category more frequently than goods commercials.	Not supported
H6	Services commercials will fall into the testimonial television commercial categories more often than goods commercials	Direction support only
H7	Goods commercials will fall into the informative category more often than services commercials.	Not supported
H8	H8: Goods commercials will fall into the demonstration category more often than services commercials	Supported

H7 stated that commercials for goods would fall into the informative category more often than services commercials. In fact the opposite trend was apparent with only 28.2 per cent of goods commercials versus 38.8 per cent of services commercials using informative commercials ($p < .10$).

Significant differences were found relating to the associative and demonstration structures. Goods commercials made use of the associative structure significantly more frequently than services commercials (27.7% v 17.4%), which was not the subject of any prediction based on the Zinkham, Johnson and Zinkham (1992) research. Furthermore, associative commercials comprised the second (for goods) and third (for services) most common type of execution in the sample.

Finally, goods commercials exhibited a greater frequency of the demonstration structure ($p<.05$). This is in line with the prediction in H8. Table 6 provides a summary of the hypotheses tested. As it can be seen, mixed results were found. While four hypotheses were supported, plus directional support found for H6, three hypotheses were rejected. In the case of H5 (staged commercials to be more frequent in services) a statistically significant finding occurred in the opposite direction.

6. Discussion

Overall, the analysis suggests that Australian marketers do adopt different advertising strategies for goods and services, although not always according to the pattern of earlier overseas research. The results indicate that services marketers have a preference for using transformational rather than informational advertisements. This likely represents an attempt to overcome service intangibility, transforming the intangible service into a meaningful psychological experience and enhancing consumer understanding of the service offered thereby reducing pre-purchase risk and dissonance.

However, given the substantial use of both informational and transformational techniques by goods advertisers, it appears that such marketers also see the benefits of going beyond simple information transfer. They are offering linkages to experiences that are highly desirable to consumers and well beyond a simple description of the functional product. One explanation is that greater use of such techniques has become more widespread in the time since the initial studies were undertaken in the 1980s. Goods brands in the mature stage of the product life cycle may also need to differentiate themselves on the basis of factors other than product attributes, just as services do.

In terms of Hefzallah and Maloney's classification scheme, as goods are more tangible it was thought that the structure of goods commercials would be predominantly informative and demonstrative. These types of commercials presumably make it easy for the consumer to assess attributes pre-purchase, thereby reducing perceived risk. It was suggested that services commercials would use staged and testimonial structures, as these structures best provide a tangible image around an otherwise intangible product. However, it was found that the staged and testimonial categories were in fact least favoured in services commercials.

The most favoured Hefzallah and Maloney category in commercials for both goods and services was the informative structure. This finding seems to contradict the informational/transformational finding concerning services, and cannot be easily explained. However, the 'informative' category, although apparently similar, cannot be assumed to be equivalent to the construct 'informational' in the informational/transformational scheme, particularly when the former is one of two basic categories available, whereas the latter is framed within six categories.

Goods advertisers were found to have a preference for using informative, associative and staged structures, again contrary to prediction. These findings regarding associative and staged structures can be interpreted as indicative of an attempt by goods marketers to get consumers to experience emotion associated with their products, in line with the use of the transformational strategies they used in a substantial proportion of the commercials.

Goods marketers appear to be using many of the techniques previously associated with services commercials. Services marketers on the other hand may be failing to capitalise on all the available techniques available to them to overcome the limitations imposed by the unique characteristics of services. Further analysis is necessary to consider possible linkages between the much discussed distinctive characteristics of services and the choices services marketers are making in terms of their advertising. A possible relationship between intangibility and variability and use of testimonials for example is not supported in this study.

Services are far from homogeneous. Hence it may be that different service types (high versus low contact, credence versus experience properties, people processing versus possession or information processing, professional versus non-professional services) have adopted advertising strategies better suited to their characteristics. In other words advertising strategies within the service sector may vary. However this was not examined in our study.

The study suggests that services marketers are using both information based and experience related commercials. While this may mean that some service marketers are yet to acknowledge that services require different advertising strategies, it could also be interpreted to mean that they feel the best way to overcome the unique characteristics of services is to provide customers with information.

7. Research Limitations and Recommendations

Despite the high inter-rater reliability measures obtained, content analysis as a research technique cannot be regarded as being without some remnant of subjectivity in the various categorisations made. Further, the purposive sampling method used which limited the times of commercials aired, as well as the limiting of recording time to a single week of programming, are both limitations which could be overcome relatively simply by replication on a larger scale.

The obvious requirement flowing from this study is for an updating of US data in order to assess whether the many differences that have emerged from earlier findings are the result of differences in advertising practices in Australian and US markets, or the result of changes over time which may be evident in the advertising of both regions. Indeed this is a fertile area for cross-cultural study linking western and non-western advertising. The current study itself would be enhanced by replication to retest its unexpected findings, with extension to larger sample sizes. Further research can also extend to other advertising media to discover whether the effects found are media specific or more general.

To gain a more comprehensive picture of differences in the advertising of goods and services in Australian advertising, other classification schemes such as search, experience and credence qualities (Zeithaml 1981; Zeithaml, Parasuraman & Berry 1985) could be utilised in classifying the focal service. Such research may assist us in understanding whether differences in advertising strategies adopted are linked to goods/ services differences, or to broader differences such as ease of evaluation.

As noted, future research may be able to link knowledge concerning differences in advertising strategies for goods and services with data concerning advertising effectiveness. This more than anything else could provoke changes in the conduct of service advertising campaigns, and is an important next step.

8. Conclusion

This study would appear to support the notion that goods and services marketers do adopt differing advertising strategies, interpretable to some extent by the unique characteristics of services. However, a number of the results found were surprising in the light of earlier research overseas. The study is a small contribution to the sparse literature on this topic.

References

Abernethy, A.M., Butler, D.D., 1992. Advertising Information: Services Verses Products. Journal of Retailing, 68 (Winter) 398 - 419.

Abernethy, A.M., Butler, D.D.,1993. Promoting Customer Contact People: A Key Difference in Service and Product Advertising. Journal of Services Marketing, 7 (1) 4 -12.

Bitner, M., Faranda, W., Hubbert, A. & Zeithaml, V. 1997. Customer Contributions and Roles in Service Delivery. International Journal of Service Industry Management, 8(3) 193 – 205.

Cooper, D.R., Schindler, P.A.,1998. Business Research Methods. Sydney: Irwin McGraw-Hill.

Crane, F.G., (1990. The Need for Corporate Advertising in the Financial Services Industry: A Case Study Illustration. Journal of Services Marketing, 4 (2) 31 - 37.

Culter, B.D., Javalgi, R.G.,1993. Analysis of Print Ad Features: Services versus Products. Journal of Advertising Research, 33 (March/April) 62 - 70.

Firestone, S.H., 1983. Why Advertising a Service is Different. In Emerging Perspectives in Services Marketing, Leonard L. Berry, G. Lynn Shostack, and George D. Upah, eds. Chicago: American Marketing Association.

Freiden, J.B., Goldsmith, R.E., 1989. Prepurchase Information-Seeking for Professional Services. Journal of Services Marketing, 3 (1) 45 - 55.

George, W.R., Berry L.L., 1981. Guidelines for the Advertising of Services. Business Horizons, 24 (July/August) 52 - 56.

Gronroos, C., 1981. Internal Marketing-An Integral Part of Marketing Theory. In Marketing of Services, James H. Donnelly and William R. George, eds. Chicago: American Marketing Association.

Grove, S.J., Pickett, G.M., Laband, D.M., 1995. An Empirical Examination of the Information Content of Service Advertisements. Services Industry Journal, 15 (April) 216 - 233.

Hartman, D.E., Lindgren Jr., J.H., 1993. Consumer Evaluations of Goods and Services. Journal of Services Marketing, 7 (2) 4 - 15.

Hefzallah, I.M., Maloney, W.P., 1979. Are There Only Six Kinds of TV Commercials? Journal of Advertising Research, 19 (August) 57 - 62.

Hill, D.J., Gandhi, N., 1992. Services Advertising: A Framework it its Effectiveness. The Journal of Services Marketing, 6 (Fall) 63 - 76.

Kassarjian, H.H.,1977. Content Analysis in Consumer Research. Journal of Consumer Research. 4 (June) 8 - 18.

Kelly, S., Donnelly, J. & Skinner, S. 1990. Customer Participation in Service Production and Delivery. Journal of Retailing., 66(3) 315 – 335.

Kolbe, R.H., Burnett, M.S.,1991. Content-Analysis Research: An Examination of Applications and Directives for Improving Research Reliability and Objectivity. Journal of Consumer Research. 18 (September) 243 - 250.

Kotler, P., Chandler, P.C., Brown, L., Adam, S., 1994. Marketing: Australia and New Zealand. Prentice Hall.

Lovelock, C.H., Patterson, P.G., Walker, R.H., 1998. Services Marketing. Sydney: Prentice Hill

Mittal, B., 1999. The Advertising of Services: Meeting the Challenge of Intangibility. Journal of Service Research, 2 (August) 98 - 116.

Parasuraman, A., 1987. Customer-Orientated Corporate Cultures Are Crucial to Services Marketing Success. Journal of Services Marketing, 1 (1) 39 – 46

Puto, C.P., Wells, W.D., 1984. Informational and Transformation Advertising: The Differential Effects of Time. In Thomas C. Kinnear (Ed.) Advances in Consumer Research (Vol. 11, pp. 638 - 64). Provo, UT: Association for Consumer Research.

Resnik, A., Stern, B.L.,1977. An Analysis of Information Content in Television Advertising. Journal of Marketing, 41 (January) 50 - 53.

Shostack, L., 1977. Breaking Free From Product Marketing. Journal of Marketing. 41(April), 73-80.

Stern, B.B., 1987. Gender Research and the Services Consumer: New Insights and New Directions. In Advances in Consumer Research, 14. Chicago: American Marketing Association.

Twible, J.L., Hensel, J.S., 1991. Services versus Goods. An Empirical Study of Vivid Information in Advertising. In Enhancing Knowledge Development in Marketing, Chicago: American Marketing Association.

Upah, G.D., 1983. Impression Management in Service Marketing: Key Research Issues. In Emerging Perspectives in Services Marketing, Leonard L. Berry, G. Lynn Shostack, and George D. Upah, eds. Chicago: American Marketing Association.

Young, R.F., 1981. The Advertising of Consumer Services and the Hierarchy of Effects. In Marketing of Services, James H. Donnelly and William R. George, eds,. Chicago; American Marketing Association.

Zeitthaml, V.A., Parasuraman, A., Berry, L.L., 1985. Problems and Strategies in Services Marketing. Journal of Marketing, 49 (Spring) 33 - 46.

Zeithaml, V. A., 1981. How Consumer Evaluation Processes Differ Between Goods and Services. In W. R. George (Ed.), Marketing of Services (pp. 186-190). Chicago: American Marketing Association.

Zinkham, G.M., Johnson, M., Zinkham, F.C., 1992. Differences Between Product and Services Television Commercials. The Journal of Services Marketing, 6 (Summer), 59 - 66.

Biographies

David Gauci completed an honours degree in business at La Trobe University, majoring in marketing and human resource management. While a student he worked with La Trobe University Housing Limited to prepare a strategic marketing plan, and also completed a placement with Adcorp Australia. For three and a half years David worked with the Victorian Blind Cricket Association as marketing and public relations co-ordinator in a voluntary capacity. He worked with the Banyule City Council/Victorian Local Governance Association as a consultation support officer conducting research into community consultation. Currently he is working with Government Superannuation Office as a superannuation consultant.

Dr. Railton Hill holds separate qualifications in Arts, marketing, media, librarianship, and both general and industry education. His PhD is in marketing. Currently he is Senior Lecturer in Marketing at Swinburne University of Technology, researching and publishing in the areas of services marketing, communications, and social marketing. He has previously taught at La Trobe University and the Australian Graduate School of Management, UNSW. His work experience has also included marketing, consulting and training work for the Australian Institute of Management-Victoria; freelance media work including production and presentation of many nationally broadcast Australian Broadcasting Corporation radio programs; small business, independent consulting experience; and work as client services manager at Deakin University's commercial/industrial training wing.

Correspondence

Dr. Railton Hill, Senior Lecturer in Marketing, School of Business, Swinburne Institute of Technology, John St., Hawthorn, Victoria 3122, Telephone: +61 (3) 9214 8416, Email: rhill@swin.edu.au

Diffusing Customer Anger in Service Recovery: A Conceptual Framework

Doan T. Nguyen & Janet R. McColl-Kennedy

Abstract

Knowing how to handle angry customers following a service failure is an important aspect of a service provider's work role. This paper presents a conceptual framework to help marketing academics and managers better understand: (1) how customer anger is provoked by a service failure; and (2) how customer anger may be reduced through using specific service recovery attempts by service providers. Specifically, we propose a two-phase conceptual model incorporating pre-service recovery (Phase 1) and service recovery (Phase 2). We argue that in Phase 1, an external cause produces anger and that cognitive appraisal is undertaken specifically in terms of: (a) goal relevance; (b) goal incongruence; and (c) ego-involvement – and this moderates the intensity of anger experienced by the customer. In Phase 2, we argue that customer anger can be reduced if the service provider undertakes the following: (a) listening; (b) engaging in blame displacement; and (c) providing an apology to the customer.

Keywords: Service failure, Service recovery, Emotions, Customer anger

1. Introduction

Despite considerable efforts to make customers happy, things do not always go right in service delivery. When things go wrong negative emotions, such as anger, frustration and even rage, are produced and expressed. When the service fails, recovery attempts by service providers may enhance or enflame these negative emotions. Knowing how to handle the recovery process is crucial as an inappropriate response may only make matters worse (Sparks and McColl-Kennedy, 2001).

It is surprising that research to date has largely disregarded the role of consumer emotions in service recovery (Stephens and Gwinner, 1998), particularly as service failures and some attempts at recovery may result in very strong negative emotions. Anger is a particularly common emotion in such circumstances. Some exceptions are Bagozzi, Gopinath, and Nyer (1999) Folkes (1984), Folkes, Koletsky, and Graham (1987), Härtel, McColl-Kennedy, and McDonald (1998), Nyer (1997), Smith and Bolton (2002), Stephens and Gwinner (1998) who studied the effects of customer emotional responses on customer satisfaction, or customer perceptions and judgments of organisational recovery attempts. Yet no study has specifically investigated the relationships between negative emotions, especially customer anger and cause of service failure, with the purpose of exploring practical strategies for recovery attempts. To fill this gap, this paper argues a two-phase conceptual framework to better understand and respond to customer anger in a service failure/recovery context.

Specifically, we propose that in Phase 1, an external cause produces anger and that cognitive appraisal takes place with reference to: (a) goal relevance; (b) goal incongruence; and (c) ego-involvement – and this moderates the intensity of anger experienced by the customer. In Phase 2, we argue that customer anger can be reduced by the service provider doing the following: (a) listening; (b) engaging in blame displacement; and (c) providing an apology. These customer anger diffusion strategies are discussed in the second part of the paper. First, however, we examine the categories of service failures that trigger customer anger, incorporating cognitive appraisal and causal attribution theory to develop a conceptual framework to better understand customer anger.

2. Customer Anger – A Conceptual Framework

2.1. Categories of Service Failures

Service failures are evaluated by customers as negative events. However, these failures may or may not be the trigger of customer anger. In other words, a customer may be angry for many different reasons. To better understand the causes of anger, a service provider could think about the fundamental elements which might produce anger. First, the service provider needs to look at the key types of service failures. Traditionally, services marketing literature has identified three main categories: (1) process failures vs. outcome failures; (2) magnitude of failures; and (3) core vs. non-core failures. Bitner, Booms, and Tetreault (1990), Hoffman, Kelley, and Rotalsky (1995), Keaveney (1995), and Mohr and Bitner (1995) refer to process and outcome. The outcome dimension of a service encounter is that which customers actually receive from the service, whereas the process dimension focuses on how they receive the service (Mohr and Bitner, 1995; Parasuraman, Zeithaml, and Berry, 1985; Smith, Bolton, and Wagner, 1999). Another way to categorise service failure events is in terms of the magnitude of the failure. Previous research has shown that the higher the magnitude of the failure, the lower the level of customer satisfaction (Gilly and Gelb, 1982; Hoffman et al., 1995; Richins, 1987; Smith et al., 1999). Core service failures were defined by Keaveney (1995) as those that are due to mistakes or technical problems with the services themselves. In other words, customers view core service failures as "big mistakes", and non-core failures as more minor.

Although it is acknowledged that there are different categories of failures, and that negative emotion typically accompanies service failures, no study has explicitly investigated customer anger in terms of the type of service failure. Given the paucity in research in marketing, we turn to the psychology literature to help us identify appropriate theory relevant to the diffusion of customer anger. Specifically, we examine the appropriateness of appraisal theory and causal attribution theory in order to develop a conceptual framework to understand the determinants and moderators of customer anger.

2.2. Cognitive Approaches to Anger

In the psychology literature, there are several approaches to understanding anger. The cognitive approach is appropriate for this research context because it facilitates empirical testing, and has been applied in a social psychology setting. However, although a cognitive approach to anger has been well developed and documented, it has been questioned by some theorists. In particular, Scherer (1999) argues that anger sometimes can be aroused independently from goal-oriented evaluation. In addition, Berkowitz (1989, 1993) proposes a cognitive–neoassociationistic approach which argues that any unpleasant state of affairs (e.g physical pain, unpleasant temperature, social stress etc.) could give rise to anger. This approach opposes cognitive appraisal analysis of anger. Furthermore, non-cognitive appraisal theorists (Berkowitz, 1989, 1993; Oatley and Johnson-Laird, 1996; Quigley and Tedeschi, 1996) claim that appraisal theories do not always work perfectly as anger can be aroused unconsciously, that is without thinking about it. In other words, individuals can be angry without carrying out a cognitive evaluation of the negative event.

However, we acknowledge that each of the theoretical approaches has merit in certain ways. The main purpose of this paper is to investigate how anger is triggered, and how service providers can effectively deal with angry customers. Specifically, we argue that both appraisal theory and attribution theory can help us to better understand customer anger (cf. Berkowitz ,1999; Frijda, 1993; Gotlib and Abramson, 1999; Scherer, 1999).

2.3. Appraisal Theories

Appraisal theory is a type of cognitive approach which views emotion as a function of cognition (Izard, 1991). Essentially, cognitive appraisal theorists propose dimensions which integrate an individual's cognitive process of an event and the resultant emotions from the appraisal process (Folkman and Lazarus, 1991; Lazarus, 1991b, 1991a; Roseman, 1984; Roseman, Antoniou, and Jose, 1996; Roseman, Dhawan, Naidu, and Thapa, 1995; Roseman, Spindel, and Jose, 1990; Smith and Ellsworth, 1985; Smith and Lazarus, 1993).

Appraisal theories are divided into four main streams which are characterised by the nature of the appraisal dimensions: criteria, attribution, themes or meaning (Scherer, 1999). Criteria is the classic approach which postulates specific profiles for appraisal outcomes which determine the nature of the emotion. Theorists such as Roseman (1984), Roseman et al. (1990, 1996), Scherer (1984), and Smith and Ellsworth (1985) propose dimensions by which individuals evaluate an event that occurs to them, and these dimensions in turn determine which emotions are provoked. These dimensions are characteristic of the event, the relevance of the event to the individual's goal, agency and the compatibility of the event with an individual's standards.

2.4. Attribution Theory

Attributions is another stream of the appraisal approach. This research (cf. Heider, 1958; Shaver, 1985; Weiner, 1985, 1986) focuses mainly on the nature of the causal attributions that are involved in emotion-antecedent appraisals (Scherer, 1999). Weiner (1980, 1985, 1986), a key researcher in this field, emphasises the extent to which a number of key emotions, such as anger, pride or shame, can be distinguished solely on the basis of internal-external attribution of responsibility. The third group of researchers (cf. Lazarus, 1991b; Monat and Lazarus, 1991; Smith and Lazarus, 1993) attempts to link the elicitation of a specific emotion to the identification of a specific pattern of goal relatedness of an event. This group is known as the themes group (Scherer, 1999). The fourth group, identified as the meaning group (Scherer, 1999), focuses on the logical operations that determine the labeling of a feeling state with a specific emotion word. Among the above approaches, attribution theory and themes approach are applied in this research because causal attribution is the most popular attribution theory applied to service failure/recovery literature (Folkes, 1984, 1988; Folkes et al., 1987; Forrester and Maute, 2001; Härtel et al., 1998; Hunt and Kernan, 1991; Taylor, 1994; Swanson and Kelley, 2001), and the themes approach provides a deeper understanding of customer anger that we will discuss in detail later.

Attribution theories describe the ways in which individuals explain their world and the events that happen to them, specially negative events (Gotlib and Abramson, 1999). The theory proposes three dimensions of causal attribution (Weiner, 1980, 1985, 1986): locus, controllability, and stability. Locus is the location of the cause of problems or negative events. Controllability is whether the problem is volitional or non-volitional. Finally, stability is whether the problem is temporary or permanent.

2.5. Cognitive Appraisal Theories

Cognitive appraisal theorists propose dimensions which integrate an individual's cognitive process of an event and the resultant emotions from the appraisal process. The two main causes as proposed by Roseman et al., (1990) are event-caused versus person-caused, and self-caused versus agency-caused. They argue that anger results from an event when it is inconsistent with the individual's motive, and when it is caused by other persons. Similarly, Smith and Ellsworth (1985) and Ortony, Clore, and Collins (1988) also use dimensions such as impersonal versus human control, self versus other agency to explore emotions triggered by an event. Other psychologists consider closely related constructs such as control, accountability, and blame (Folger and Cropanzano, 2001; Folkman and Lazarus, 1991; Folkman, Lazarus, Dunkel-Schetter, Delongis, and Gruen, 1986; Izard, 1977; Lazarus, 1991b, 1966; Lazarus and Folkman ,1984; Monat and Lazarus, 1991). In short, there is significant overlap among the dimensions proposed by appraisal theories in terms of the cognitive function of anger. They argue that if A has to suffer from a problem caused by B, and A thinks that this problem is controllable by B, A will be angry at B (Ortony et al., 1988; Roseman, 1984; Scherer, 1984; Smith and Ellsworth, 1985).

Applying these psychological dimensions to the service failure/recovery context, service failures that lead to anger can be divided into two categories based on their causes: (1) external and (2) non-external. From the customer's perspective, an externally-caused service failure is the service failure caused by a service provider. In contrast, non-external-caused failures are caused by the customer, by the situation, or due to a customer not knowing who or what caused the problem. For example, if a customer has to wait for one hour in a health clinic, although s/he has made an appointment and arrives on time, this will be appraised as a failure. The customer might think that the long-waiting time is caused by front desk staff who did not do a good job in arranging the appointment schedule. This problem is called an external-caused service failure, and the health clinic is blamed as the external party that caused the problem. However, if the customer is late, the waiting time s/he has to endure is caused by her/himself. This is an example of non-external-caused service failure. Finally, if the doctor is delayed by an emergency, and all patients in the waiting room have to wait for a long time, this would also be interpreted as a non-external-caused service failure.

Anger needs an object or target. In other words, an individual has to be angry at someone or something (Berkowitz, 1999). In the service failure context, if customers perceive the problem to be the service provider's fault, s/he will be angry at the service provider. Otherwise, customers might be angry at themselves or at other parties, but these cases are outside the scope of this research. Hence we propose:

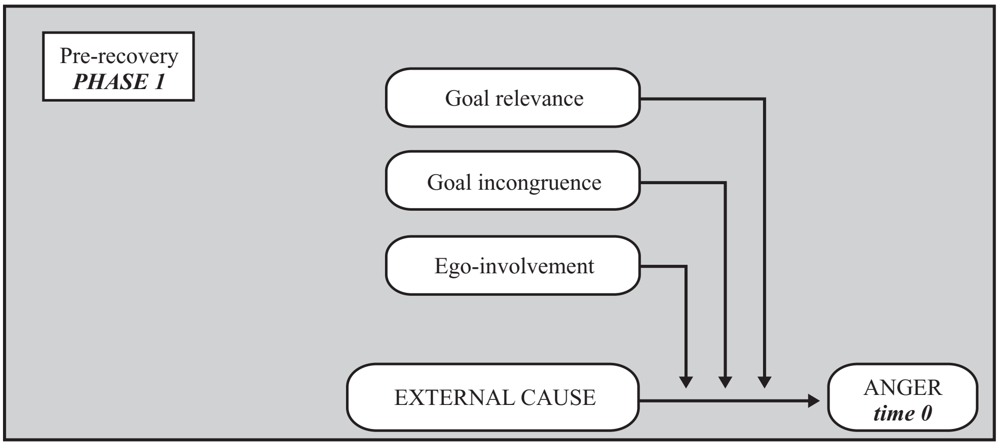

Figure 1: Conceptual Model of Causes of Customer Anger in Service Failure.

P1: If it is perceived that the service failure is caused by an external source (e.g. the service provider), the customer will be angry at the external cause.

Combining causal attributions and appraisal theories, we propose the cause of the service failure as the main component that triggers anger at the service provider. However, causal attributions themselves do not explain the intensity of the customer's anger because appraisal theories focus on emotion generally rather than in terms of discrete emotions such as happiness, sadness, anger, shame (Izard, 1991; Lazarus, 1991b; Lazarus and Folkman, 1984; Quigley and Tedeschi, 1996; Roseman, 1984; Roseman et al., 1996; Roseman et al., 1990). However, in the case of service failure/recovery context, we argue that an individual's cognitive appraisal moderates the level of anger. In other words, we use the cognitive appraisal framework as a moderator of the relationship between the cause of the failure and customer's level of anger.

2.6. Cognitive Appraisal

Essentially, cognitive appraisal theorists argue that cognitive appraisal processes result in different emotions. The core concept of appraisal theories is that a person evaluates and interprets events in terms of their own well-being. Those evaluations result in emotional responses (or no emotion at all). Different individuals can have different emotional reactions for the same event based on their individual appraisal process. In other words, emotions are produced by an individual's psychological appraisal process, not by a specific event or physical circumstance per se (Bagozzi et al., 1999; Folkman et al., 1986; Lazarus, 1991b, 1991a, 1966; Lazarus and Folkman, 1984; Nyer, 1997; Roseman, 1984; Roseman et al., 1990; Stephens and Gwinner, 1998). Lazarus (1991b)'s three key components of an individual's primary appraisal have been widely acknowledged in the literature (cf. Frijda, 1993; Nyer, 1997; Ortony et al., 1988; Roseman, 1984; Roseman et al., 1996; Roseman et al., 1990; Scherer, 1999; Smith and Ellsworth, 1985) and therefore, we use these as the appraisal components in Figure 1. The three components are: goal relevance, goal incongruence, and ego involvement.

Goal relevance

Goal relevance is the extent to which a problem is personally relevant to the individual's well-being. When an event occurs which carries no implications for an individual's well-being, it is appraised as goal irrelevant (Lazarus and Folkman, 1984). And if there is no goal relevance, there will be no emotion (Lazarus, 1991b). The intensity of the emotional response also depends on goal relevance (McColl-Kennedy and Sparks, 2003). The more relevant it is to one's goal, the greater the intensity of negative emotions experienced. For example, if a customer discovers that an amount of money which was supposed to be transferred into her/his account has not yet appeared, it is assessed as problematic. If the money is planned to be used for a special purpose in a certain time, then it is likely to be appraised as highly relevant to one's goal.

Goal incongruence

Goal congruence is the extent to which an event meets the desire of the individual, or is consistent with what s/he wants (Lazarus, 1991b). In other words, in a service failure context, one could say that the event is very incongruent to the goal that s/he wants to achieve. For example, in the case of a health clinic, although the customer has been waiting for forty minutes and is becoming annoyed as the front desk staff does not appear to recognise the problem. When the customer approaches the counter to complain, s/he is informed that the doctor s/he is waiting for is caught up in an emergency. The customer requests to be transferred to another doctor because s/he sees that the patients of other doctors are being attended to and they have arrived after the customer concerned. However, the person on the front desk is not flexible enough to solve the problem, and the customer ends up waiting for one hour. In spite of the cause of the problem being situational, the customer is still very angry. The reason is that the customer attributes the cause of the waiting time and her/his anger to the inflexibility and lack of concern of the front desk staff. Hence, this is an externally-caused service failure that triggers customer anger, and the longer the customer has to wait, the more unpleasant the customer feels, and the more angry s/he will become.

Ego involvement

Ego involvement is the extent to which the event touches an individual's ego-identity which involves self-esteem and social-esteem, personal value, moral value, meanings, ego ideas (Lazarus, 1991b). Therefore, if one's self-esteem is threatened, conditions are ripe for anger. For example, a customer makes a booking in a restaurant for a very important date. When they arrive, no seats are available. Somehow the booking was not recorded. That event is not only goal relevant, and goal incongruent but also has a high level of ego involvement. In this case, the customer might experience anger although it might actually be her/his fault for being late for the booking time, or perhaps other factors such as a traffic jam have made the individual late for the booked time. The anger might be directed at herself/himself, or s/he might blame the restaurant for the problem. In short, the more the customer is embarrassed about the failure service, the more angry s/he will become. Prior relationship between the service provider and the customer is one dimension within ego involvement that increases customer anger with the service provider. For instance, in the restaurant booking case above, the customer will be angrier at the restaurant if s/he is a regular customer, than if s/he is a new customer. Hence, we argue that:

P2: The more relevant the goal, the more incongruent the event, and the more ego-involvement the failure, the angrier the customer will be.

3. Recovery Attempts

The services marketing literature recognises that there are several ways to recover customers. A popular approach proposes recovery strategies based on social exchange theory and justice theory. These strategies are compensation, response speed, apology and initiation (Smith and Bolton, 2002; Smith and Bolton, 1998; Smith et al., 1999), concern, voice, neutrality, and outcome (Sparks and McColl-Kennedy, 2001). Although these recovery strategies deal with recovering customer satisfaction and repurchase intention, they do not directly address the ways to diffuse customer anger. Strategies of apology, concern and voice appear applicable to anger reduction. According to Smith et al. (1999), an apology compensates the customer's self-esteem damage, and it can help regain customer satisfaction. Sparks and McColl-Kennedy (2001) argue that voice involves customers having an opportunity to express their view and/or provide input to the decision, and concern is the manner in which the service provider shows interest toward the failure.

Another research stream in service marketing and consumer behaviour literature addresses the issue of diffusing customer anger. Examples include Bennett (1997), Folkes (1984), Folkes et al. (1987), Menon and Dube (2000) O'Grady (1995) Taylor (1994), and Swanson and Kelley (2001). Recovery strategies proposed in terms of reducing the customer anger include listening, explanation and apology. Listening allows the service provider to obtain information from the customer about the problem. Explanation gives the customer information about what is happening, why it is happening, and who caused the problem (cf. Hoffman et al., 1995; Johnston and Hewa, 1997; Johnston and Fern, 1999; de Ruyter, Wetzels, and Birgelen, 1999; Swanson and Kelley, 2001).

Based on the above review, we apply listening, explanation and apology as the steps to follow to diffuse customer anger. Furthermore, we argue that listening should be the first step because it facilitates explanation and apology. Listening shows concern on the part of the service provider (Beatty, 1999), and gives customers a chance to voice their opinions. From a customer's perspective, without listening, a service provider cannot provide a meaningful, convincing explanation, or a genuine apology (Bennett, 1997; Folkes, 1984; Folkes et al., 1987; Menon and Dube, 2000; O'Grady, 1995; Taylor, 1994; Swanson and Kelley, 2001).

Hence, we propose:

P3: Listening is positively associated with the reduction of customer anger.

Although explanation is widely used in service failure/recovery literature, there is limited discussion of how this should be carried out in practice. Specifically, research recommends that service providers explain the situation to the customer, but the literature does not provide details on how to go about explaining, nor what is the goal of the explanation or what could be achieved from the explanation. To fill the gap in the literature, we propose that excuse giving theory be applied to service recovery (Folkes, 1988; Manusov et al., 1998; Schlenker, 1980; Weiner, Figueroa-Munoz, and Kakihara, 1991; Weiner, 2000; Weiner, Folkes, Amirkhan, and Verette, 1987). The main purpose of excuse giving strategy is to allocate responsibility. Based on causal attribution theory, by displacing blame, an individual can lessen another's level of anger. Applying this idea to the current research, we propose blame displacement as the second step in order to help diffuse customer anger.

According to Weiner's causal attribution theory (1980, 1985, 1986), an individual will be angry with the party where causal locus is attributed and when the problem is perceived to be controllable by that party. In order to lessen a customer's level of anger, it seems appropriate to target the excuses at the antecedents of the attributions which are motivation, information and beliefs (Folkes, 1988; Weiner et al., 1991; Weiner et al., 1987) rather than trying to change the customer's formed attributions. According to Folkes (1988), customers might be motivated to attribute the causal inference to an external cause to protect their self-esteem, thus they seek information about the frequency of the problem, others' experiences of the problem, and their own experience of the problem. Customers might also have prior beliefs about the causes of the problem. Providing information appears to be relatively easy to do, and hence we propose that service providers engage in a blame displacement strategy, specifically in terms of the following three steps:

Step 1: Identify the cause of the problem (whether the cause of the problem is external or non-external).

Step 2: Communicate to the customer if the problem is non-externally-caused, explain the cause of the problem so that the customer clearly understands that the locus of the cause is not the service provider.

Step 3: Withhold information if the cause of the problem is the service provider. If possible, redirect the blame to another target other than the service provider. (For example: late delivery from the supplier, software failure, communication failure, virus in the computer system, strike) or redirect the blame to situational targets (bad weather, traffic accident etc).

If the cause of the problem is successfully redirected away from the service provider (from external to non-external cause), the blame displacement strategy is considered successful. For example, in the restaurant case above, if the problem is the restaurant's fault (not recording the booking), it is an externally-caused service failure. However, if the manager explains to the customer that it is the restaurant's policy to hold the booking for only half hour, and the customer is late by more than half an hour, and the seats were given away to other people, the cause of the problem will be moved from external cause to non-external. Alternatively, if the customer is informed that the staff member who should have made the booking is a new staff member, and her/his mistake will be reviewed by the manager, the customer has someone to blame for the trouble. In this case, the new staff member will be an external cause of the problem rather than the restaurant. Hence:

P4: An appropriate blame displacement strategy is positively associated with the reduction of customer anger.

If customers feel that their ego-identity or self-esteem is damaged by the service failure, they think that they deserve an apology (Bennett, 1997; Folkes, 1984; Folkes et al., 1987; Menon and Dube, 2000; O'Grady, 1995; Taylor, 1994; Swanson and Kelley, 2001). Therefore, giving an apology is an essential strategy. As mentioned above, one of the antecedents of the causal attributions is self-esteem protection. Moreover, ego-involvement is proposed as one of the moderators of the relationship between failure causes and customer anger. Yet the service provider might not be able to identify how much ego-involvement the customer is experiencing. Therefore, providing an apology is a safe strategy to use. Hence:

P5: Apology is positively associated with the reduction of customer anger.

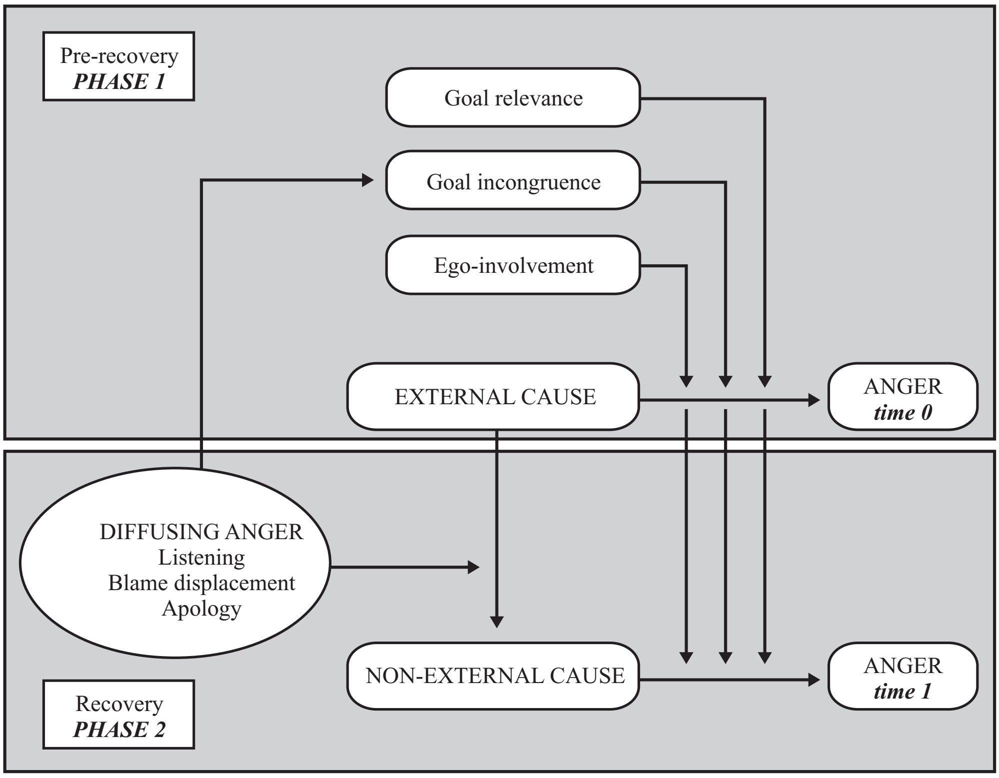

Figure 2: Model of Customer Anger and Diffusing Customer Anger Strategies

4. Conclusions and Future Research

This paper proposes a conceptual framework to help better understand customer anger following service failure, and to assist service providers in reducing customer anger as a result of a service recovery attempt. We propose that customer anger is triggered by a service failure that the customer perceives as the service provider's fault. Customer anger at the service provider will be moderated by the customer's cognitive appraisal in terms of: (1) goal relevance; (2) goal incongruence; and (3) ego-involvement. Based on this understanding, we propose strategies to diffuse customer anger using causal attribution theory and communication techniques. The specific strategies proposed are listening, blame displacement, and apology. We argue that listening gives a service provider a chance to identify the cause of the problem, decode the cause of anger and decide upon appropriate response techniques. Blame displacement allows the service provider to redirect the blame. Giving an apology compensates the customer in terms of ego-identity or self-esteem damage associated with the service failure.

Although limited by the scope and size of this research, this paper opens some interesting lines for future research. In the current research, we propose strategies to diffuse customer anger by providing information that redirects the blame. Research on customer's evaluations of the appropriateness of blame displacement would be helpful. What if an excuse is perceived to be not good enough? In this case, the service provider will face the risk of losing customers, and negative word of mouth. Conversely, if the service provider does not give an excuse and accepts the responsibility, how much compensation should be offered to the customer? Research into the costs and/benefits of giving an excuse and not giving an excuse would appear to be a fruitful research direction to take.

A limitation of this paper is that the conceptual framework proposed does not address issues of cultural difference. In addition, at the conceptual level, we cannot address the issues of individual differences, nor industry differences. Studying these differences will require a long-term comprehensive study.

References

Bagozzi, R. P., Gopinath, M., and Nyer, P. U. 1999. The Role of Emotions in Marketing. Journal of the Academy of Marketing Science 27 (2), 184-206.

Beatty, J. 1999. Good listening. Educational Theory 49 (3), 281.

Bennett, R. 1997. Anger, Catharsis, and Purchasing Behavior Following Aggressive Customer Complaints. Journal of Consumer Marketing 14 (2/3), 156.

Berkowitz, L., 1999. Anger. In: Dalgleish, T., Power, M. (Eds.), Handbook of Cognition and Emotion. Wiley, London.

---- 1989. Frustration-Aggression Hypothesis: Examination and Reformulation. Psychological Bulletin 106, 59-73.

---- (1993), Towards a General Theory of Anger and Emotional Aggression: Implications of the Cognitive-Neoassociationistic Perspective of the Analysis of Anger and Other Emotions. In: Wyer, R. S., Srull, T. K. (Eds), Perspectives of Anger and Emotion: Advances in Social Cognition Vol. VI. Hillsdale, NJ: Erlbaum.

Bitner, M. J., Booms, B. H., and Tetreault, M. S. 1990. The Service Encounter: Diagnosing Favorable and Unfavorable Incidents. Journal of Marketing 54 (January), 74-81.

de Ruyter, K. D., Wetzels, M., and Birgelen, M. V. 1999. How Do Customers React to Critical Service Encounters?: A Cross Sectional Perspective. Total Quality Management 19 (8), 1131-45.

Folger, R., and Cropanzano, R. 2001. Fairness Theory: Justice as Accountability. In: Greenberg, J., Cropanzano, R. (Eds.), Advances in Organizational Justice, Stanford University Press, California.

Folkes, V. S. 1984. Consumer Reaction to Product Failure: An Attributional Approach. Journal of Consumer Research 10 (March), 398-409.

---- 1988. Recent Attribution Research in Consumer Behavior: A Review and New Directions. Journal of Consumer Research, 14, (4), 548.

Folkes, V. S., Koletsky, S., and Graham, J. L. 1987. A Field Study of Causal Inferences and Consumer Reaction: The View from the Airport. Journal of Consumer Research 13 (March), 534-39.

Folkman, S., and Lazarus R. S. 1991. Coping and Emotion. In: Lazarus, R. S., Monat, A. (Eds.), Stress and Coping. Columbia University Press, New York.

Folkman, S., Lazarus, R. S., Dunkel-Schetter, C., Delongis, A., Gruen, R. J. 1986. Dynamics of a Stressful Encounter: Cognitive Appraisal, Coping, and Encounter Outcomes. Journal of Personality and Social Psychology 50 (5), 992-1003.

Forrester, W. R. and Maute, M. F. 2001. The Impact of Relationship Satisfaction on Attributions, Emotions, and Behaviors Following Service Failure. Journal of Applied Business Research 17 (1),1-14.

Frijda, N. H. 1993. Appraisal and Beyond. Cognition and Emotion 7 (3/4), 225-31.

Gilly, M. C. and Gelb, B. 1982. Post Purchase Consumer Processes and the Complaining Consumer. Journal of Consumer Research 9 (December), 323-28.

Gotlib, I. H., and Abramson L. Y. 1999. Attributional Theories of Emotion. In: Dalgleish, T., Power, M. (Eds.), Handbook of Cognition and Emotion. Wiley, London

Härtel, C., McColl-Kennedy, J., and McDonald, L. 1998. Integrating Attributional Theory and the Theory of Reasoned Action within an Affective Events Theory Framework to Produce a Contingency Predictive Model of Consumer Reactions to Organizational Mishaps. Advances in Consumer Research 25, 428-432.

Heider, F. 1958. The Psychology of Interpersonal Relations. Wiley, New York.

Hoffman, K. D., Kelley, S. W., and Rotalsky, H. M. 1995. Tracking Service Failures and Employee Recovery Efforts. Journal of Services Marketing 9 (2), 49-61.

Hunt, J. M., and Kernan, J. B. 1991. Consumer Reaction to Inequitable Exchange: The Role of Causal Inferences. Journal of Social Psychology 131 (5), 685-956.

Izard, C. E. 1977. Human Emotion. Plenum, New York.

---- (1991), The Psychology of Emotions. Plenum Press, New York.

Johnston, T. C., and Hewa, M. A. 1997. Fixing Service Failure. Industrial Marketing Management 26, 467-73.

Johnston, R., and Fern, A. 1999. Service Recovery Strategies for Single and Double Deviation Scenarios. Service Industries Journal 19 (2), 69-82.

Keaveney, S. M. 1995. Customer Switching Behavior in Service Industries: An Explanatory Study. Journal of Marketing 59 (April), 71-82.

Lazarus, R. S. 1991a. Cognition and Motivation in Emotion. American Psychologist. 46 (April), 352-67.

---- 1991b. Emotion and Adaptation. Oxford University Press, New York.

---- 1966. Psychological Stress and the Coping Process. McGraw-Hill, New York.

Lazarus, R. S. and Folkman, S. 1984. Stress, Appraisal and Coping. Springer, New York.

Manusov, V., Trees, April R. Lois Adeyinka Reddick, Rowe, A. C., and Easley, J. M. 1998. Explanations and Impressions: Investigating attributions and their effects on judgments for friends and strangers. Communication Studies 49 (3), 209.

McColl-Kennedy, J.R., and Sparks B. A. 2003. Application of Fairness Theory to Service Failures and Service Recovery. Journal of Service Research 5 (3), 251-266.

Menon, K., and Dube, L. 2000. Ensuring Greater Satisfaction by Engineering Salesperson Response to Customer Emotions. Journal of Retailing 76 (3), 285-308.

Mohr, L. A., and Bitner M. J. 1995. The Role of Employee Effort in Satisfaction with Service Transitions. Journal of Business Research 32 (3), 239-52.

Monat, A., and Lazarus R. S. 1991. Stress and Coping : An Anthology. Columbia University Press, New York.

Nyer, P. U. 1997. A Study of the Relationships Between Cognitive Appraisals and Consumption Emotions. Journal of the Academy of Marketing Science 25 (4), 296-305.

Oatley, K., and Johnson-Laird, P. N. 1996. The Communicative Theory of Emotions: Empirical Tests, Mental Models, and Implications for the Social Interaction. In: Martin, L. L., Tesser, A. (Eds.), Striving and Feeling. Erlbaum, Mahwah NJ.

O'Grady, D. 1995. Learn Steps to Diffuse Customer Anger. Secretary 55 (1).

Ortony, A., Clore, G., and Collins, G. L. 1988. The Cognitive Structure of Emotions. Cambridge University Press, New York.

Parasuraman, A., Zeithaml, V., and Berry L. L. 1985. A Conceptual Model of Service Quality and Its Implications for Future Research. Journal of Marketing 49 (4), 41-50.

Quigley, B. M., and Tedeschi, J. T. 1996. Mediating Effects of Blame Attributions on Feelings of Anger. Personality and Social Psychology Bulletin 22, 1280-88.

Richins, M. L. 1987. A Multivariate Analysis of Responses to Dissatisfaction. Journal of the Academy of Marketing Science 15 (3), 24-31.

Roseman, I. 1984. Cognitive Determinants of Emotion: A Structural Theory. Sage, CA: Beverly Hill.

Roseman, I., Antoniou, A., and Jose, P., 1996. Appraisal Determinants of Emotions: Constructing a More Accurate and Comprehensive Theory. Cognition and Emotion 10, 241-277.

Roseman, I., Dhawan, N., Naidu, R., and Thapa, K. 1995. Cultural Differences and Cross Cultural Similarities in Appraisals and Emotional Responses. Journal of Cross-Cultural Psychology 26, 23-48.

Roseman, I., Spindel, M., and Jose, P. 1990. Appraisals of Emotion-Eliciting Events: Testing a Theory of Discrete Emotions. Journal of Personality and Social Psychology 59, 899-915.

Scherer, K. 1999. Appraisal Theory. In: Dalgleish, T., Power, M. (Eds.), Handbook of Cognition and Emotion. Wiley, London

Scherer, K. R. 1984. On the Nature and Function of Emotion: A Component Process Approach. In Approaches to Emotion, Klaus Scherer and P. Ekman, Eds.: Hillsdale, NJ: Lawrence Erlbaum.

Scherer, K.R., 1984. On the Nature and Function of Emotion: A Component Process Approach. In: K. Scherer and P. Ekman (Eds.), Approaches to Emotion. Lawrence Erlbaum, Hillsdale, 293-317.

Schlenker, B. R. 1980. Impression Management. Brooks/Cole, New York.

Shaver, G. K. 1985. The Attribution of the Blame: Causality, Responsibility, and Blameworthiness. Springer Verlag, New York.

Smith, A. K., and Bolton, R. N. 2002 The Effect of Customers' Emotional Responses to Service Failures on Their Recovery Effort Evaluations and Satisfaction Judgements. Journal of the Academy of Marketing Science 30 (1), 5-23.

---- 1998. An Experimental Investigation of Customer Reactions to Service Failure and Recovery Encounters: Paradox or Peril? Journal of Service Research. 1 (1), 68-81.

Smith, A. K., Bolton, R. N., and Wagner, J. 1999. A Model of Customer Satisfaction with Service Encounters

Involving Failure and Recovery. Journal of Marketing Research 36 (3), 356-72.

Smith, C. A., and Ellsworth, P. C. 1985. Patterns of Cognitive Appraisal in Emotion. Journal of Personality and Social Psychology 48 (4), 813-38.

Smith, C. A., and Lazarus R. S. 1993. Appraisal Components, Core Relational Themes, and Emotions. Cognition and Emotion 7, 233-69.

Sparks, B. A., and McColl-Kennedy, J. R. 2001. Justice Strategy Options for Increased Customer Satisfaction in a Services Recovery Setting. Journal of Business Research 54, 209-18.

Stephens, N. and Gwinner, K. P. 1998. Why Don't Some People Complain? A Cognitive-Emotive Process Model of Consumer Complaint Behavior. Journal of the Academy of Marketing Science 26 (3), 172-89.

Swanson, R. S., and Kelley S. W. 2001. Attributions and Outcomes of the Service Recovery Process. Journal of Marketing Theory and Practice 9 (4), 50-65.

Taylor, S. 1994. Waiting for Service: The Relationship between Delays and Evaluations of Service. Journal of Marketing 58, 56-69.

Weiner, B. 2000. Attributional Thoughts about Consumer Behavior. Journal of Consumer Research 27 (3), 382-87.

---- 1985. An Attribution Theory of Achievement, Motivation, and Emotion. Psychological Review 92, 548-73.

---- 1986. An Attributional Theory of Motivation and Emotion. Springer Verlag, New York.

---- 1980. A Cognitive (Attribution) - Emotion - Action Model of Motivated Behavior: An Analysis of Judgments of Help-Giving. Journal of Personality and Social Psychology 37 (July), 1211-20.

Weiner, B., Figueroa-Munoz, A., and Kakihara, C. 1991. The Goals of Excuses and Communication Strategies Related to Causal Perceptions. Personality and Social Psychology Bulletin 17 (1), 4-13.

Weiner, B., Folkes, V. S., Amirkhan, J., and Verette, J. 1987. An Attributional Analysis of Excuse Giving: Studies of a Naive Theory of Emotion. Journal of Personality and Social Psychology 52 (2), 316-24.

Biographies

Doan T. Nguyen is an Associate Lecturer in Marketing at UQ Business School, the University of Queensland. She is completing a PhD in service recovery. She holds an MBA (Advanced) in services marketing. She has a publication in the Proceedings of the Australian and New Zealand Marketing Conference and presented at the International Services Marketing Conference, 2002. Doan has extensive industry experience in publishing, marketing and financial services marketing. Her current research interest includes services marketing, service recovery and customer emotion.

Janet R. McColl-Kennedy is Professor of Marketing at the UQ Business School, University of Queensland, Australia. She holds a B.A. with first class honours and a PhD from the University of Queensland. A key research focus is service recovery. She has published in several journals including Journal of Service Research, Journal of Business Research, The Leadership Quarterly, Journal of Services Marketing, Advances in Consumer Research, Journal of International Consumer Marketing, and International Journal of Human-Computer Studies. She is a reviewer for several international journals and is on the editorial board of the Australasian Marketing Journal. She is the editor of a book Services Marketing: A Managers Approach (2003, John Wiley & Sons). Further details are provided on her Web site, http://www.business.uq.edu.au/staff/academics/mccollkennedy.phtml

Correspondence Addresses

Doan T. Nguyen, Associate Lecturer, UQ Business School, University of Queensland QLD 4072, Telephone: + 61 (7) 3365 6743, Facsimile: + 61 (7) 3365 6988, email: d.nguyen@business.uq.edu.au. Janet R. McColl-Kennedy, Professor of Marketing,UQ Business School, University of Queensland QLD 4072, Telephone: + 61(7) 3365 6673, Facsimile: +61 (7) 3365 6988, email: j.mccoll-kennedy@business.uq.edu.au

E-mail Customer Service by Australian Educational Institutions

Jamie Murphy & Liza Gomes

Abstract

This research used an e-mail from mock Chinese consumers to investigate how Australian educational institutions use e-mail for overseas marketing and customer service. Less than two out of three of the 212 institutions sampled replied to a simple e-mail asking about fees and entry requirements. Even less institutions answered the questions promptly, politely, personally, professionally and promotionally. Despite e-mail's widespread use, these results highlight implementation issues with this new marketing and customer service tool.

The study gives institutions benchmarks and insights for improving e-mail marketing and online customer service. Academically, this paper supports past organisational research that size and industry sector relate to adopting innovations, suggests new metrics for measuring Internet adoption and proposes future research agendas.

Keywords: Electronic marketing, diffusion of innovations, e-mail, eService, education

1. Introduction

Australian educational institutions, from high schools to higher education, have adopted the Internet. Yet how effectively they use this new tool remains to be seen. Over-hyped technologies, poor implementation and unintended consequences can offset fabled technology benefits or backfire (Brown and Duguid, 2000; Fidler, 1997; Tenner, 1996) as in Boo.com (Stockport, Kunnath and Sedick, 2001) and similar dot.com disasters (Mahajan, Srinivasan and Wind, 2002). For companies today though, it is no longer a question of going online, rather how to leverage their online presence and measure its profitability (Dubosson-Torbay, Osterwalder and Pigneur, 2002; Garbi, 2002; Porter, 2001). Similarly, academics wrestle with the role of an organisation's online presence (Barnes and Cumby, 2002; Weil and Vitale, 2001) and appropriate metrics to evaluate electronic service strategies (Cox and Dale, 2001; Rust and Lemon, 2001).

Organisations often fear being left behind, jump on the bandwagon and adopt the latest technology -- such as the Internet (McBride, 1997; Murphy, Olaru, Schegg and Frey, 2003). Sensing and responding to technology is critical for success (Day and Schoemaker, 2000) and information-intensive industries, such as education, are inviting candidates for Internet transformation (Raymond, 2001). As universities, textbook publishers and private ventures explore online initiatives (Murphy and Massey, 2000; Massey and Murphy, 2000), the Internet becomes increasingly important for educational institutions (Tsichritzis, 1999).

To remain competitive, universities view students as customers and are restructuring themselves as service providers (Tsichritzis, 1999). Australia's introduction of full-fees in 1986 replaced student subsidies, established an open market for public and private education providers and gave birth to Australia's education export industry (Strickland, 1995). With 153,372 international students and a further 34,905 enrolled offshore with Australian education providers, overseas students generated $3.7 billion for Australia's economy in 2000 (DETYA 2001).

Four common international educational sectors in Australia are University, ELICOS (English Language Intensive Course for Overseas Students), VET (Vocational Education and Training) and Schools (primary and secondary). The VET sector, which includes all public and private vocational colleges, offers Australian Qualifications Framework courses and pathways to university studies. In the university sector, postgraduate education is deregulated and an important revenue source for most Australian universities. As faculties may offer unlimited places to full-fee paying students, competition for full-fee paying postgraduate students is intense and prestigious institutions have a competitive advantage (Scott, 1999).

China, Australia's fastest growing overseas market with a 69% increase and 14,948 students in 2000, was forecast to become Australia's biggest market in 2002 (DETYA 2001). Chinese demand for overseas education will continue to grow due to rapid economic and social developments, the 2008 Olympic Games, World Trade Organisation membership, governmental support for international cooperation in education and affluent parents willing to pay high fees for their single child's education (Xinhua 1999; Mazzarol, Soutar, Smart and Choo 2001). Most institutions consider China a great opportunity and are developing this market through agents, trade shows, joint ventures, and offshore programs (Mazzarol et al. 2001).

For Chinese (Mazzarol et al., 2001) as well as other students choosing overseas education, information is the most critical variable (Bourke, 2000). Potential overseas students going online found insufficient information on Australian universities' websites, yet website information influenced their choices (Gomes and Murphy, 2003). Websites are the glamorous Internet application, but institutions may be overlooking a simpler and more powerful online tool, e-mail.

One out of three prospective overseas students used e-mail to seek information about Australian educational institutions, and responses to their e-mail queries influenced four of five students' choices. Yet some institutions lacked policies or procedures for answering e-mail (Gomes and Murphy 2003). When prospective students or their parents e-mail an institution -- knock on their virtual door -- how does the institution respond?

Treating e-mail as business correspondence, similar to letters and faxes, necessitates developing standards for prompt, polite, personal, professional and promotional e-mail responses (Murphy et al, 2003; Ober, 2001; Strauss and Hill, 2001; Yang, 2001; Zemke and Connellan, 2001). Diffusion of innovations (Rogers, 1995), which helps explain how organisations implement new technologies, serves as the theoretical base for benchmarking and investigating e-mail customer service by Australian educational institutions that target overseas students.

2. Literature Review

2.1 Diffusion of innovations

For over half a century scholars have researched how consumers and organisations adopt new products and technologies, from different perspectives including sociology, geography and consumer behaviour (e.g., Brown, 1981; Mahajan, Muller and Bass, 1990; Rogers, 1995). Society often misuses and overestimates the short run influence of emerging technologies and underestimates their long run effects (Brown and Duguid, 2000; Fidler, 1997; Rogers, 1995; Tenner, 1996). The media, for example, hyped paperless offices as inevitable thanks to computers. Today's paperless office is an office with more paper (Forester, 1992; Liu and Stork, 2000; Tenner, 1996).

Prior media innovations such as the telephone and radio have had widespread impact on both business and everyday life but fail to match the combined speed and scale of the Internet's impact (Barwise and Hammond, 1998). With 10.63 million citizens online, over half the Australian population has adopted the Internet. By contrast, Australia's fastest growing overseas student market, China -- with 45.8 million or just one in 30 citizens online (Nua Internet Survey, 2002) -- is early in the adoption process. Once online, at home and at work (Ramsey, 2001), users of all ages flock to e-mail (BBC News 2002, Pastore 2002). As China's number of Internet users grew 72.8% from June 2001 to June 2002 (Nua Internet Survey, 2002), Australian educational institutions can expect increased e-mail from prospective Chinese students and their parents.

2.2 Diffusion of innovations by organisations

Individual diffusion occurs in several ways, based on social structures, social norms, opinion leaders, change agents and types of innovations. Rogers (1995) and others (e.g., Abrahamson, 1991; Damanpour, 1991; Fichman, 2000) have extended this model to organisations, noting that individuals often make optional innovation decisions, but organisations decide authoritatively or collectively. Factors such as individual (leader) characteristics and internal/external structure influence organisational innovativeness (Rogers, 1995).

Structural considerations related to adoption include organisational characteristics such as affiliation, age, size, type, and scope for innovation (Abrahamson, 1991; Damanpour, 1991; Moch and Morse, 1977; Raymond, 2001; Rogers, 1995; Soutar, Allen and Long, 2000; Wolfe, 1994), bandwagon effects (Abrahamson, 1991; Abrahamson and Rosenkopf, 1993; Murphy et al., 2003) and assimilating the innovation (Fichman, 2000). Competition and social emulation often pressure firms to jump on the bandwagon and adopt new technologies rather than be perceived as below-average performers (Abrahamson and Rosenkopf, 1993; McBride, 1997). For example, Australian organisations rapidly adopted the Internet perceiving it as unavoidable, yet their adoption often had little relationship to their business strategy (Soutar et al., 2000).

2.3 Phases of adoption

Related to bandwagon effects is assimilating the adopted technology. Organisational diffusion ranges from being aware of the innovation, or initiation, to successfully infusing the technology within the organisation's operational and managerial work systems, or implementation (e.g., Fichman, 2000; Fichman and Kemerer, 1999; Rogers, 1995; Van de Ven, 1986; Wolfe, 1994; Zmud and Apple 1992). For Australian educational institutions, initiation to the Internet can begin with simply having an e-mail address or a website.

As trusted brands are more important online (Barwise, Elberse and Hammond 2002, p. 41), institutions could move further along the diffusion continuum and augment their online trust via eBranding. Using domain names for branded e-mail and website addresses, such as <info@www.australia-school.edu.au> and <www.australia-school.edu.au> for a hypothetical institution named the Australia School, are easier to remember than unbranded ones, thus initiating more e-mail enquiries and website visits (Hanson 2000; Reis and Reis, 2000). E-branding integrates the organisation's offline identity online, thereby enhancing trust.

Having Internet tools such as branded websites and e-mail addresses though, fails to equate to the implementation phase of using these tools well, such as properly answering emails. A study of 200 Swiss hotels found that those hotels with an extra feature on their website, animation, responded to customer e-mails significantly less often than those sites without animation did (Murphy et al., 2003). This suggests a bandwagon effect in the initiation stage, adding animation to mimic other flash sites, followed by poor implementation. Differences between an organisation's technology-sensing capability and technology-response capability lead to an "assimilation gap" between initiation to and implementation of an innovation (Fichman and Kemerer, 1999; Srinivasan et al., 2002).

E-mail and websites meet Roger's (1995) criteria for rapid adoption (e.g. relative advantage, compatibility, complexity, trialability and observability), which makes adopting these Internet tools almost too easy for organisations. Successful adoption however, includes moving past the initiation phase of having these tools and implementing strategies that ensure proper e-mail responses. The implementation phase of organisational diffusion should help explain educational institution's use of e-mail for customer service.

2.4 Electronic customer service via e-mail

Just as telephones and toll free numbers pioneered new customer service delivery, email adds another channel that is ubiquitous, cheap, digital, asynchronous and virtual. Rust and Lemon (2001, p. 85) argue that electronic customer service, or eService, represents "the key to marketing most effectively to the consumer, for it is the logical continuation of a 100-year trend toward information service in the economy". As customers shift from phone to e-mail communication, companies increasingly use e-mail for customer service (Strauss and Hill, 2001; Zemke and Connellan, 2001).

Compared to customer service and direct marketing via surface mail, e-mail costs significantly less and is faster to send. While responses to traditional direct marketing messages take weeks, Van Hoof (1998) found that four out of five hotels respond to an e-mail in a couple of days. Furthermore, e-mail's speed and simplicity lets marketers test multiple messages, changing the offer or segmentation to improve results (Marinova, Murphy and Massey, 2002; Ramsey, 2001).

Strauss and Hill's (2001) study of e-mail consumer complaints showed that responding quickly, addressing the specific problem and closing with an employee's name increased customer satisfaction. Other suggestions for e-mail responses include friendly answers, personalised salutations and polite closings with the sender's full name, contact details and position (Barnes and Cumby 2002; Murphy et al., 2003; Murphy and Tan, 2003; Ober 2001; Strauss and Hill, 2001; Yang, 2001; Zemke and Connellan, 2001). Drawing upon these previous sources, five "Ps" - Prompt, Polite, Personal, Professional and Promotional - profile a suggested e-mail response.

Prompt replies arrive in less than a day. Polite includes opening with a greeting such as dear, thanking the person for their e-mail and a polite closing such as "sincerely" or "best regards". Addressing the recipient by name and giving a personalised rather than standardised answer is personal. Professional replies address the questions in the e-mail, use proper grammar, include the sender and institution's name and avoid attachments. Recipients may fear a virus and lack the software or bandwidth for viewing and downloading attachments. Promotional replies use a branded e-mail address and include a signature file. The latter - text automatically inserted at the bottom of an e-mail that includes the sender's name, title, company name, physical contact information, website address and e-mail address -- gives customers an easy way to contact the sender or visit the website for further information (Sterne, 2001).

Describing a proper e-mail response is easy, but implementation is hard. Organisations often face difficulties implementing new technology (Rogers 1995; Fichman, 2000), such as ensuring proper e-mail responses. Early results show poor implementation of e-mail as a customer service tool in Austria and Italy (Pechlaner et al. 2002), Singapore (Murphy and Tan, 2003), Switzerland (Murphy et al., 2003), Tunisia (Gherissi et al., 2002) and the United Kingdom (Voss, 2000). In Australia, two studies found that just over half the firms responded to a simple e-mail query (Gabbott, Dubelaar and Tsarenko, 2000; Heuchan et al. , 2001). Diffusion of innovations helps explain this poor eService.

3. Hypotheses

Three hypotheses explore relationships between organisational characteristics and e-mail customer service. A fourth hypothesis tests a proposed measure of electronic marketing and customer service, e-branding, which reflects further initiation to e-mail customer service.

Past research has shown that larger organisations, with greater access to resources and subsequently stronger need for strategic planning, adopt innovations more rapidly (Baptista, 1999; Kimberly and Evanisko, 1981; Rogers, 1995; Sieber, 2000). Thus, larger institutions should have moved beyond the initiation phase and implemented e-mail policies that help ensure better e-mail answers.

H1: Compared to smaller institutions, larger institutions will respond more (a) frequently, (b) promptly, (c) politely, (d) personally, (e) professionally and (f) promotionally.

Damanpour's (1991) meta-analysis argued that some inconsistencies in organisational diffusion research were due to organisational type. He and others (e.g. Rogers, 1995, Wolfe, 1994) note differences in diffusion based upon organisational type and call for further research in this area. Private institutions, with less government support than public institutions, depend more upon student fees and should therefore have stronger needs for effective electronic customer service and marketing. Private institutions should provide better e-mail answers than public institutions.

H2: Compared to public institutions, private institutions will respond more (a) frequently, (b) promptly, (c) politely, (d) personally, (e) professionally and (f) promotionally.

Given that they target different markets and that diffusion varies across organisation types (Damanpour, 1991; Rogers, 1995; Wolfe, 1994), e-mail responses should vary across the four common educational sectors, higher education, VET, ELICOS and schools.

H3: Based upon the educational sector, responses will vary with regard to being more (a) frequent, (b) prompt, (c) polite, (d) personal, (e) professional and (f) promotional.

Branded e-mail addresses suggest moving from an initiation phase and towards implementation of the Internet as a customer service and marketing tool. Murphy and Tan (2003) found that compared to those agencies without branded e-mail addresses, Singapore travel agents with branded e-mail addresses had significantly more e-mail responses and significantly less bounced e-mails.

H4: Compared to those institutions without, institutions with branded e-mail addresses will respond more (a) frequently, (b) promptly, (c) politely, (d) personally, (e) professionally and (f) promotionally.

4. Methodology

4.1 Sample

The methodology avoids a common limitation of marketing (Blair and Burton, 1987; Lee, Hu and Toh, 2000) and innovation (Rogers, 1995) research, relying upon stated behaviour, by e-mailing educational institutions and measuring their actual behaviour.

The sample included all 120 educational institutions subscribed to the Australian Education International (AEI) China market. AEI is a governmental organisation that promotes and develops Australian international

Table 1
Dependent Variables

	Did the institution
	Respond?
Prompt	Respond in less than 24 hours?
Polite	Open the response with “Dear”? Close the response politely, such as with “Sincerely” or “Best Regards? Thank the customer for e-mailing the institution?
Personal	Address the customer by name? Give the customer a personalised answer instead of a standardised answer?
Professional	Identify the person that sent the e-mail? Identify the institution that sent the e-mail? Answer the questions such that no follow-up e-mail was necessary? Attach any documents to the e-mail?
Promotional	Use a branded e-mail address? Include electronic contact details in a signature file?

education. An additional 92 e-mail addresses of institutions accepting Chinese students and listed in the Good Universities Guide and Good Schools Guides for New South Wales and Victoria - comprehensive guidebooks of Australian universities, TAFEs, colleges and independent secondary schools - supplemented the sample. The 212 e-mail addresses represented 133 private and 79 public institutions across 37 higher education institutions, 25 VET, 65 schools and 85 ELICOS. The institution’s principle educational sector classified institutions listed in multiple sectors.

4.2 Mock e-mail enquiry

Rocky, a fictitious 18-year-old student from Beijing sent half the e-mails and Wang Da Wei seeking information for his son Rocky, sent the other half. The two e-mails were randomly stratified across educational sectors and public or private ownership. Adjusting for who sent the e-mail, the content and questions were the same. Two pretests clarified e-mailing procedures, dependent variables and trimmed the questions to two -- course fees and entry requirements.

Pseudo-Rocky and his dad sent their e-mails on 10 October 2001, using separate Yahoo! e-mail addresses that ended in a Chinese domain, @yahoo.com.cn. The sender’s e-mail address was in the “to” field and the samples' e-mail addresses were in the “bcc” field. All e-mails used plain text format and contained no attachments. After the study, all institutions that responded received an e-mail explaining that they were part of a study, a brief summary of the results and offer of a full report.

4.3 Independent and dependent variables

The independent variables were: institution size, operationalised as the number of students; who sent the e-mail, Rocky or his dad; the source of the e-mail address, AEI or Good Universities/Schools Guide; the four educational sectors; and ownership, public or private. Table 1 lists thirteen binomial variables related to e-mail responses, based on suggested online and traditional business communication (Barnes and Cumby, 2002, Murphy et al., 2003, Murphy and Tan, 2003, Ober, 2001, Strauss and Hill, 2001, Yang, 2001, Zemke and Connellan, 2001). These variables were coded yes or no, and classified into five factors: Prompt, Polite, Personal, Professional and Promotional. How well an institution responded should indicate how well that institution had implemented using e-mail as a business communication tool.

5 Results

As there were no significant (Chi square, $p < 0.05$) response differences between e-mails sent using the AEI and Good Universities/Schools Guide databases, and different senders, Rocky and his dad, the data were combined. As Table 2 shows, there is ample room for improving e-mail replies.

Similar to an out of order telephone, about one in twenty establishments had an e-mail address that bounced. Using the same analogy, two institutions used an answering machine - automated e-mail replies - but failed to follow up with a human reply. Almost two out of three organisations answered the phone - replied to the e-mail. Comparable to answering a phone within five rings, 64% of the establishments said hello promptly - within a day - but other replies dribbled in over the next 16 days. Timely responses are important as the greater the perceived control businesses have over the delay, the more anger, or associated feelings of annoyance and frustration the customer feels (Taylor, 1994).

Of those that replied, polite replies hovered around 80% percent and personal replies under 80%. Professional replies varied. Nine out of ten senders identified themselves, six out of ten institutions identified themselves, and just one out of eight senders used attachments. Only one out of three establishments however, answered both questions. The institutions showed mix promotional results. Eight out of ten had branded e-mail addresses but less than half included a signature file.

Most surprising to the authors was the complete lack of attention that some institutions gave to their responses.

Table 2:
E-mail Responses

	Dependent Variables	n	% Respondents n = 136	% Total n = 212
Response Types	Responded	136	100%	64.2
	Bounced e-mail	11		5.2
	Automated response	2		0.9
Prompt	Responded in less than 24 hours	87	64.0	41.0
Polite	Opened with "Dear"	108	79.4	
	Closed politely	116	85.3	
	Thanked the customer	107	78.7	
Personal	Addressed the customer by name	107	78.7	
	Gave a personalised answer	99	72.8	
Professional	Sender identified	125	91.9	
	Institution identified	82	60.3	
	Answered the question	49	36.0	
	Used attachments	19	14.0	
Promotional	Branded e-mail address	126/188	92.6	88.7
	Signature file	63	46.3	

Table 3
Hypothesis testing using one-way ANOVA and the log-transformed number of students

Dependent Variables		Size of institution performing better	F Value	df	Sign.
Responded		Larger	0.19	163	.67
Prompt	Responded in less than 24 hours	Smaller	4.45	109	.04
Polite	Opened with "Dear"	Smaller	1.31	109	.26
	Closed politely	Smaller	0.34	109	.56
	Thanked the customer	Smaller	0.05	109	.82
Personal	Addressed the customer by name	Smaller	1.90	109	.17
	Gave a personalised answer	Smaller	3.07	109	.08
Professional	Sender identified	Smaller	0.49	109	.49
	Institution identified	Smaller	0.61	109	.44
	Answered the question	Smaller	5.62	109	.02
	Used attachments	Smaller	4.68	109	.03
Promotional	Branded e-mail address	Larger	6.74	163	.01
	E-signature file	Smaller	0.85	109	.36

Although his e-mail never mentioned graduate studies, one institution thanked young Rocky for his interest in their MBA programme and implied easy acceptance. Another institution sent Rocky a 17-page e-mail, replete with >>>> symbols suggesting that it had been forwarded at least four times. The institution told Rocky that answers to his questions (all two of them) followed. In essence, sort through these 17 pages for what you need.

Hypothesis 1

A log function transformed the number of full-time students to obtain normality. A one-way ANOVA then used this transformed value to test for significant differences on the average size of the establishments that met or did not meet the dependent variable. As Table 3 shows, and in contrast to the hypothesised direction, smaller institutions responded better on all but two variables, response rate and using attachments. Few differences were significant however. The average size of the institution was significantly larger for establishments with branded e-mail addresses, and significantly smaller for institutions that used attachments, were prompt and answered the questions.

Hypothesis 2

The second hypothesis predicted that private institutions would provide better e-mail responses than public institutions. The results in Table 4 show little difference in responding. Replies by private institutions tended to be more prompt, polite and personal while public institutions' replies were more professional and promotional. A chi square test showed that private schools' responses were significantly more personal than public institutions' responses were. Public institutions however, identified themselves significantly more often than private institutions did.

Hypothesis 3

The third hypothesis predicted that responses would vary by educational sector. As Table 5 shows, there were no significant differences in responding and politeness but significant differences in four variables. Schools led and Higher Education lagged in two variables, responding in less than 24 hours and personalised answers. VET led

Table 4
Response percentages and Pearson Chi Square testing of Private versus Public Institutions

	Dependent Variables	% Private Institutions	% Public Institutions	Pearson x^2	df	Asym. Sig.
	Responded	63.2	65.8	0.15	1	.77
Prompt	Responded in less than 24 hours	69.0	55.8	2.46	1	.12
Polite	Opened with "Dear"	83.3	73.1	2.07	1	.15
	Closed politely	85.7	84.6	0.03	1	.86
	Thanked the customer	77.4	80.8	0.22	1	.64
Personal	Greeted the customer by name	86.9	65.4	8.87	1	< .01
	Gave a personalised answer	81.0	59.6	7.38	1	.01
Professional	Sender identified	91.7	92.3	0.18	1	.89
	Institution identified	51.2	75.0	7.61	1	.01
	Answered the question	35.7	36.5	.01	1	.92
	Used attachments	16.7	9.6	1.33	1	.25
Promotional	Branded e-mail address	86.5	92.4	1.74	1	.19
	Signature file	41.7	53.8	1.92	1	.17

Table 5
Response percentages and Pearson Chi Square across four educational sectors

	Dependent Variables	% Higher Ed	% VET	% ELICO	% Schools	Pearson x^2	df	Asym. Sig.
	Responded	73.0	68.0	61.2	61.5	1.93	3	.59
Prompt	Responded in less than 24 hours	40.7	64.7	67.3	75.0	8.69	3	.03
Polite	Opened with "Dear"	66.7	88.2	82.7	80.0	3.84	3	.28
	Closed politely	77.8	88.2	86.5	87.5	1.55	3	.67
	Thanked the customer	85.2	76.5	86.5	65.0	7.11	3	.07
Personal	Greeted the customer by name	63.0	94.1	78.8	82.5	6.74	3	.08
	Gave a personalised answer	51.9	88.2	59.6	97.5	24.92	3	< .01
Professional	Sender identified	88.9	100	92.3	90.0	2.04	3	.57
	Institution identified	74.1	76.5	61.5	42.5	9.32	3	.03
	Answered the question	22.2	58.8	30.8	42.5	7.42	3	.06
	Used attachments	3.7	5.9	30.8	2.5			
Promotional	Branded e-mail address	97.3	84.0	81.2	95.4			
	Signature file	40.7	70.6	53.8	30.0	9.83	3	.02

and Schools lagged in identifying the institution and using a signature file. There were too few cases in some cells to analyse Attachments and Branded e-mail addresses.

Hypothesis 4

The last hypothesis proposed that branded e-mail addresses reflect moving past initiation and toward implementation of e-mail customer service and marketing. As expected, institutions with a branded e-mail address Responded about twice as often, 67% vs. 33%, as institutions without branded e-mail addresses (c2 =5.95, df=1, p=0.015) did. With over nine out of ten responding institutions having branded e-mail addresses though, there were too few cases for further analysis of this variable.

6. Conclusion

As the e-mail concerned students in China, where Australian visas are difficult to obtain, some institutions may have given this e-mail a low priority and responded accordingly. Responses may have been better for queries from countries with less onerous visa requirements. Hence the results may not be generalisable outside this context. Nonetheless, the lessons gleaned would seem to be important and relevant to all educational establishments seeking to get their institutions into student's (parents and other influencers) consideration and choice sets.

6.1 Managerial conclusions

E-mail is a simple method for customers to initiate contact with a company and thus may influence the future marketing relationship. Customer-initiated contacts, such as e-mail, represent a potential opportunity (Schultz, 2002). Harvesting this opportunity will probably be via e-mail, a very cost effective means of converting opportunity into reality. A powerful customer service tool that can build and strengthen relationships (Newell, 2000; Bertagnoli, 2001), e-mail is important for Australian institutions that recruit overseas students (Gomes and Murphy, 2003). This research though, suggests that institutions face implementation issues with this eService and marketing communication tool.

These results illustrate that treating e-mail as business correspondence gives establishments immediate competitive advantages, especially as responses play a critical role in the customer-initiated communication model (Schultz, 2002). Management and staff must appreciate that e-mail is as important as a phone call, fax or letter. For legal, marketing and organisational reasons, institutions should establish e-mail communication protocols and policies and train staff on these procedures (Straus and Hill, 2001; United Nations, 2001; Mills, Clay and Mortenson, 2000; Stevens and McElhill, 2000).

Analysing current e-mails is a key to this initiative. Based on customers' frequently asked e-mail questions, institutions should develop a Frequently Asked Questions section on their websites (United Nations, 2001) and template e-mail answers. These templates should use basic business communication procedures such as politely greeting, thanking and addressing the potential student by name, answering all questions, providing additional information and identifying the institution - name, postal address, phone and fax numbers and website address - as well as the sender. Online customers expect a response, the sooner the better, but a fast response should not override proper replies. Appendix 1 shows a suggested response.

6.2 Theoretical conclusions

Although the results support extending organisational diffusion of innovations to e-mail customer service, it is too early to draw clear-cut conclusions on organisational use of e-mail. As Paul Saffo notes, "the amount of time required for new ideas to fully seep into a culture has consistently averaged about three decades for at least the past five centuries" (Fidler, 1997, p. 8). Furthermore, e-mail takes on a life of its own in an organisational context and should be viewed as a reagent rather than a medium (Lee, 1994). Based on his hermeneutic interpretation of organisational e-mail use, Lee (1994, p. 143) suggests that researchers study "the actual processes by which the users of a communication medium come to understand themselves, their own use of the medium, and their organisational context."

There were no significant differences in responding or not responding based upon industry size, institutional ownership, and educational sector. This may suggest that simply hitting the reply key and sending a response represents an early step of eService implementation. That less than two out of three institutions responded to a potential customer, though, suggests poor implementation. E-branding may represent an intermediate step towards implementation. Institutions with branded e-mail addresses responded significantly more often than those institutions without e-branding did.

There were no significant differences all three measures of politeness and one professional measure, identifying the sender, regardless of the independent variables. Given the high percentage of organisations addressing these eService measures, all above 78%, this lack of significant differences may reflect that these four measures have reached the implementation stages with regard to e-mail customer service. The eight variables that showed significant differences however, may answer calls for appropriate metrics to evaluate electronic service strategies (Cox and Dale, 2001; Rust and Lemon, 2001), such as the implementation of e-mail customer service.

Promptness - responding within 24 hours - varied significantly across size and educational sector. Both personal measures, greeting the customer by name and providing personalised rather than template answers, were significantly better for private establishments. Providing a personalised answer also differed significantly across educational sectors. Three professional measures varied significantly. Differences in identifying the institution were significant across ownership and educational sector. Compared to larger institutions, smaller institutions answered the question and used attachment more often. Finally, there were significant differences across both promotional measures. Larger institutions had more branded e-mail addresses and the use of a signature file varied across educational sectors.

The results support calls for further research into institutional type (Damanpour, 1991; Rogers, 1995; Wolfe, 1994). Both educational sector and ownership revealed significant differences in how organisations provide personal, professional and promotional replies. Private establishments provided responses that were significantly more personal, yet less professional and promotional. Across the educational sectors, higher education was the worst sector in promptness and personalisation, yet had the highest percentage of branded e-mail addresses. Perhaps higher education jumped on the bandwagon with branded e-mail addresses, but faced an assimilation gap that the slower responses and less personalised answers suggest.

Contrary to the first hypothesis, the results showed that smaller institutions outperformed larger institutions on all but two measures of eService. Significant differences showed that size related positively to branded e-mail addresses but related negatively to answering the question and promptness. Large institutions may have the resources for buying and registering a domain name but are less nimble than smaller institutions when it comes to actually reading the e-mail and answering the questions. Size may relate positively to the initiation stage of adoption but negatively to the implementation stage.

Noteboom (1994) suggests that although small firms lag in the adoption of innovations, small firms also complement larger firms in adoption. Small firms, for example, participate less in research and development but have a greater productivity when they do participate. Larger businesses are better at generating fundamentally new technologies but smaller firms are likely to be better at applying these technologies. These results, which hint that size may relate positively to the initiation stage of adoption but negatively to the implementation stage, merit further research.

6.3 Future Research

In addition to further exploration of organisational characteristics related to initiation and implementation phases, diffusion of innovations implies that these results should change over time. A follow-up or longitudinal study could track changes in the institutions' e-mail replies and further explore initiation and implementation of e-mail customer service. Studies in other countries and using other databases would reinforce the Australian results and possibly generalise the results beyond Australia. The use of other countries also permits the study of cultural factors (Hofstede, 1980) related to the diffusion of eService.

Expanding the research methods could prove fruitful. Using a larger sample and more independent and dependent variables could lead to a factor analysis of the responses and a cluster analysis of the respondents (Hair et al., 1998). A content analysis of the responses by multiple coders would increase reliability (Krippendorf, 1980) and a content analysis of the institutions' websites - manual (MacMillan, 2001) or automated (Schegg et al., 2002; Scharl, 2000) -- could explore relationships between an institution's e-mail response and that same institution's website features (Murphy et al. 2003).

Future research could incorporate educational institution age as an independent variable. Established businesses are often more conservative, less flexible, stronger culturally and less likely to adopt new technology (O'Neil, Pouder and Buchholtz, 1998; Sieber, 2000). It would also be interesting to explore usage asymmetry and changes in adoption rates by educational institutions and prospective students.

Meador (2002) found that US companies gave better customer service over the phone than via e-mail. Future research could test e-mail customer service versus customer service in traditional and possibly other new media such as mobile phones (Barwise and Strong 2002). This research explored institutions' eService but failed to explore consumer reactions. Future research could investigate the influence of eService on prospective students' attitudes and behaviours. For example, Taylor (1994) argues that delays are an important aspect of service. Is there a relationship between speed of e-mail response and consumer reactions?

Future eService research should move beyond descriptive and towards causal research. A limitation of this research was using the Bcc function for emailing. Would the results differ if the email was addressed individually to each institution? Would institutions respond differently to prospective students from Singapore, where Australia has simpler visa requirements? Would institutions respond differently to a business e-mail address, such as rocky@ibm.com rather than a free e-mail address such as rocky@yahoo.com.cn? Would the institutions respond more professionally if the prospective student included a signature file?

As the institution's reply should influence customer relationships and profitability, future research should investigate the customer's reactions to eService as well as the importance that customers place on eService. Finally, how does eService influence an educational institution's costs and revenues? For example, would an institution reduce costs and increase revenues by outsourcing e-mail customer service?

References

Abrahamson, E., 1991. Managerial fads and fashions: the diffusion and rejection of innovation. Academy of Management Review 16 (3), 586-612.

Abrahamson, E., Rosenkopf, L., 1993. Institutional and competitive bandwagons: Using mathematical modelling as a tool to explore innovation diffusion. The Academy of Management Review 18 (3), 487-517.

Baptista, R., 1999. The diffusion of process innovations: A selective review. International Journal of the Economics of Business 6 (1), 107-129.

Barnes, J.G., Cumby, J.A., 2002. Establishing customer relationships on the Internet requires more than technology. Australasian Marketing Journal 10 (1), 36-46.

Barwise, P., Hammond, K., 1998. Predictions: Media, London, Phoenix.

Barwise, P., Elberse, A., Hammond, K., 2002. Marketing and the Internet: A research review. London Business School, Retrieved 28 March 2003 from the World Wide Web http://forum.london.edu/lbsfacpubs.nsf/ researchCentre/362E8F2C304B261F80256B05003A1532/$File/MATIVersion1.pdf

Barwise, P., Strong, C., 2002. Permission-based mobile advertising. Journal of Interactive Marketing 16 (1), 14-25.

Bayne, K. M. 2000. The Internet marketing plan (2nd ed.), New York, John-Wiley and Sons.

Bauer, H., Grether, M., Leach, M., 2002. Building customer relations over the Internet. Industrial Marketing Management, Special Issue on Internet Based Business-to-Business Marketing 31, 1-9.

BBC News, 2002, May 10. Elderly take up surfing, Retrieved 18 March 2003 from the World Wide Web: http://news.bbc.co.uk/hi/english/sci/tech/newsid_1977000/1977823.stm

Bertagnoli, L., 2001. Getting satisfaction. Marketing News 35 (10), 11.

Blair, E., Burton, S., 1987. Cognitive processes used by survey respondents to answer behavioral frequency questions. Journal of Consumer Research, 14 (September), 280-88.

Bourke, A., 2000. A model of the determinants of international trade in higher education. The Service Industries Journal 20 (1), 110-138.

Brown, L.A., 1981. Innovation Diffusion: A New Perspective, London, Methuen.

Brown, J. S., Duguid, P., 2000. The Social Life of Information, Boston, Harvard Business School Press.

Cox, J., Dale, B.G., 2001. Service quality and e-commerce: An exploratory analysis. Managing Service Quality 11 (2), 121-131.

Dubosson-Torbay, M., Osterwalder, A., Pigneur, Y., 2002. E-Business model design, classification, and measurements. Thunderbird International Business Review 44 (1), 5-23.

Damanpour, F., 1991. Organizational innovation: A meta-analysis of determinants and moderators: Impact of organizational factors. Academy of Management Journal 34 (3), 555-590.

Day, G.S., Schoemaker, P.J., 2000. Wharton on Managing Emerging Technologies, New York, John Wiley and Sons.

DETYA, 2001. International student numbers reach record high. Media Release by Australia's Department of Education, Training and Youth Affairs 1 September. Retrieved 28 March 2003 from the World Wide Web http://www.dest.gov.au/archive/ministers/kemp/sept01/k209_030901.htm

Fichman, R.G., 2000. The diffusion and assimilation of information technology innovations. Framing the domains of IT management. In Zmud, R. (Ed.), Projecting the Future Through the Past, Pinnaflex Publishing, Cincinnati, OH, pp. 105-128.

Fichman, R.G., Kemerer, C.F., 1999. The illusory diffusion of innovation: An examination of assimilation gaps. Information Systems Research 10 (3), 255-275.

Fidler, R.F., 1997. Mediamorphosis: Understanding New Media, Journalism and Communication for a New Century, Boston, Pine Forge Press.

Forester, T. 1992. Megatrends or megamistakes? What ever happened to the information society? The Information Society 8 (2), 133-146.

Garbi, E., 2002. Alternative measures of performance for e-companies: A comparison of approaches. Journal of Business Strategies 19 (1), 1-18

Gabbott, M., Dubelaar, C., Tsarenko, Y., 2000. Response time in customer electronic servicescape: Estimating parameters. Proceedings of the ANZMAC 2000 Conference, Gold Coast, Australia.

Gherissi, T.L, Schegg, R., Murphy, J., 2002. The quality of electronic customer service in the Tunisian hotel industry. Proceedings of the 7th Association for Information Management Conference. Hammamet, Tunisia.

Gomes, L., Murphy, J., 2003. An exploratory study of marketing international education online. International Journal of Educational Management 17 (3), 116-125.

Hair, J.F., Anderson Jnr., R., Tatham, R., Black, W., 1998. Multivariate Data Analysis (5th ed.), New Jersey, Prentice-Hall International.

Hanson, W., 2000. Principles of Internet marketing, South-Western College Publishing, Cincinnati.

Heuchan, J, Murphy, J., Neale, L., Liu, F., 2001. Online customer service by Australian businesses. Proceedings of the Australia New Zealand Marketing Academy, Auckland, New Zealand.

Hofstede, G., 1980. Culture's consequences: International differences in work-related values, Beverly Hills, Sage Publications.

Krippendorf, K., 1980. Content analysis: An introduction to its methodology. Beverly Hills: Sage Publications.

Lee, A.S., 1994. Electronic mail as a medium for rich communication: An empirical investigation using hermeneutic interpretation. MIS Quarterly June, 143-167.

Liu, Z., Stork, D.G., 2000. Is paperless really more? Communications of the ACM 43 (11), 94-97

Kimberly, J. R., Evanisko, M. J., 1981. Organizational innovation: The influence of individual, organizational, and contextual factors on hospital adoption of technological and administrative innovations. Academy of Management Journal 24 (4), 689-713.

Lee, E., Hu, S.M., Toh, R., 2000. Are consumer survey results distorted? Systematic impact of behavioral frequency and duration on survey response errors. Journal of Marketing Research 37 (February), 125-133.

MacMillan, S., 2000. The microscope and the moving target: The challenge of applying content analysis to the World Wide Web. Journalism and Mass Communication Quarterly 77 (1), 80-98.

Mahajan, V., Muller, E., Bass, F.M., 1990. New product diffusion models in marketing: A review and directions for research. Journal of Marketing 54 (1), 1-26.

Mahajan, V., Srinivasan, R., Wind, J., 2002. The Dot.com retail failures of 2002: Were there any winners? Journal of the Academy of Marketing Science 30 (4) Fall, 474-486.

Marinova, A., Murphy, J., Massey, B.L., 2002 Permission e-mail marketing as a means of targeted promotion. Cornell Hotel and Restaurant Administration Quarterly 43 (1) February, 61-69.

Massey, B.L., Murphy, J., 2000. Textbook publishers in a networked world. International Journal of Hospitality Information Technology 1 (2), 47-50.

Mazzarol, T., Soutar, G., Smart, D., Choo, S., 2001. Perceptions, information and choice – Understanding how Chinese students select a country for overseas study. Canberra, Commonwealth of Australia.

McBride, N., 1997. Business use of the Internet: Strategic decision or another bandwagon? European Management Journal 15 (1), 58-67.

Meador, K., 2002. Customer service and technology study. IMC Research Journal 10-13.

Mills, J.E., Clay, J., Mortensen, M., 2000. You've got trouble! Managing e-mail liability. Cornell Hotel and Restaurant Administration Quarterly 41 (5), 64-71.

Moch, M.K., Morse, E.V., 1977. Size, centralization and organizational adoption of innovations. American Sociological Review 42 (5) 716-725.

Murphy, J., Massey, B.L. 2000. Luddite learning: A call for low-tech alternatives. International Journal of Hospitality Information Technology 1 (2), 51-54.

Murphy, J., Olaru, D., Schegg, R., Frey, S. 2003. The bandwagon effect: Swiss hotel's web-site and e-mail management. Cornell Hotel and Restaurant Administration Quarterly, 44 (1) February, 71-87.

Murphy, J., Tan, I., 2003. Journey to nowhere? Electronic customer service by travel agents in Singapore. Tourism Management [forthcoming in 24(5)]

Newell, F., 2000. Loyalty.com: Customer relationship management in the new era of Internet marketing, New York, McGraw Hill Professional Books.

Noteboom, B., 1994. Innovation and diffusion in small firms: Theory and evidence. Small Business Economics 6 (5) October, 327-347.

Nua Internet Surveys, 2002. How many online? Retrieved 28 March 2003 from the World Wide Web: http://www.nua.com/surveys/how_many_online/index.html

Ober, S., 2001. Contemporary business communication (4th ed.), Boston, Houghton Mifflin.

O'Neil, H., Pouder, R., Buchholtz, A., 1998. Patterns in the diffusion of strategies across organizations: Insights from the innovation diffusion literature. The Academy of Management Review 23 (1), 98- 114.

Pastore, M., 2002, January 25. Internet key to communication among youth. CyberAtlas, Retrieved 28 March 2002 from the World Wide Web: http://cyberatlas.internet.com/big_picture/demographics/article/0,,5901_961881,00.html

Pechlaner, H., Rienzner, H., Matzler, K., Osti, L., 2002. Response attitudes and behavior of hotel industry to electronic info requests. In Wöber, K.W., Frew, A.J., Hitz, M. (Eds.). Information and Communication Technologies in Tourism, Springer Computer Science. Wien-New York, pp. 177-186.

Porter, M. 2001. Strategy and the Internet. Harvard Business Review 79 (3), 63-77.

Ramsey, G., 2001. The e-mail marketing report, executive summary. eMarketer Inc., Retrieved 14 March 2002 from the World Wide Web: http://www.the-dma.org/library/whitepapers/e-mail_Marketing_Exec_Sum_BD.pdf.

Raymond, L., 2001. Determinants of web site implementation in small businesses. Internet Research: Electronic Networking Applications and Policy 11 (5), 411-422.

Ries, A., Ries, L., 2000. The 11 Immutable Laws of Internet Branding, New York, HarperCollins.

Rogers, E.M., 1995. Diffusion of Innovations (4th ed), New York, The Free Press.

Rust, R.T., Lemon, K.N., 2001. E-Service and the consumer. International Journal of Electronic Commerce 5 (3) Spring, 85-101.

Scharl, A., 2000. Evolutionary Web Development, London, Springer

Schegg, R., Frey, S., Steiner, T., Murphy, J., 2002. Benchmarking the marketing functions of Swiss hotels' websites. Information Technology and Tourism 5 (2), November, 73-89.

Schultz, D., 2002. Marcom model reverses traditional pattern. Marketing News, April 1, 8.

Scott, S.V., 1999. The academic as service provider: Is the customer 'always right? Journal of Higher Education Policy and Management 21 (2), 193-202.

Soutar, G., Allen, R., Long, F., 2000. Does the pace of e-commerce adoption reflect considered strategy or revolutionary fervor? Indications from Western Australia and Western Europe. Paper presented at the Fifth International Conference on Global Business and Economic Development, Beijing.

Sieber, P., 2000. Einsatz und nutzung des Internet in kleinen und mittleren Unternehmen in der Schweiz 2000. Bern, Dr. Pascal Sieber & Partners AG. Retrieved 14 February 2002 from the World Wide Web: http://www.pascal-sieber.ch/Files/kmuinfo-2000.pdf

Srinivasan, R., Lilien, G.L., and Rangaswamy, A., 2002. Technological opportunism and radical technology adoption: An application to e-business. Journal of Marketing 66 (3) July, 47-60.

Sterne, J., 2001. World Wide Web marketing (3rd ed), New York, John-Wiley and Sons.

Stevens, G.R., McElhill, J., 2000. A qualitative study and model of the use of e-mail in organizations. Internet Research: Electronic Networking Applications and Policy 10 (4), 271-283.

Stockport, G.J., Kunnath, G., Sedick, R. 2001. Boo.com - The path to failure. Journal of Interactive Marketing 15 (4), 56-70.

Strauss, J., Hill, D.J., 2001. Consumer complaints by e-mail: An exploratory investigation of corporate responses and customer reactions. Journal of Interactive Marketing 15 (1), 63-73.

Strickland, G., 1995. Report of the formative study of the Western Australian provision of international education. Perth, Education Department of Western Australia.

Taylor, S., 1994. Waiting for service: The relationship between delays and evaluations. Journal of Marketing 58 (2), 56.

Tenner, E. 1996. Why Things Bite Back: Technology and the Revenge of Unintended Consequences, New York, Alfred Knopf.

Tsichritzis, D., 1999. Reengineering the university. Communications of the ACM 42 (6), 93-100.

United Nations, 2001. Electronic commerce and tourism for developing countries. Chapter 3 in E-Commerce and Development Report 2001. New York-Geneva, United Nations Conference on Trade and Development.

Xinhua, 1999. China enthusiastic for international educational cooperation. Xinhua News Agency, 20 August.

Van de Ven, A.H., 1986. Central problems in the management of innovations. Management Science 32 (5), 590-607.

Van Hoof, H., 1998. The use of the Internet in the US lodging industry. FIU Hospitality Review, 16 (2), 77-90.

Voss, C., 2000. Developing an eService strategy. Business Strategy Review 11 (1), 21-33.

Weil, P., Vitale, M., 2001. Place to Space: Migrating to Ebusiness Models. Boston, Harvard Business School Press.

Wolfe, R.A., 1994. Organizational innovation: Review, critique and suggested research directions. Journal of Management Studies 31 (3), 405-431.

Yang, Z., 2001. Consumers' perceptions of service quality in Internet commerce: Strategic implications. Proceedings of the American Marketing Association Summer Educator's Conference, Washington, D.C.

Zemke, R., Connellan, T., 2001. e-service, New York, Amacom

Zmud, R. W., Apple, E. L., 1992. Measuring technology incorporation/infusion. Journal of Product Innovation Management 9 (June), 148-155.

Biographies

Jamie Murphy, an Associate Professor at The University of Western Australia Business School, has also taught in the US, Canada and Switzerland. His teaching and research focus on effective use of the Internet. He has published widely in marketing and tourism journals, The New York Times, Wall Street Journal, as well as being the co-author of seven books. Interspersed with his academic career, Jamie worked as the European Marketing Manager for several US-based sports products.

Liza Gomes, who recently earned her Masters degree at The University of Western Australia School of Business, is the National Manager, International Programs at La Trobe University Programs (Sydney, Brisbane, Perth). Her extensive overseas marketing experience began in the late 1980's. Prior to her La Trobe appointment, Liza was the marketing consultant for Alexander Education Group, the honorary regional manager in China and Hong Kong for "Perth Education City" and instrumental in the inauguration of the first Western Australian Representative Office in Shenzhen, China. Fluent in English, Cantonese, Mandarin and Portuguese, she lived in Europe and Asia before migrating to Australia.

Correspondence

Jamie Murphy, Associate Professor, University of Western Australia School of Business, IMM Department, University of Western Australia, Crawley, WA 6009, Australia, Telephonbe: +61 (8) 9380 1979, Facsimile: +61 (8) 9380 1055, E-mail: jmurphy@ecel.uwa.edu.au